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Examination of the Students' Activity Preferences Toward Their Peers with Special Needs in Terms of Social Acceptance Levels and Various Variables*

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Abstract

The present study aims to examine the activity preferences of typically developing students for their peers with special needs in terms of social acceptance levels and various variables. In total, 1098 typically developing students attending public secondary schools, where there are students who continue their education through inclusion, participated in this study. The causal and comparative model was used in this research. Given the results, it was observed that there is a relationship between the social skill levels, student behaviors, and peer attitudes of the students with typically developing students toward individuals with special needs, and their activity preferences towards students with special needs. Social skills and peer attitudes, which are sub-dimensions of the social acceptance scale, were found to predict activity preferences. Moreover, it was revealed that there was a differentiation between the activity preferences of students with typical development for their peers with special needs and their gender, mother's education level, father's education level, class level, and disability status among their relatives ($p<0,05$). In schools where inclusive practices are carried out, various activities should be organized for the characteristics of individuals with special needs, so that typically developing students develop positive attitudes towards their peers with special needs and their social acceptance levels should be increased.

Keywords: Inclusive practices, individual with special needs, peer, social acceptance

1. Introduction

Students with special needs are assigned to the same classroom as their peers through inclusive education. Thanks to the education given through inclusion practices, students with special needs gain academic, social, and cognitive gains. It is known that inclusive education is very important, particularly in the acquisition of independent life skills by students with special needs. As stated by Morrison and Gleddie (2019), various elements should be combined for inclusion practices to be successful. It is known that teachers' ability to cope with problematic behaviors, classroom management, and attitudes are effective in successfully maintaining inclusion practices.

* This study was presented as an oral presentation at the ELMIS International Special Education Congress in 2019.

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Moreover, the use of materials and technology in classrooms is considered important. The inclusion team plays an important role in the success of inclusion practices. School administrators, classroom teachers, special education teachers, peer students, families of the integrated student, and every other personnel in the team have various duties and responsibilities in the inclusive education process (Çıkılı, Gönen, Aslan-Bağcı & Kaynar, 2020; Klavina & Block, 2008).

The interaction of typically developing students with students with special needs in the classes that provide education through inclusion was shown to be one of the important goals of inclusion practices (Özkan-Yaşaran, Batu & Özen, 2014). It was observed that typically developing peers in classrooms that provide education through inclusion do not have clear information about how they should interact when they encounter students with special needs. The lack of knowledge about the inadequacy of students with special needs causes typically developing students not to know how to behave towards their peers with special needs, and as a result, they do not accept their peers with special needs socially and avoid doing activities together with them (Odom, Zercher, Li, Marquart, Sandall & Brown, 2006). However, learning and behavior patterns that affect the later development of students develop during school periods. In particular, primary school time is a period when students establish social relationships with their peers; in this context, it is a period in which emotional, social, physical, communicative, and mental development continues. At school age, students acquire various knowledge and skills from their friends and environment. This knowledge, acquired in the same environment with their peers, provides the basis for the next steps of their development (Öztürk & Yıkmış, 2013). To achieve complete success in inclusive education in classrooms where students with special needs are assigned to, they must be a part of the class, be socially accepted, be able to participate in joint activities, and have their social needs met (Batu, 2008).

Social acceptance and activity preferences, which are the behavioral dimensions of positive attitudes toward inclusion, are among these basic aspects (Siperstein, 1980). In particular, students with special needs may differ significantly from those with typical development in terms of physical, cognitive, and adaptive skills. Such differences sometimes determine the interaction levels of students with special needs and their typically developing peers. Such skills can develop when students with special needs and typically developing students receive education together in the same environment. The importance of special needs students receiving education with their typically developing peers made the concept of inclusion one of the most researched topics in Türkiye recently (Rakap, Parlak-Rakap & Aydin, 2016). Children with special needs receive education in classrooms that provide education through inclusion with student-student interaction. Peer relations, peer attitudes, social acceptance, and activity preferences of students with their peers are important factors playing roles in the development of children (Lorger, Schmidt & Bakracevic Vukman, 2015). It is known that peers' attitudes toward them and their being preferred in activities play an important role for students with special needs to create positive self-perception, exhibit positive behaviors, and take responsibility (Juvonen, Lessard, Rastogi, Schacter & Smith, 2019; Olmstead, Guy, O'Malley, & Bentler, 1991; Paseka & Schwab, 2020).

Reviewing the literature on activity preference and peer behavior, it can be seen that, although there are various definitions, the most accepted definition is "sub-components of the attitude" made by Smith (1968). Considering this definition, attitude is a tendency, which is attributed to an individual and regularly forms his/her thoughts, feelings, and behaviors toward a psychological object. Attitude has three components: cognitive, affective, and behavioral. The existence of an attitude is the sum of these three elements. These components are not independent of each other and there is often a consistency and interaction between them. A classification used by individuals in their thought processes or grouping of the acquired knowledge is the cognitive component, the individual's emotion, and evaluation of the attitude object constitute the affective component, and

the behavioral component makes it obligatory to act on the attitude object (Kartal & Bardakçı, 2019).

Generally, the strength and elements of established strong attitudes are also high. A stronger attitude is associated with a stronger change (Kağıtçıbaşı, 1985; Siperstein, Parker, Norins & Widaman, 2011). It is emphasized that students with strong attitudes prefer students with special needs in their activities, and therefore, positive peer relations are established in the classroom (Lebarič, Kobal Grum, & Kolenc, 2006; Siperstein et al., 2011). It was reported in previous studies that activity preference is the behavioral dimension of the attitude (Siperstein, 1980). Children's attitudes and preferences for activities with their peers begin to develop at the age of 3-4 years. It is known that the effects of parents in the process of raising children and their experiences with students with special needs affect children's attitudes toward students with special needs (Gottlieb, Corman & Curci, 1984). Moreover, various media tools such as newspapers, television, radio, and movies play an important role in shaping this attitude. Depending on these factors, when young children start school, they may have biased information, perceptions, and attitudes toward those who are different from them (Erdoğan & Şanlı, 2019).

It was emphasized that students with special needs are not preferred in common activities (Bakkaloğlu, Sucuoğlu & Özbek, 2019; Baydık & Bakkaloğlu, 2009; Smoot, 2004; Vuran, 2005) and that there is low social acceptance for them, particularly for students with autism and intellectual disability (Fırat, 2021). It was reported in a previous study that negative attitudes toward students with special needs cause students not to prefer these individuals in their activities and social rejection of students with special needs (Lebarič et al., 2006). It is thought that the social acceptance level of typically developing students toward those with special needs is related with the success of students with special needs and their social and emotional harmony, in-class behaviors and activity preferences (Sucuoğlu & Kargın, 2006). Since social acceptance level of students with special needs is reflected in learning achievements, school performance, and student activities, it was emphasized to contribute to students' social relations and social inclusion (Lebarič et al., 2006).

It was stated that various researches and studies should be conducted on the social acceptance of typically developing children in the education process and the level of realization of common activity preferences with them to integrate students with special needs into society (Peters 2004) because one of the biggest difficulties in inclusion is thought to be students with special needs not being accepted by their peers (Siperstein et al., 2011). Individual differences among students with special needs can sometimes create various difficulties in the activity preferences of typically developing students. These differences are considered extremely important for students with special needs during school years. Especially, the primary education time is the period in which students with special needs feel that they are different from their typically developing peers and they experience the feeling of exclusion most intensely. It was reported that, when individuals in need of special education think that they are different from their peers in many issues and their peers feel this, they may encounter significant difficulties, especially in personality development, throughout their lives (Karaca, 2018).

Therefore, it is argued that social acceptance and rejection, defined as the selection of a student with special needs as a member of a group for any activity by typically developing students (Ünal & Yel, 2019), influences many factors and it is frequently stated that variables such as academic competence, problematic behaviors, social skills, physical appearance, age and gender are the main factors (Baydık & Bakkaloğlu, 2009). Therefore, in this study, it is thought that, particularly in Türkiye, it would be important to understand the social acceptance and activity preferences of typically developing students toward students with special needs and to examine their activity preferences in terms of various variables. It may contribute to the development of various

educational intervention approaches by revealing the social acceptance levels of typically developing students towards their peers with special needs in Türkiye. Even though there are many studies examining the views and attitudes of teachers and students toward students with special needs (Pesen & Demirhan, 2021; Uçar, Yildizer, Özböke, Yilmaz & Kocaekşi, 2019), the number of studies examining the attitudes of students with special needs toward typically developing students in classrooms that provide education through inclusion and their preference for them in their activities is limited (Nal & Tüzün, 2011). Secondary school is considered an important breaking point, particularly for peer relations and social development (Steinberg & Morris, 2001), and no study could be found on the relationship between the social acceptance levels and activity preferences of the typically developing students in secondary school toward students with special needs in Türkiye. Therefore, this study is considered important in terms of understanding this in classrooms that provide education through inclusion and their preferring students with special needs in activities.

1.1. Purpose of the Research

The present study aims to examine the social acceptance levels and activity preferences of typically developing students for students with special needs. Therefore, it was also aimed to achieve the following sub-objectives.

1. Is there a relationship between the social acceptance levels of typically developing students toward students with special need and their interaction preferences for them?
2. Do social skills, student behaviors, and peer attitudes, which are the sub-dimensions of social acceptance level toward students with special needs, predict the interaction preferences of typically developing students?
3. Does the average score of the activity preferences of the typically developing students for the students with special needs differ according to;
    a) Their gender,
    b) Education levels of parents,
    c) Grade levels,
    d) Having a person with disability among relatives.

2. Method

2.1. Research Model

The quantitative research method was used in this study. One of the aims of the quantitative research method is to explain the cause-effect relationship and to obtain results from the sample, which can be generalized to the population (Gall, Borg & Gali, 1996). The causal and comparative model was used in this study. Since the effect of an independent variable on the dependent variable is examined in this study, a causal model is a part of this research model. Moreover, the comparison model was used in the present study because of the comparison of the typically developing students' gender, parental education levels, grade level, and having a disability in their relatives with their activity preferences toward students with special needs. In causal comparison studies, there are at least two groups affected by the same condition in different ways, or two groups affected and unaffected by the assumed condition. These groups are examined by considering some variables to understand the possible causes of the current situation and those affecting this situation (Cohen & Manion, 1994). Therefore, the results achieved in this study are expressed with numerical data.

2.2. Research Group

The research was conducted in Konya city center of Türkiye. A total of 1098 students with typical development, attending public secondary schools where inclusive education practices are included, were involved in the research. There are students with special needs who continue their education through inclusion in the classrooms of the students with typical development in the research group. Necessary permissions were obtained from the Provincial Directorate of National Education. Schools with inclusive students in the classrooms were determined. Demographic information of the participant students is given in Table 1.

Table 1

Demographic Information Table of Participant Students

Variables Related to Participants		Gender			
		Male		Female	
		N	%	N	%
Grade	6	175	46.1%	205	53.9%
	7	169	43.8%	217	56.2%
	8	130	39.2%	202	60.8%
Having a Person with Disability among Relatives	Yes	109	38.9%	171	61.1%
	No	365	44.6%	453	55.4%
Education Status of Mother	Elementary School	142	40.0%	213	60.0%
	Secondary School	131	47.0%	148	53.0%
	High School	110	42.0%	152	58.0%
	University	76	46.9%	86	53.1%
	Master's Degree	15	37.5%	25	62.5%
Education Status of Father	Elementary School	56	34.8%	105	65.2%
	Secondary School	126	50.0%	126	50.0%
	High School	127	39.7%	193	60.3%
	University	116	43.4%	151	56.6%
	Master's Degree	49	50.0%	49	50.0%

In Table 1, demographic information of the participants is given. A total of 1098 students studying in the 6th, 7th, and 8th grades participated in the research. 474 male and 624 female students participated in the research on a voluntary basis. There were 175 boys (46.1%) and 205 girls (53.9%) studying in the 6th grade, 169 boys (43.8%) and 217 girls (56.2%) studying in the 7th grade, and 130 males (39.2%) and 202 females (60.8%) students studying in the 8th grade participating to this research.

2.3. Research Instruments and Processes

In the present study, an activity preference form was used to determine the preferences of typically developing students to interact with their peers with special needs, and a social acceptance scale was used to understand the social acceptance levels of typically developing students toward their special needs peers. Measurement tools were distributed directly to the participating groups by visiting the schools determined by the researchers. They were told not to write names on the measurement instruments. It was stated that their answers would not be shared in any way. The participant group was provided with the necessary information by explaining how to carry out the coding before the research.

2.3.1. Activity Preference Form

This scale, which was developed by Siperstein (1980) and adapted into Turkish by Çiftçi (1997), was developed to determine the behavioral dimension of children's attitudes toward interacting positively with their peers with typical development or special needs. This scale aims to measure a child's behavioral intention, which is thought to be the best indicator of overt or observed behavior (Siperstein, 1980). The scale was developed based on the social cognition theory regarding the development of friendship relations (Bak & Siperstein, 1987). "Social cognitive theory" argues that human learning occurs as a result of the interaction of individual, environmental, and behavioral factors. In addition, it is also argued that individuals in society learn by modeling and observing other people since human beings are social creatures (Bayrakçı, 2007). In this scale, there are statements that reflect the types of activities and interactions that these children like to do with their friends at home, school, and outdoors, determined through interviews with students in the last grade of primary school and secondary school. This scale, which consists of 15 items, has a Likert-type structure. As a result of the reliability study, the Cronbach-Alpha internal consistency coefficient was found to be .90. High scores obtained from the scale indicate that the level of activity preference is high. In this study, the Cronbach Alpha internal reliability coefficient calculated for the overall activity preference form was found to be .916.

2.3.2. Social Acceptance Scale

The "Social Acceptance Scale" was used in order to determine the levels of social acceptance of typically developing students in the inclusion classes for students with special needs. The social acceptance scale developed by Arslan (2010) is a Likert-type scale with a 32-item triple rating. As a result of the exploratory factor analysis for the construct validity of the scale, a three-factor structure was determined. The first of the three factors forming the scale was defined as "Social Skills", the second as "Student Behavior", and the third as "Peer Attitude". As a result of the reliability analysis, the internal consistency coefficient of 32 items was found to be .93. A high score obtained on the scale indicates a high level of social acceptance. In this study, the Cronbach Alpha internal reliability coefficient calculated for the overall social acceptance scale was found to be .849.

2.4. Data Analysis

Measurements of central tendency were examined regarding whether the data met the normality conditions, and it was determined that they were close to each other. Also, the kurtosis and skewness coefficients of the data group to be tested for normality were examined; since these values are between +1 and -1, it is assumed that they have a normal curve (George & Mallery, 2012; Hair, Black, Babin, Anderson & Tatham, 2006).

Table 2

Kurtosis and Skewness Values of the Obtained Data

Scales	N	$\bar{X}$	Ss	Skewness	Kurtosis
Activity Preference	1098	29.08	8.91	.486	.282
Social Acceptance	1098	76.86	11.29	-.697	.430

Moreover, Pearson product-moment correlation technique was used to estimate the relationship between students' social acceptance levels and their activity preferences. Prediction of social acceptance level of activity preference was tested by using the multiple regression technique. The

t-test was used for independent groups in order to understand whether there is a difference regarding the gender of the typically developing students and the presence of a person with disability among their relatives. One-way analysis of variance (ANOVA) was used to understand the differentiation between the grade levels, father education levels, and education levels of the mothers of typically developing students. In cases with differentiation, Tukey test was used to control the difference between the means to find the reason of the differentiation.

2.5. Ethics

Before starting the data collection process, the ethical permission required was obtained from the Scientific Research and Ethics Committee of Inonu University with a letter dated 30.09.2022 and numbered 2022/13.

3. Results

In this part of the present study, the table representing the correlation between students' activity preferences and social acceptance level and the regression table for the variables that predict students' activity preferences are included. Moreover, considering the situation of typically developing students preferring their peers with special needs in their activities, the results regarding the differences between their gender, parental education levels, grade levels, and having a person with disability among relatives are included.

Table 3

The Correlation Table Between Students' Activity Preferences and Social Acceptance Sub-Dimensions

Scale		Social Skills	Student Behaviors	Peer Attitudes
Activity Preference	r	.551**	.279**	.191**
	p	.001	.001	.001

Examining Table 3, it can be seen that there are positive and significant relationships ($p<0.01$) between the activity preferences of the typically developing students for students with special needs and social skills, student behavior, and peer attitude, which are the sub-dimensions of social acceptance level. Therefore, the level of preferring students with special needs in activities of typically developing students increases as social skills, student behavior, and peer attitudes increase. As a result of the regression analysis, VIF and tolerance values for social skills, student behavior and peer attitudes, which are among the sub-dimensions of social acceptance levels, were examined. Since VIF values are lower than 3 and tolerance statistics are higher than 0.5, it can be seen that there is no perfect linear relationship between its variables. Therefore, regression analysis was used.

Table 4

Regression Table for Variables Predicting Students' Activity Preferences

Sub-Dimensions	B	Std. Error	Beta	t	p	Tolerance	VIF
1. (Stable)	18.599	1,57		11,845	.000		
Social Skill	.664	.036	.535	18.610	.000	.766	1.305
Student Behavior	.009	.065	.004	.136	.892	.721	1.386
Peer Attitude	.145	.063	.061	2.289	.022	.879	1.138

R =.555 p≤,00 0 R2=.308 F =162.115 Durbin-Watson = 1.741

Table 4 is the regression table for variables that predict the activity preferences of typically developing students for students with special needs. Durbin-Watson (D-W) test was used to determine whether there is autocorrelation in the model. The D-W value was found to be 1.741. Since this value is close to 2, it suggests that there is no autocorrelation. The level of activity preference of typically developing students with students with special needs increases as the level of social skills and peer attitude, which are among the sub-dimensions of social acceptance level, increases. Therefore, it can be seen that there is a significant relationship between them (R=.555, R2= .308, p<0.001). Social skills, student behaviors, and peer attitudes toward students with special needs explain 30.8% of the activity preference of typically developing students with students with special needs. Considering the standardized regression coefficient (β) and predictor variable, it was found that social skills and peer attitude, which are sub-dimensions of the social acceptance scale, predicted activity preferences, but the student behavior dimension did not predict activity preference.

Table 5

The Relationship Between Students' Gender and Their Preferences for Interacting with Their Peers with Special Needs

Scale	Gender	N	$\overline{X}$	Ss	t	p
Activity Preference	Male	474	44.73	8.82	-4.862	.000
	Female	624	47.27	8.39		

p<0.05

Table 5 shows the relationship between the gender of the typically developing students and their preferences for interacting with their peers with special needs. Considering the activity preference averages of the students, it is seen that boys = 44.73 and girls =47.27. As a result of the statistical analysis, it was observed that there is a significant difference between the genders of the typically developing students and their interactions with their peers with special needs [t=-4.862 p<.05], and it was found that the mean score of the female students is significantly higher than the mean score of the male students.

Table 6

The Relationship Between Students' Maternal Education Levels and Their Preferences for Interacting with Their Peers with Special Needs

Maternal Education Levels	N	$\overline{X}$	Ss	F	p	Significant Difference
1. Primary School	355	47.19	9.00	2.608	.034	1-4
2. Secondary School	279	46.16	8.25			
3. High School	262	45.70	8.77			
4. University	162	44.69	8.29			
5. Master's degree	40	46.25	8.65			
Total	1098	46.17	8.67			

p<0.05

Examining Table 6, it can be seen that the mean activity preference score of the typically developing students, whose mother's education level is primary school, was 47.19, those of them with secondary school graduate mothers was 46.16, those of them with high school graduate mothers was 45.70, those of them with university graduate mothers 44.69, and those of them with mothers having a master's degree was 46.25. The F value for the mean score was determined to be 2.608. According to the analysis of variance results, the activity preferences of the students

differ significantly according to the mother's education level variables ($p<0.05$). As a result of the pairwise comparisons made to determine the source of the difference, the mean score of the students whose mothers were primary school graduates was found to be significantly higher than those of the students whose mothers were university graduates.

Table 7

The Relationship Between the Education Levels of Typically Developing Students's Father and Their Preferences for Interacting with Their Peers with Special Needs

Father's Education Levels	N	$\overline{X}$	Ss	F	p	Significant Difference
Primary School	161	47.45	8.76	4.612	.001	1-5
Secondary School	252	45.95	9.17			3-5
High School	320	47.03	7.82			
University	267	45.60	8.54			
Master's Degree	98	43.37	9.53			
Total	1098	46.17	8.67			

$p<0.05$

Table 7 shows the comparison between the father's education levels of the typically developing students and their preferences for interacting with their peers with special needs. Considering the activity preference averages of the students, it can be seen that those whose fathers are primary school graduates had a score of 47.45, those whose fathers are secondary school graduates had a score of 45.95, those whose fathers are high school graduates had a score of 47.03, those whose fathers are university graduates had a score of 45.60, and those whose fathers have master's degree had a score of 43.37. The F value for the mean score was determined to be 4,612. Given the analysis of variance results, the activity preferences of the students differ significantly in terms of their father's education level ($p<0.05$). As a result of the pairwise comparisons made to determine the source of the difference, the mean scores of the students whose fathers were primary school graduates and those whose fathers graduated from high school were found to be significantly higher than those of the students whose fathers were university graduates.

Table 8

The Relationship Between Students' Grade Levels and Their Preferences for Interacting with Their Peers with Special Needs

Grade Levels	N	$\overline{X}$	Ss	F	p	Significant Difference
6th Grade	380	46.69	8.45	5.970	.003	6-8
7th Grade	386	46.83	8.41			7-8
8th Grade	332	44.81	9.08			
Total	1098	46.17	8.67			

$p<0.05$

Table 8 shows the comparison between the grade levels of the typically developing students and their preferences for interacting with their peers with special needs. Considering the averages of the statistical analysis, it can be seen that the average score of the students studying in the 6^{th} grade was 46.69, that of the students studying in the 7^{th} grade was 46.83, and that of the students studying in the 8^{th} grade was 44.81. The F value for the mean scores was found to be 5.970. Given the results of the analysis of variance, the activity preferences of the students differ significantly by the grade-level variables of the students. ($p<0.05$). As a result of the pairwise comparisons

conducted to determine the source of the difference, the mean scores of the 6th- and 7th-grade students were found to be significantly higher than the 8th-grade students' mean scores.

Table 9

The Relationship Between the Situation of Existing A Person with Disability Among the Relatives of the Students and Their Preferences to Interact with Their Peers with Special Needs

Scale	A Person with Disability Among Relatives	N	$\bar{X}$	Ss	t	p
Activity Preference	Yes	280	47.47	8.01	2.908	.004
	No	818	45.73	8.84		

$p<0.005$

Table 9 shows the comparison between the presence of a person with disability among the family members of the typically developing students and their preferences for interacting with their peers with special needs. Although the mean score of the students who have a person with disability among relatives was found to be 47.47, that of the students who do not have a person with disability among their relatives was determined to be 45.73. As a result of the independent sample t-test analysis, it was observed that the mean score of preference to interact among the typically developing students who have a person with disability among relatives was significantly higher than that of the students who do not have a person with disability among relatives [t=2.908 p<.005].

4. Results, Discussions and Suggestions

Considering the results achieved in the present study, it was observed that there is a relationship between the social skill levels, student behaviors, and peer attitudes of typically developing students toward students with special needs, and their activity preferences with students with special needs. Social skills and peer attitudes, which are sub-dimensions of the social acceptance scale, were found to predict activity preferences. Since social skills are necessary for an individual to establish mutual and healthy relationships with other people, previous studies revealed that children who have well-developed social skills and positive attitudes due to their social acceptance level can interact more positively with their peers (Lorger et al., 2015) and previous studies also showed that if the level of social acceptance decreases, social interaction and peer closeness decrease (Wendelborg & Kvello, 2010). As a result of this study, it was revealed that the attitudes of typically developing students predicted their preferences for interaction with students with special needs. This result is an important finding. It has long been stated that peers play an important role in ensuring the quality of inclusive education (De Boer, Pijl & Minnaert 2012; Nowicki, 2006; Spörer et al., 2020) because the social acceptance of students with special needs reflects both learning outcomes, school performance, and student activities, and accordingly, it expresses aspects regarding students' social relations and social inclusion (Leboric et al., 2006).

In the present study, among the questions in the activity preference form, the mean scores for the items "helping teacher together" and "working together in the classroom" were high, while the mean scores for the items stated as "playing together after school" and "playing at our house" were found to be low. In a study carried out by Gümüş and Tan (2015), the Activity Preference Form was also used and the mean scores for "helping the teacher together" and "working together in the classroom" were high, whereas the average scores for "playing together after school" and "playing at our house" were low. It is suggested that this situation may result from the information

and guidance that students with special needs who lack adequate social skills should be included in classroom activities by teachers.

It was emphasized in previous studies that there is a strong relationship between students' social acceptance levels and the social skills of students with special needs, whereas the lowest relationship was found between social acceptance level and problem behaviors (Bakkaloğlu et al., 2019). It can be seen that activity preference and social acceptance level have a similar relationship for typically developing students. It is known that peer attitude is effective on students' self-concept, self-respect, and especially their behavior toward others. In previous studies, it was emphasized that peers who have negative attitudes toward students with special needs want to interact less with these individuals (Aktaş, 2001; Sucuoğlu & Kargın, 2006).

Košir (2013) stated that social skills training should be included so that typically developing students can choose students with special needs in their activities. As a result of this study, it was determined that the typically development students have a high level of preference for activities with students with special needs. In particular, it can be seen that the average scores obtained from helping the teacher together and going on a picnic together are high. Some of previous studies revealed that the attitudes of typically developing students toward students with special needs and their level of performing activities together are high (Griffin, Summer, McMillan, Day & Hodapp, 2012). Siperstein, Glick and Parker (2009) stated that children with and without special needs are considered equal by their peers and classroom activities take place together. As a result of the study, it was determined that typically developing female students have higher preference levels for interaction with students with special needs when compared to male students. In previous studies, it was reported that girls accept their peers with special needs more quickly and allocate more space to their joint activities (De Boer, Pijl, Post & Minnaert, 2013; Georgiadi, Kalyva, Kourkoutas & Tsakiris, 2012). Examining the results reported this study and previous ones, it was confirmed that the gender variable differs significantly in social acceptance. As a result of the present study, it was observed that typically developing students' preference for engaging in activities with students with special needs decreases as their grade level increases. Previous studies showed that the attitude toward students with special needs changes systematically with the increase in grade level. (Ayral et al., 2015; Blacher et al., 2014; Gifford-Smith & Brownell, 2003; MacMillan & Morrison, 1984; Swan & Ray, 2014). Ayral et al., (2015) stated that typically developing students' social acceptance levels for students with special needs decrease slightly as their age group and class levels increase. It was reported in previous studies that the typically developing students between the ages of 10 and 13 years choose their peers with special needs in some play activities (Hall & McGregor, 2000), but their preference for activities with their special needs peers decreases as their grade level increases (Hall & McGregor, 2000).

As a result of this study, it was determined that typically developing students' level of activity preference for students with special needs decreases as the education level of their parents increases. The reason for this result was reported a previous study (Öncül & Batu, 2005) to be the presence of limited cooperation between school and family regarding classrooms that provide education through inclusion and families have limited information about inclusive education. This result is also considered a result of the fact that the parents of typically developing children are aware of the existence of students who receives special education services only through their children who attend the classrooms that provide education through inclusion.

In order for inclusive education to be carried out successfully, the peer attitudes and social skills of students with typical development towards students with special needs should be improved and supported. Therefore, it can be ensured that students with typical development prefer their peers with special needs more frequently in their activities. Reviewing previous studies, it was reported that peer attitudes improve when students learn more about individuals with special needs

(Favazza & Odom, 1997; Godeau et al. 2010). Considering the results achieved in this study, it can be seen that comprehensive intervention studies should be carried out, including information on preparation activities for inclusion. Within the scope of orientation training, particularly during the beginning of the academic year, training can be given to students with typical development regarding the characteristics of students with special needs.In schools where inclusion practices are carried out, various activities should be organized for the characteristics of individuals with special needs, so that students with typical development develop positive attitudes towards their peers with special needs and their social acceptance levels should be increased. However, all interventions should involve parents and teachers, not just typically developing students. In this study, this condition was neglected by examining only the attitudes of students with typical development. This is one of the limitations of this study. Only a quantitative study was carried out. Supporting the research with qualitative findings is among its other limitations.

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Investigation of the Relationship between Prosocial and Play Behaviors of 60-72 Months-Old Children Attending Preschool Education*

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Abstract

This study was conducted to examine the prosocial behaviours and play behaviours of 60-72-month-old children attending preschool education and the relationship between these behaviours. For this purpose, the research was designed by adopting the correlational survey model. The sample of the study consisted of 300 children aged 60-72 months attending kindergartens in Turkey in the 2021-2022 academic year. "Penn Interactive Peer Play Scale-Teacher Form" and "Preschool Prosocial Behaviour Scale" were used in the study. It was determined that peer play behaviours differed statistically according to the variables of gender, age, parental education level, parental occupation, number of siblings, family income status and previous preschool education. Upon analyzing the prosocial skills of the children participating in the study, it was found that prosocial skills showed a statistically significant difference according to the variables of gender and previous pre-school education, but did not show a statistically significant difference according to the variables of age, parents' education level, parents' occupation, number of siblings and family income status. Another result of the study was that there was a positive relationship between children's prosocial behaviours and play interaction behaviours and a negative relationship between children's play disruptive behaviours.

Keywords: Play behavior, preschool education, prosocial behavior

1. Introduction

The first step to increase an individual's adaptation to society is to establish harmonious relationships with other people and to follow the rules of society. Positive social behaviours are considered a central indicator of social competence in early childhood and include behaviours such as helping, cooperating and caring for others' distress (Ladd & Profilet, 1996). Research on prosocial behavior from infancy to childhood has provided empirical findings on the origins and development of prosocial behavior, including when young children begin to exhibit prosocial behaviors, how these behaviors change over development, and why children may or may not engage in prosocial behavior (Malti & Dys, 2018).

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Prosocial behavior is considered an important dimension of positive development (Ferreira, Cadima, Matias, Vieira, Leal & Matos, 2016). It has been defined as voluntary behavior intended to benefit another (Eisenberg, Spinrad & Morris, 2013). The topics how prosocial behaviors develop and during which age periods they are observed have maintained their importance from past to present (Zahn Waxler, Radke Yarrow, Wagner & Chapman, 1992). Recent research shows that the onset of positive social behaviours, such as simple helping and cooperation, can be observed as early as the second year of life. However, these behaviours are only the beginning of a wide range of positive social behaviours. Researchers suggest that social bias increases in the early years with the development of social-cognitive understanding, emotional maturation and other factors (Hay, Payne & Chadwick, 2004; Köster, Ohmer, Nguyen & Kärtner, 2016). This is early years when children are eager to play with their peers. Children share their toys, try to understand why they seem sad, and comfort their friends (Bee & Denise, 2003).

Children acquire many skills related to social development such as making friends, sharing, helping, being respectful, being aware of their rights and protecting them through plays (Durualp & Aral, 2011). Play is one of the most widely used ways of learning about children and understanding their world (Kadim, 2012). Children who learn the behaviors, knowledge and skills necessary for life through plays also learn to establish relationships with others, adapt to social life, defend their rights to the end, respect the rights of others, cooperate and share. Through plays, the children assume social roles and tests those roles. They express their concerns. They reveal their emotions. For example, playing the role of helper in a play provides an opportunity to practice “helping”. Therefore, play is an important factor in learning prosocial behaviors (Durualp & Aral, 2011; Yavuzer, 2007).

The aim of this study is to examine the relationship between prosocial and play behaviors of 60-72-month-old preschool children. Upon examining the field studies, no research was found that investigates the prosocial and play behaviors of 60-72-month-old children and the relationship between them. Investigating the relationship between prosocial behaviours and play behaviour in preschool children will help us understand children's social and emotional development. This research may help educators and parents to develop more effective strategies to support children's social skills. In addition, it is thought that it will help children to establish healthy relationships and social adaptation in later life. Consequently, answers to the following sub-problems were sought:

1. Do the scores of 60-72-month-old children attending preschool education institutions from the Penn Interactive Peer Play Scale-Teacher Form and Prosocial Behavior Scale differ according to the variables of gender, age, number of siblings and previous preschool education?

2. What is the relationship between Preschool Prosocial Behavior Scale and Penn Interactive Peer Play Scale-Teacher Form scores of 60-72-month-old children attending preschool education institutions?

2. Method

2.1. Research Model

This study, which aims to determine the prosocial and play behaviors of 60-72-month-old children and the relationship between these behaviors, was conducted by adopting the correlational survey model. Correlational survey model is a research model that aims to

determine the existence and/or degree of change between two or more variables (Karasar, 2012).

2.2. Population-Sampling

The study group consists of children aged 60-72 months attending official kindergartens affiliated to the Ministry of National Education in Kütahya, Turkey. The sample consisted of 300 children between the ages of 60-72 months and 15 teachers attending three official kindergartens selected among eight official kindergartens affiliated with the Ministry of National Education. The sample was selected by simple random sampling. In simple random sampling, every possible combination of items in the population has an equal probability of being included in the sample (Kerlinger & Lee, 1999). While conducting the research, all units are listed and random units are selected from the list (Kılıç, 2013). The "Preschool Prosocial Behavior Scale" was applied to 300 children in the selected kindergartens who voluntarily participated in the study. Then, "Penn Interactive Peer Play Scale" was applied to the teachers of the children participating in the study to determine the play behaviors of the children. Demographic characteristics of the sample are given below in Table 1.

Table 1

Distribution of the Study Group According to Demographic Characteristics

Variable	n	%		n	%
Gender			Number of Siblings		
Girls	151	50,33	Singleton	95	31,67
Boys	149	49,67	1 sibling	162	54,00
Age			2 siblings	36	12,00
5	187	62,3	3 siblings	6	2,00
6	113	37,7	4 siblings	1	0,33
	Previous Pre-school Education Status				
Yes	213	71,00	No	87	29,00

Table 1 shows that 151 (50.33%) of the children were girls and 149 (49.67%) were boys. In terms of the number of siblings, 95 (31.67%) were singleton, 162 (54%) had one sibling, 36 (12%) had two siblings, 6 (2%) had three siblings and 1 (0.33%) had four siblings. According to the variable of pre-school education status of the children, 213 (71%) had received education and 87 (29%) had not received pre-school education.

2.3. Research Instruments

A "Personal Information Form" was used to gather personal information about the participants. The "Preschool Prosocial Behavior Scale" was utilized to measure the prosocial behaviors of 60-72-month-old children. Additionally, the "Penn Interactive Peer Play Scale Teacher Form" was employed to assess the children's play behaviors.

2.3.1. Personal Information Form

The Personal Information Form, prepared by the researchers, included information about the gender, age, parental education level, parental occupation, number of siblings, family income level and previous preschool education of the children in the study group.

2.3.2. Preschool Prosocial Behavior Scale

The scale developed by Çelik Kahraman (2019) includes scenarios consisting of 14 items of hypothetical problem situations. The scale consists of 5 sub-dimensions. These are empathy (2 items), helping (4 items), sharing (4 items), communication skills (2 items) and cooperation (2 items). The problem situation is explained by showing the pictures of the scenarios in the test to the children and the children are asked "What do you think happened afterwards?" and "What do you think the child in the picture felt?". If the answers given by the children are prosocial, they are given 1 point, and if they are non-prosocial, they are given 0 point and the scale checklist form is filled out. The skewness kurtosis value of the scale shows a distribution between -1 and +1 and is close to a normal distribution is observed. After the scenarios included in the scale were evaluated The calculated reliability value of 0.80 for 61-72 month old children (KR-20) is acceptable.

2.3.3. Penn Interactive Peer Play Scale Teacher Form (PPIPS-T)

Penn Interactive Peer Play Scale was developed by Fantuzza, Mendez & Tighe (1998) and adapted to Turkish language and culture by Ahmetoğlu, Acar, and Aral (2017). The scale, developed for teachers to understand peer play behaviors in early childhood, consists of 32 items divided into three sub-dimensions: Play Interaction, Play Disruption, and Disengagement from Play. The items are completed by teachers. The internal consistency values of the scale, calculated using Cronbach's alpha method, were found to be $\alpha = .85$ for Play Interaction, $\alpha = .89$ for Play Disruption, and $\alpha = .81$ for Disengagement from Play.

2.4. Data Collection

Permissions were obtained for the implementation. Information regarding children aged 60-72 months and their parents was obtained using a Personal Information Form. Data were collected through scales administered to the children by the researcher and filled out by teachers. To avoid any confusion in the scales administered to the children, the scales were numbered sequentially as C1, C2, etc., and matched with the scales filled out by the teachers.

2.5. Data Analysis

Before analyzing the data, it was checked whether they met the necessary assumptions for parametric tests. Skewness coefficients were examined in each sub-dimension for normality of the data. Independent Samples T Test or Mann Whitney U Test was used to examine the differentiation of mean scores in independent variables with two categories for making comparisons; One-Way Analysis of Variance or Kruskall Wallis H Test was used to examine the differentiation of mean scores in variables with more than two categories. Pearson Product Moment Correlation was used for the correlation between prosocial behaviors and play interaction, and Spearman Rank Difference Correlation was used for the correlation between prosocial behaviors and play disruption/disengagement sub-dimensions.

2.6. Ethics Committee Permission

The necessary permissions were obtained from Kütahya Dumlupınar University, Social and Human Sciences Scientific Research and Publication Ethics Board of Social Sciences and Humanities with the letter numbered E.38765 and from Kutahya Provincial Directorate of Ministry of National Education.

3. Findings

In this section, findings and interpretations related to the sub-problems of the study are presented.

3.1. Findings Related to the First Sub-Problem

3.1.1. *Findings and Comments Regarding Penn Interactive Peer Play Scale Teacher Form Subscale Scores*

Table 2

T Test Results of Play Interaction Sub-dimension Scores According to Gender, Age and Receiving Previous Pre-school Education Status Variables

Variable		N	X	S	Sd	T	p	Effect Size
Gender	Girls	151	31.27	6.08	298	4.035	0.00	0.05
	Boys	149	28.41	6.20				
Age	5	187	29.57	6.35	298	-1.002	0.317	-
	6	113	30.32	6.20				
Previous Education	Yes	213	30.59	6.19	298	3.242	0.001	0.034
	No	87	28.03	6.28				

Table 2 shows that there is a significant difference between the mean scores of children in the Play Interaction sub-dimension according to their gender ($t(298) = 4.035$; $p < 0.05$). The arithmetic mean of girls is 31.27 and the arithmetic mean of boys is 28.41. As a result of the analysis, it can be claimed that girls engage in more play interactions than boys. As seen in the table, there is no significant difference between the mean scores of play interaction according to the age of the child ($t(298) = 1.002$, $p > 0.05$). Table 2 shows significant difference according to the status of receiving Preschool education ($t(298) = 3.242$; $p < 0.05$). The arithmetic mean of the children who received preschool education is 30.59, and the arithmetic mean of the children who did not receive preschool education is 28.03. As a result of the analysis, it can be asserted that children with previous pre-school education engage in more play interactions than children without previous pre-school education.

Table 3

Mann-Whitney U Test Results of Play Disruption Sub-dimension Scores According to Gender, Age and Receiving Previous Pre-school Education Status Variables

Variable		N	Mean Rank	Sum of Ranks	z	p	Effect Size
Gender	Girls	151	128.56	19412.50	-4.442	0.00	0.26
	Boys	149	172.73	25737.50			
Age	5	187	156.57	29278.00	-1.569	0.117	
	6	113	140.46	15872.00			
Previous Education	Yes	213	142.68	30390.00	-2.462	0.014	0.14
	No	87	169.66	14760.00			

Table 3 shows that there is a significant difference between the mean scores of children's Play Disruption according to gender ($z = 4.442$, $p < 0.05$). The mean ranks and sum of ranks analysis shows that boys (172.73) experience more disruption during play than girls (128.56). As seen in the table, there is no significant difference between the mean scores of play disruption according to the age of the child ($z = 1.569$, $p > 0.05$). The table also shows that there is a significant

difference between the mean scores of play disruption according to the previous pre-school education ($z = 2.462$, $p < 0.05$). Considering the rank averages and rank sums, it can be stated that children who did not receive previous pre-school education (169.66) experienced disruption during play more than children who pre-school received education (142.68).

Table 4

Mann-Whitney U Test Results of Detachment from Play Sub-dimension Scores According to Gender, Age and Receiving Previous Pre-school Education Status Variables

Variable		N	Mean Rank	Sum of Ranks	z	p	Effect Size
Gender	Girls	151	139.19	21018.00	-2.280	0.023	0.13
	Boys	149	161.96	24132.00			
Age	5	187	158.95	29723.00	-2.177	0.030	0.13
	6	113	136.52	15427.00			
Previous Education	Yes	213	139.73	29763.00	-3.375	0.001	0.19
	No	87	176.86	15387.00			

Table 4 shows that there is a significant difference between the mean scores of children's disengagement from play according to gender ($z = 2.280$, $p < 0.05$). Considering the rank averages and rank sums analysis, it can be said that boys (161.96) experienced more disengagement during play than girls (139.19). It is found that there is a significant difference between the mean scores of children's disengagement from play according to age ($z = 2.177$, $p < 0.05$). The rank means and rank sums analysis demonstrates that 5-year-old children (158.95) experienced more disconnection during play than 6-year-old children (136.52). The table also makes it clear that there is a significant difference between the mean scores of children's disengagement from play according to the status of receiving previous pre-school education ($z = 3.375$, $p < 0.05$). Considering the rank averages and rank sums analysis, it can be claimed that children who did not receive previous pre-school education (176.86) experienced disconnection during play more than children who received pre-school education (139.73).

Table 5

Anova Results of the Comparison of Play Interaction Sub-dimension Scores According to the Number of Siblings

Sourceof Variance	Sum of Squares	Sd	Mean Squares	F	p	Significant Difference	Effect Size
Intergroup	277.422	2	138.711	3.552	0.030	Singleton-2 siblings	0.024
Intragroup	11324.298	290	39.049				
Total	11601.720	292					

Table 5 shows that, as a result of ANOVA, children's mean play interaction scores differs significantly according to the number of siblings ($F(2,290) = 3.552$, $p < 0.05$). For the source of the difference, Tukey pairwise comparison method was used to compare group mean scores and a significant difference is observed between being an only child and having two siblings in favor of two siblings. The mean play interaction score of children with two siblings is 31.69, while the mean score of children with singleton is 28.66.

Table 6

Kruskal Wallis H Test Results for the Comparison of Play Disruption and Disengagement Sub-dimension Scores by Number of Siblings

Variable	Number of Siblings	N	Mean Rank	sd	χ^2	p	Significant Difference	Effect Size
Play Disruption	Singleton	95	155.75	2	10.283	0.006	1 siblings -2 siblings	0.60
	1 siblings	162	134.46					
	2 siblings	36	180.36					
Play Disengagement	Singleton	95	153.18	2	1.072	0.585		
	1 siblings	162	145.63					
	2 siblings	36	136.85					

Table 6 shows that there is significant difference between the mean scores of children on the play disruption sub-dimension according to the number of siblings ($\chi 2$ (2) = 10.283, $p < 0.05$). As a result of the pairwise comparisons made to investigate which groups caused the observed difference between the groups, as seen in the Table 6, the play disruption scores of children with singleton (134.46) are lower than the scores of children with two siblings (180.36). The number of siblings has a great effect on play disruption. There is no significant difference between the mean scores of the children in the play disengagement sub-dimension according to the number of siblings ($\chi 2$ (2) = 1.072, $p > 0.05$).

3.1.2. Findings on Prosocial Behavior Scale Scores

Table 7

T Test Results of Prosocial Behavior Scale Scores According to Gender, Age and Receiving Previous Pre-school Education Status

Variable		N	X	S	SD	T	p	Effect Size
Gender	Girls	151	9.69	2.51	298	2.292	0.023	0.017
	Boys	149	8.99	2.74				
Age	5	187	9.57	2.56	298	1.890	0.060	
	6	113	8.97	2.60				
Previous Education	Yes	213	9.60	2.63	298	2.715	0.007	0,024
	No	87	8.70	8.70				

Table 7 shows a significant difference is found between the prosocial behavior levels of children according to their gender (t (298) = 2.292; $p < 0.05$). As seen in the table, the arithmetic mean of girls is 9.69 and the arithmetic mean of boys is 8.99. As a result of the analysis, it can be said that girls tend to show more prosocial behavior than boys. There was no significant difference between the prosocial behavior levels of children according to their ages (t (298) = 1.890; $p > 0.05$). There is a significant difference between the mean scores of the children's prosocial behavior level according to the status receiving previous pre-school education (t (298) = 2.715; $p < 0.05$). The arithmetic mean of the children who received pre-school education is 9.60 and the arithmetic mean of the children who did not receive pre-school education is 8.70. As a result of the analysis, it can be said that the children who received pre-school education tend to show more prosocial behavior than the children who did not receive pre-school education.

Table 8

Anova Results of Comparison of Prosocial Behavior Scale Scores According to Number of Siblings

Sourceof Variance	Sum of Squares	Sd	Mean Squares	F	p	Significant Difference
Intergroup	15.216	2	7.608			
Intragroup	2037.487	290	7.026	1.083	0.340	-
Total	2052.703	292				

Table 8 shows that, as a result of ANOVA, there is no significant difference between the mean scores of children's prosocial behavior levels according to the number of siblings ($F_{(2,290)} = 1.083$, $p > 0.05$).

3.2. Findings Related to the Second Sub-Problem

Is there a relationship between prosocial behaviors and peer play behaviors of 5-6 year old children attending preschool education institutions? Considering the findings related to the sub-problem, a significant positive low correlation is found between children's prosocial behaviors and play interaction behaviors ($r = 0.194$, $p = 0.001$). There is a significant low negative correlation between children's prosocial behaviors and play disruption behaviors ($r = -0.127$, $p = 0.028$). There is a significant low negative correlation between children's prosocial behaviors and play disengagement behaviors ($r = -0.140$, $p = 0.016$).

4. Discussion and Conclusion

Upon examining the results of the study were examined, a significant difference was found between the mean scores of the children in the play interaction sub-dimensions of the Penn Interactive Peer Play Scale Teacher Form according to their gender. The arithmetic mean of girls was found to be higher than the arithmetic mean of boys. As a result of the analysis, it can be said that girls engage in more play interaction than boys. A significant difference was found between the mean scores of children in the sub-dimensions of play disruption according to gender. The mean ranks and sum of ranks analysis shows that boys experience more disruption during play than girls. A significant difference was found between the mean scores of children on the sub-dimensions of detachment from play according to gender. Considering the rank means and sum of ranks, it can be said that boys experience more detachment during play than girls. The findings of the study are similar to the results of previous studies.

McDermott (2008) found that boys reveal their problems more than girls and have more difficulties in adaptation. It can be said that girls are more successful in maintaining interactive plays than boys because girls exhibit a more cooperative approach to reach a solution to problems, while boys exhibit more aggressive reactions. Leung (2013) concluded that girls play interactive plays more than boys and exhibit play disruption and disengagement behaviors less than boys. Aşık Öztürk (2018) conducted a study to evaluate play in group environments in preschool education institutions and play behaviors differed in favor of Girls and that play behaviors in group environments were at a higher level than boys. Sönmez (2019) examined the relationship between the temperaments of preschool children and peer relations and the scores of girls are higher than boys in the sub-dimension of play interaction, and the scores of boys are higher than girls in the sub-dimensions of play disruption and disconnection from the play. Bahadır (2020) examined the peer play behaviors and social skills of 60-72-month-old children and concluded that the scores of girls in play interaction are significantly higher than the scores

of boys, while the scores of girls in play disruption and disconnection from play are significantly lower than the scores of boys. Üzel (2020) examined the effect of aggression orientations of 48-72-month-old children on play interaction and found that there is no significant difference between boys and girls in the sub-dimension of play interaction, while significant differences are found in favor of girls in the sub-dimensions of play disruption and disconnection from play. Boys and girls go through the same developmental stages of play. However, it is thought that the difference in play behaviors is that they choose play styles according to their gender. The previous studies about plays show that boys prefer plays that involve more pushing and shoving and movement, while girls prefer calmer, symbolic and group plays (Aslan Metin, 2013; Aşık Öztürk, 2018; Değirmenci, 2016; Kılınç, 2016; Köycekaş, 2019).

It is found that there is a significant difference between the mean scores of children's detachment from the play according to their ages. It can be said that 5-year-old children experience disengagement during play compared to 6-year-old children and that age has a small effect on disengagement. The findings of this study are similar to the results of some previous studies. Bayrak (2019) conducted a study with 48-72-month-old children and concluded that there is no significant relationship in the sub-dimensions of “play interaction” and “play disruption” according to age variable, but there is a significant relationship in the sub-dimension of “disconnection from play”. As children get older, they tend to play plays that they think are better and attract their attention more. With advancing age, attention span increases and children focus on a certain area for a longer period of time and thus become less bored. The duration of a particular play or activity increases with age, and they spend more time on subjects that interest them and that they are willing to do (Önder & Çiftçi, 2020). For this reason, it is thought that the 5-year-olds show disengagement behavior compared to the 6-year-olds.

There are also studies in the literature that reach different results between play behavior and age variable. Aşık Öztürk (2018) concluded that play behaviors vary according to the age of children in the study conducted to evaluate play in group settings in preschool education institutions. It was found that 73 months and older children's scores on the “Observation Form for the Evaluation of Play in Group Environments” are higher than the scores of 36-48 months and 49-60 months children. Acer (2018) examined the value levels and peer play behaviors of 48-72-month-old children attending a preschool education institution and concluded that there is no significant difference between the mean scores on the “Penn Interactive Peer Play Scale” in the sub-dimensions of play disruption and disconnection from play, but there is a significant difference between the sub-dimensions of play interaction. It is thought that the results of the current study differ from the other studies because the age group is close.

Children's mean play interaction scores differs significantly according to the number of siblings. There is a significant difference between being a singleton and having two siblings in favor of two siblings. The number of siblings has a small effect on play interaction.

Taylı (2007) found that singletons play alone more than the children with siblings, while children with siblings play together and cooperative plays more than singletons. Since it is thought that there will be more interaction in cooperative plays, it is similar to the findings of this study. It can be said that siblings are friends and play games with each other at home. Yokuş & Yavuz Konokman (2019), on the contrary to the findings of this research, in their research in which they examined the play behavior levels of preschool children in terms of various variables, revealed that those who do not have siblings play less playful fights compared to those with one or two siblings. However, there are also studies that concluded that the number of siblings do not make a significant difference on the play behaviors of preschool children (Acer, 2018; Aşık Öztürk, 2018; Budak, 2016; Günal, 2019; Kocabaş, 2018;

Kozikoğlu, 2019; Macun & Güvendi, 2019). This is thought to be due to the availability of environments where children can play with their peers or other friends outside the home.

There is a significant difference between the mean scores of children in the play interaction sub-dimension according to the status of receiving preschool education. It can be said that children with preschool education have more play interaction than children without preschool education. Research findings are similar to previous studies. Acer (2018) concluded that children who attended preschool education institutions for a longer period of time have better play interaction levels and lower levels of play disengagement. Günal (2019) concluded that the play tendencies of children who previously attended preschool education institutions are higher than those who did not. Değirmenci (2016) found a significant difference between the duration of education in preschool institutions. Özkılıç Kabul (2019) reached similar results in her research. In her study, which examined the effects of the use of technology on social skills, play skills and language development in three-year-old children, it was concluded that children who attended school had higher levels of play interaction and lower levels of play disruption and disengagement than children who did not attend school. Preschool education institutions are thought to be institutions that allow children to play with their peers. It can be said that children learn to live, play and have fun together by interacting with their peers in these institutions. In these institutions, children have chance to find the best environment for play (Yavuzer, 1999).

A significant difference is found between the prosocial behavior levels of children according to their gender. As a result of the analysis, it can be said that girls tend to show more prosocial behavior than boys. Some research findings are similar to the findings of this study (Aktaş & Güvenç, 2006; Altay & Güre, 2012; Bağcı, 2015; Önal, 2018Öztürker, 2014; Uzmen & Mağden, 2002; Yazıcı & Salıkutluk, 2017). In the study conducted by Altay and Güre (2012), it was concluded that girls exhibited the behaviors of cooperating with their peers, sharing things and consoling in difficult moments more frequently than boys, and also boys exhibit more physical and verbal aggression behaviors against their peers than girls. Bağcı (2015) found a significant difference in favor of girls in terms of child prosociality teacher form scores. This difference is thought to arise due to the stereotypes attributed to gender roles of the society. While aggression, not acting emotionally, being dominant, and leadership are considered typical Boys behaviors by the society, girls' behaviors are supposed to include being kind, being overly emotional, and being empathetic. These judgments on gender may lead to different upbringing styles and disciplinary attitudes of boys and girls. While girls are rewarded more when they display prosocial behaviors, boys are rewarded when they show their anger. Eisenberg and Fabes (1998) stated that gender differences in prosocial behaviors are not evident in most of the studies, but in cases where this difference is observed, the results are in favor of girls.

No significant difference is found between the prosocial behavior levels of children according to their ages. Children are expected to develop cognitively and linguistically with increasing age. Thus, children can solve their problems by talking, understand the feelings and thoughts of others and give appropriate reactions. It can be said that both the frequency and variety of positive social skills increase with increasing age. In some of the studies on prosocial behaviors (Çubukçu, 2019; Şen, 2009), the age variable creates a significant difference, while in others (Çelik Kahraman, 2019; McGinley & Carlo, 2007; Önal, 2018; Uluyurt, 2012) it does not create a significant difference. It is thought that the lack of a significant difference between prosocial behaviors and age in the study group of the research is due to the fact that the age group is close to each other, the teacher establishes affective relationships with the children and the social skills he/she has.

No significant difference is found between the mean scores of children's prosocial behavior levels according to the number of siblings. The findings of this study are similar to the findings of the study conducted by Uluyurt (2012). In Uluyurt's (2012) study, it was revealed that there is no significant difference in peer relations according to the number of siblings. Gültekin (2008) examined the sibling variable and found that there is no significant difference between those who are only children and those who are not in terms of "Social Skills Total Score" and "Problem Behavior Total Score". Alisinanoğlu and Kesicioğlu (2010) concluded that the number of siblings do not make a significant difference on children's behavioral problems in their study in which they examined the behavioral problems of preschool children. Sarı (2007) reached similar findings, and no significant difference is found between the numbers of siblings in terms of the answers given to the "social adjustment scale". Uzmen (2001) concluded that the number of siblings have no effect on helping and sharing actions. There are also studies in the literature that differ from the findings of this study. Yenidede (2018) found that children with siblings exhibit more prosocial behaviors than those who are singletons. Bağcı Çetin & Öztürk Samur (2018) concluded that the scores of singletons from the mother form of the child prosociality scale are lower than those with one or more siblings. Bağcı (2015) found that the scores of singletons from the child prosociality mother form are lower than those with one sibling and those with two or more siblings. It is thought that children can gain positive social skills such as empathy, cooperation, and sharing through sibling relationships. However, it can be said that families give more importance to the development of their singletons and allocate more time to their children in order for them to acquire social behaviors.

There is a significant difference between the mean scores of children's prosocial behavior level according to the status of receiving preschool education. As a result of the analysis, it can be said that children who receive education tend to show more prosocial behavior than children who have not received education. Yazıcı and Salıkutluk (2017) concluded in their study that the tendency to show prosocial behaviors is directly proportional to the duration of receiving preschool education, and the tendency to show prosocial behaviors increases as the duration of receiving education increases. Günindi (2008) concluded that children who attend preschool education institutions for two years or more have more positive social adaptation behaviors than those who just start school. In a study conducted by Dinç (2002), it was concluded that the social development level of those who attended preschool for two years is higher than those who attended preschool for one year. According to these findings, it can be said that as the duration of preschool education increases, children's tendency to show prosocial behavior also increases.

According to finding of this study, there is a low positive correlation between children's prosocial behaviors and play interaction behaviors ($r= 0.194$, $p=0.001$). Ogelman and Erten Sarıkaya (2014) examined the predictive effect of preschool children's play behaviors on peer relationships and concluded that increasing the level of social play increases the level of prosocial behavior and decreases the level of antisocial behavior. The finding of the study is parallel in terms of the positive effect of play interaction on prosocial behaviors. Prosocial behaviors are seen around 2-3 years of age, when children are interested in playing with other children. At this age, children need to cooperate and interact socially. Today, with the increase the number of working mothers, children are introduced to the educational environment before the age of three. In this environment, positive behaviors can be thought to be acquired through play (Yazıcı & Salıkutluk, 2017). It can be said that social interaction with peers or adults through play supports the development of prosocial behaviors in children.

There is a significant low negative correlation between children's prosocial behaviors and play disruption behaviors ($r = -0.127$, $p = 0.028$). In the study conducted by Salı (2014) in which peer relations and exposure to peer violence in preschool children were examined in terms of various

variables, it was concluded that the score of showing social behaviors to help peers decreased as exposure to peer violence. In the study conducted by Gülay (2009), it was concluded that as the level of exposure to peer violence increased, hyperactivity, aggression, fearful-anxiousness and non-social behaviors increased in children, while social behaviors aimed at helping others decreased. The findings of this study are in parallel with the findings of Ogelman and Erten Sarıkaya (2014). Ogelman and Erten Sarıkaya (2014) concluded that increasing the level of playful fight increased the level of hyperactivity, aggression, fearful-anxiousness and exposure to peer violence, while decreasing the level of positive social behavior.

There is a significant low negative correlation between children's prosocial behaviors and play disengagement behaviors ($r = -0.140$, $p = 0.016$). In the study conducted by Aşık Öztürk (2018) to evaluate play in group environments in preschool education institutions, it was concluded that play skills in group environments negatively affect children's anxious/introverted behaviors. Coolahan, Fantuzzo, Mendez & McDermott (2000) stated in their study that the behavior of disconnecting from play often causes children not to be accepted by their peers.

The results achieved in this study suggest the following recommendations: The data for the conducted research were collected from both teachers and children. Including parents' perspectives in future studies could lead to obtaining more comprehensive data on play and prosocial behaviors. More comprehensive research can be conducted with additional variables related to play and prosocial behaviors for children. The research could be expanded by selecting a broader population and sample group, and utilizing different scales. Observation-based studies could also be conducted to further examine the relationship between children's peer play behaviors and prosocial behaviors.

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Examination of the Relationship between School Administrators' Lifelong Learning Tendencies and Individual Innovativeness Levels*

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Abstract

This study aims to investigate school administrators' tendencies towards lifelong learning and their individual innovativeness levels by using different variables, as well as to determine the relationship between these tendencies and levels. The research was conducted using a correlational survey model, one of the quantitative methods. The universe of this study consisted of 1308 school administrators working in Sakarya province. The sample includes 302 school administrators who were randomly selected from this universe and volunteered to participate. Data collection involved the use of a "Personal Information Form", the "Lifelong Learning Tendencies Scale", and the "Individual Innovativeness Scale". Data analyses were conducted using the SPSS 24.0 software package. Descriptive statistics were used to calculate the scores obtained by school administrators from the scales to analyze the sub-problems of the research. The Kolmogorov-Smirnov and Shapiro-Wilk normality tests, along with the Mann-Whitney U and Kruskal-Wallis H tests, were used for comparison analyses, whereas the Spearman rank-order correlation coefficient was examined for the relationship analysis. Given the results achieved research results, a positive and moderately significant relationship was found between school administrators' lifelong learning tendencies and their individual innovativeness levels. It was concluded that there is no significant difference in school administrators' lifelong learning tendencies and individual innovativeness levels by gender and administrative experience variables. However, it was found that school administrators' lifelong learning tendencies show a significant difference in favor of those pursuing postgraduate education by the education level variable, whereas their individual innovativeness levels do not show a significant difference.

Keywords: Individual innovativeness, lifelong learning, school administrators

1. Introduction

School administrators are individuals managing the infrastructure that surrounds the technical aspects of teaching and learning. They are responsible for planning, organizing, budgeting, and addressing issues both within and outside the system (Lunenburg, 2002). School administration refers to the capacity to influence the attitudes, skills, and beliefs of employees in a way that contributes to the school's goals (Gibson & Deem, 2016). The effectiveness of a school organization largely depends on the school administrator's skills to create, manage, maintain, and

* This study is derived from the first author's thesis supervised by the second author.

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execute purposeful actions through coordinated collaborative efforts. Therefore, school administration is the process of coordinating and integrating both individual efforts and material resources to achieve the goals of the school system.

For a school administrator to perform their administrative duties effectively and efficiently, they must be knowledgeable about the implementation of innovations in school management (Akpan, 2016). In this context, it becomes important for administrators to continuously work on updating and developing themselves to adapt to technological innovations in the field of education and create an information society in schools through the process of lifelong learning (LLL) (Urhan, 2020). Adopting the LLL process and continuously improving themselves can contribute to administrators not only in terms of their professional development but also in making their schools stronger.

LLL means sustainable learning. Sustainability in education should primarily start with school administrators. The advancement of the education system requires school administrators who are dedicated to LLL, globally competitive, and excel in their work. In this context, today's school administrators need to adapt to recent changes in the education system (Baldovino, 2018). Educational administration is not merely a bureaucratic function; it is an evolving professional discipline with different implementation elements depending on educational achievements, namely student learning. Educational administration has become a complex profession requiring in-depth study and continuous learning throughout one's professional career. Leading an educational organization necessitates LLL (Reeves & Berry, 2008). Thus, LLL can help school administrators better understand the constantly changing educational environment, expand their knowledge and skills development, and strengthen their abilities to serve as mentors (Kajs, Decman, Cox, Willman & Alaniz, 2002). The most significant features of the current era are uncertainty, complexity, globalization, and technological advancements. Under such conditions, success often requires changes in the execution and management of institutional activities and tasks. In this sense, the presence of effective and innovative administrators can help educational systems better achieve their goals (Rad, Shahi & Fazeli, 2021). Changes and advancements in society bring innovative practices in education. Innovation refers to purposeful, organized, and risk-taking changes applied to any business organization to ensure efficiency and increase productivity. The goal of injecting innovations into school administration is to increase school standards, quality, and institutional effectiveness (Akpan, 2016). Kılıçer (2011) defined individual innovativeness (II) as the willingness of individuals to accept and adopt innovation with a positive attitude, reflect innovation in their daily lives, and benefit from innovations. In this context, school administrators who adopt individual innovativeness can become successful administrators in aligning their schools with the requirements of the age by continuously developing themselves through the LLL process.

The educational environment is constantly changing. Factors such as the emergence of new technologies, differentiation of pedagogical approaches, and changing societal expectations bring about continuous change in education. LLL enables school administrators to adapt to this changing environment, follow current educational research, and adopt best practices. LLL and innovativeness are complementary important concepts for individuals to succeed in an ever-changing world. These two characteristics contribute to individuals' personal and professional development. LLL focuses on continuously developing an individual's knowledge, skills, and abilities. This continuous development makes the individual more flexible, open-minded, and innovative. LLL enhances an individual's creativity and innovation capability. The continuous learning process helps the individual to develop new ideas by feeding on various sources of information. School administrators can shape the school culture and climate with II

characteristics. Innovativeness can create a positive learning atmosphere among students, teachers, and other staff.

School administrators' lifelong learning tendencies and innovative characteristics can contribute to the success of the school, student achievement, and alignment with societal expectations. School administrators with lifelong learning tendency become more innovative and creative by continuously acquiring new knowledge and experiences, enhancing their problem-solving skills, increasing their flexibility, and strengthening attributes such as risk-taking and openness to change. Innovative individuals are generally curious, eager to explore, and open to learning. Thus, they are driven by a constant desire to learn and discover new things, which can further enhance their tendency for lifelong learning. It is believed that there is a positive relationship between lifelong learning tendencies and individual innovativeness. In this context, it is important to examine the relationship between the lifelong learning tendencies and the levels of individual innovativeness among school administrators. The success of a school can be directly related to the leadership and management skills of its administrators. School administrators who exhibit individual innovativeness and a tendency for lifelong learning can more effectively fulfill their leadership roles. Investigating the relationship between the lifelong learning tendencies and the level of individual innovativeness of school administrators is crucial for improving educational quality and making schools more effective. The results of this research can contribute to the development of educational policies and leadership development programs.

Reviewing the literature, it was determined that there are studies examining the lifelong learning tendencies and individual innovativeness levels among administrators working in different professional fields, as well as among students and teachers within the education system (Beşkaya, 2017; Mülhim, 2018; Yenice & Tunç, 2019; Yılmaz & Beşkaya, 2018; Öztürk Yurtseven & Aldan Karademir, 2017). However, there are only a few studies that specifically investigate the relationship between the lifelong learning tendencies and the individual innovativeness levels among school administrators (Yılmaz & Beşkaya, 2018). This study differs from the study carried out by Yılmaz and Beşkaya (2018) by involving a larger number of school administrators and collecting data by using a different scale for measuring lifelong learning tendencies. Additionally, the literature on lifelong learning and individual innovativeness includes studies conducted on samples different from the current study, such as university students and teachers, examining variables like gender, managerial experience, and educational background (Kılıç, 2015; Mülhim, 2018; Yenice & Tunç, 2019). In this context, determining the relationship between the lifelong learning tendencies and the levels of individual innovativeness among school administrators through this study can raise their awareness about fostering a culture that promotes lifelong learning in schools, thus contributing to more effective and innovative educational environments. Furthermore, this study is considered important for the development of strategies aiming to improve educational practices through training activities to be organized in schools. In this context, the present study aims to examine the relationship between the lifelong learning tendencies and the levels of individual innovativeness of school administrators, as well as the differences in these tendencies and levels by various variables (gender, managerial experience, and educational background). Within this scope, the research questions are as follows:

1. Do the lifelong learning tendencies of school administrators exhibit significant differences by gender, managerial experience, and educational background?
2. Do the levels of individual innovativeness of school administrators exhibit significant differences by gender, managerial experience, and educational background?
3. Is there a relationship between the lifelong learning tendencies and the levels of individual innovativeness of school administrators?

2. Method

2.1. Research Model

The correlational survey model, one of the quantitative approaches, was used in the present study. The correlational survey model is a type of survey that is used to determine if there is a simultaneous change between two or more variables (Karasar, 2017).

2.2. Universe and Sample

The population of the research consists of a total of 1,308 school administrators, including 472 school principals, 19 vice-principals, and 817 assistant principals working in official kindergartens, primary schools, secondary schools, and high schools in Sakarya province during the 2022-2023 academic year (MEB, 2022). From this population, school administrators from schools selected by simple random sampling were included in the sample. This method ensures that each participant in the population has an equal and independent chance of being selected (Büyüköztürk et al., 2015). The link to the scales was sent to the school administrators working at the selected schools. A total of 302 school administrators who voluntarily completed the scales formed the sample of the study. The demographic characteristics of the school administrators in the sample are shown in Table 1.

Table 1

Demographic Characteristics of Administrators in the Sample

Demographic Variable	Category	Frequency (f)	Percentage (%)
Sex	Female	82	27.2
	Male	220	72.8
Administrative Experience	0-10 years	161	53.3
	11-20 years	113	37.4
	21 years and longer	28	9.3
Educational Status	Undergraduate	214	70.9
	Postgraduate	88	29.1

Examining Table 1, it can be seen that 82 (27.2%) of the school administrators who participated in this study are female and 220 (72.8%) are male. Of the school administrators, 161 (53.3%) have 0-10 years of experience, 113 (37.4%) have 11-20 years of experience, and 28 (9.3%) have over 21 years of experience. Furthermore, 214 (70.9%) of the school administrators have an undergraduate degree, and 88 (29.1%) have a postgraduate degree.

2.3. Data Collection Instruments

In the present study, the "Personal Information Form" prepared by the researcher was used to determine the demographic characteristics of the administrators. The "Lifelong Learning Tendency Scale (LLTS)" developed by Gür Erdoğan and Arsal (2016) was used to identify the lifelong learning tendencies of school administrators, and the "Individual Innovativeness Scale (IIS)" adapted into Turkish by Kılıçer and Odabaşı (2010) was used to determine the individual innovativeness levels of the school administrators.

2.3.1. *Personal Information Form*

The "Personal Information Form" prepared by the researcher consists of three questions covering the demographic information of the administrators (sex, administrative experience, and education level).

2.3.2. Lifelong Learning Tendency Scale

The LLTS, consisting of 17 items, was developed by Gür Erdoğan and Arsal (2016). The scale items are scored on a five-point Likert scale (1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree). There are no negative (reverse) items on the scale. The scale has two sub-dimensions. The first eleven items address the "Willingness to Learn" sub-dimension, and the last six items address the "Openness to Development" sub-dimension. Scores on the LLTS range between 17 and 85 points. Higher scores on the LLTS indicate a higher lifelong learning tendency, whereas lower scores indicate a lower tendency. Gür Erdoğan and Arsal (2016) calculated the criterion validity of the LLTS as 0.71. The Cronbach's Alpha reliability coefficient for the entire scale was calculated as 0.86 and for the sub-dimensions as 0.82.

2.3.3. Individual Innovativeness Scale

The "Individual Innovativeness Scale (IIS)" consisting of 20 items, developed by Hurt et al. in 1977, was adapted into Turkish by Kılıçer and Odabaşı in 2010. The scale items are scored on a five-point Likert scale (1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree). The scale consists of four sub-dimensions. Eight items (4, 6, 7, 10, 13, 15, 17, 20) relate to "Resistance to Change", five items (1, 8, 9, 11, 12) relate to "Opinion Leadership", five items (2, 3, 5, 14, 18) relate to "Openness to Experience", and two items (16, 19) relate to "Risk Taking". The innovativeness score on the scale is calculated by subtracting the total score of the negative items from the total score of the positive items and then adding 42 to the result (Kılıçer & Odabaşı, 2010). Scores obtained range from 46 and below for traditionalists, 47 to 56 for skeptics, 57 to 68 for inquirers, 69 to 80 for pioneers, and 81 and above for innovators, with scores below 64 indicating low innovativeness (Kılıçer & Odabaşı, 2010). Kılıçer and Odabaşı (2010) calculated the Cronbach's Alpha reliability coefficient as 0.82 for the entire IIS, 0.81 for the "Resistance to Change" sub-dimension, 0.73 for the "Opinion Leadership" sub-dimension, 0.77 for the "Openness to Experience" sub-dimension, and 0.62 for the "Risk Taking" sub-dimension.

2.4. Data Collection Process

In the first stage of data collection, permissions were obtained via email from the researchers who adapted the II scale (Kılıçer & Odabaşı, 2010) and developed the LSALS scale (Gür Erdoğan & Arsal, 2016). In the second stage, necessary permissions were acquired from the Rectorate of Sakarya University and the Sakarya Provincial Directorate of National Education to administer the scales to school administrators. After obtaining these permissions, the scales were administered electronically via Google Forms to the 302 school administrators identified as the sample.

2.5. Data Analysis

The study data were analyzed using SPSS 24.0. The demographic information of the participating school administrators was examined through percentage and frequency distributions. The standard deviation and arithmetic mean were calculated to determine the LLTS tendencies and II levels of the school administrators based on the administered scales. To identify the statistical method to be used in analyzing the LLTS tendencies and II level scores of the school administrators, a normality test was applied to these variables and their sub-dimensions. The skewness and kurtosis coefficients were used to analyze the normality of the scale scores. The test results showed that none of the variables had skewness and kurtosis coefficients within ±1. Based on these results, it was determined that the variables did not meet normality assumptions, and non-parametric tests were used for the analyses (Hair et al., 2013). The Mann-Whitney U test was used to determine if there were differences between two independent groups, and the Kruskal-Wallis H test was used for more than two independent groups. Spearman's rank correlation coefficient was used to examine the relationships between variables. A correlation value of 0.00 indicates no relationship, 0.01-0.29 indicates a low relationship, 0.30-0.70 indicates a moderate relationship, 0.71-0.99 indicates a high relationship, and 1.00 indicates a perfect relationship (Büyüköztürk, 2015).

2.6. Validity and Reliability

The reliability analyses for the LLTS scale in this study resulted in a Cronbach's Alpha coefficient of 0.937 for the entire scale, 0.915 for the "Willingness to Learn" sub-dimension, and 0.85 for the "Openness to Development" sub-dimension. For the Individual Innovativeness Scale, the reliability analyses yielded a Cronbach's Alpha coefficient of 0.87 for the entire scale, 0.89 for the "Resistance to Change" sub-dimension, 0.76 for the "Opinion Leadership" sub-dimension, 0.82 for the "Openness to Experience" sub-dimension, and 0.69 for the "Risk Taking" sub-dimension. A reliability coefficient value of 0.70 or higher for measurement tools collecting data on psychological attitudes indicates that the scores obtained from the scale are sufficiently reliable (Büyüköztürk, 2015). Hence, the scales used in this study can be considered reliable

2.7. Ethics Committee Approval

This research adhered to all the rules specified in the Directive on Scientific Research and Publication Ethics of Higher Education Institutions. The ethical approval for this study was obtained with decision number 05 from the 10th meeting of the Sakarya University Educational Research and Publication Ethics Committee held on September 14, 2022.

3. Results

The findings are presented under the following subsections: 1) Comparison of School Administrators' LLL Tendencies by Demographic Variables, 2) Comparison of School Administrators' II Levels by Demographic Variables, 3) Relationship Between School Administrators' LLL Tendencies and II Levels.

3.1. Comparison of School Administrators' LLL Tendencies by Demographic Variables

The relationship between school administrators' LLL tendencies and variables such as gender, managerial experience, and educational status is provided below.

3.1.1. Comparison of School Administrators' LLL Tendencies by Gender

The results achieved from the Mann-Whitney U test conducted to compare the LLL tendencies of school administrators by gender are presented in Table 2.

Table 2

Comparison of School Administrators' LLL Tendencies by Gender

Subdimensions	Sex	N	Rank Mean	Rank Sum	U	p
Willingness to Learn	Female	82	150.09	12307.50	8904.5	0.854
	Male	220	152.03	33445.50		
Openness to Development	Female	82	153.42	12580.50	8862.5	0.805
	Male	220	150.78	33172.50		
LLL Tendency	Female	82	152.11	12473.00	8970.0	0.939
	Male	220	151.27	33280.00		

Examining Table 2, the results of the Mann-Whitney U test conducted to determine whether there is a significant difference between the LLL tendencies of female and male school administrators indicate that there is no statistically significant difference between the LLL tendencies of female school administrators and those of male school administrators (U=8970, p=0.939).

3.1.2. Comparison of School Administrators' LLL Tendencies by Administrative Experience

The Kruskal-Wallis H test, conducted to compare the LLL tendencies of school administrators in terms of their administrative experience, is presented in Table 3.

Table 3

Comparison of School Administrators' LLL Tendencies by Administrative Experience

Subdimension General	Administrative Experience	N	Rank Mean	s.d.	X^2	p	Diff.
Willingness to Learn	0-10 years	161	152.86	3	2.18	0.53	-
	11-20 years	113	145.12				
	21 years and longer	28	169.23				
Openness to Development	0-10 years	161	148.42	3	0.49	0.91	-
	11-20 years	113	154.78				
	21 years and longer	28	155.59				
LLL Tendency	0-10 years	161	149.86	3	0.62	0.89	-
	11-20 years	113	151.00				
	21 years and longer	28	163.15				

Examining Table 3, it can be stated that the scale scores of school administrators do not show a significant difference in the sub-dimensions of "Openness to Development" ($\chi2$=0.649, p=0.53) and "Willingness to Learn" ($\chi2$=2.18, p=0.91), nor in the overall individual innovativeness tendencies ($\chi2$=0.62, p=0.89) by the variable of years of administrative experience.

3.1.3. Comparison of School Administrators' LLL Tendencies by Educational Status

The Mann-Whitney U test, conducted to compare the LLL tendencies of school administrators according to their educational status, is presented in Table 4.

Tablo 4

Comparison of School Administrators' LLL Tendencies by Educational Status

Subdimensions	Educational Status	N	Rank Mean	Rank Sum	U	p
Willingness to Learn	Undergraduate	214	114.24	30867.00	7862.0	0.015
	Postgraduate	88	169.16	14886.00		
Openness to Development	Undergraduate	214	146.51	31353.00	8348.0	0.101
	Postgraduate	88	163.64	14400.00		
LLE Tendency	Undergraduate	214	144.08	30833.50	7828.50	0.017
	Postgraduate	888	169.54	14919.50		

Examining Table 4, it was determined that there is a statistically significant difference in LLL tendencies by the educational status variable (U=7828.5, p=0.017), with this difference favoring school administrators holding a master's degree. Considering the Mann-Whitney U test results, there is no statistically significant difference in the "Openness to Development" sub-dimension between school administrators with a bachelor's degree and those with a master's degree (U=8343, p=0.101). However, in the "Willingness to Learn" sub-dimension, there is a statistically significant difference favoring school administrators with a master's degree (U=7862, p=0.015).

3.2. Comparison of School Administrators' II Levels by Demographic Variables

The relationship between school administrators' II levels and the variables of gender, administrative experience, and educational status is detailed below.

3.2.1. Comparison of School Administrators' Individual Innovativeness Levels by Gender

The Mann-Whitney U test, conducted to compare the II levels of school administrators by the gender variable, is presented in Table 5.

Table 5

Comparison of School Administrators' II Levels by Gender

Subdimensions	Sex	N	Rank Mean	Rank Sum	U	p
Resistance to Change	Kadın	82	150.95	12378.0	8975.0	0.946
	Erkek	220	151.70	33375.0		
Opinion Leadership	Kadın	82	156.55	12837.5	8605.5	0.534
	Erkek	220	149.62	32915.5		
Openness to Experience	Kadın	82	142.93	11720.5	8317.5	0.268
	Erkek	220	154.69	34032.5		
Risk-Taking	Kadın	82	150.43	12335.0	8932.0	0.879
	Erkek	220	151.90	33418.0		
IIS	Kadın	82	155.66	12764.0	8679.0	0.612
	Erkek	220	149.95	33989.0		

Examining Table 5, the results of the Mann-Whitney U test conducted to determine whether there is a significant difference between the II levels of female and male school administrators indicate

that there is no statistically significant difference between the II levels of female school administrators and those of male school administrators (U=8679, p=0.612).

3.2.2. Comparison of School Administrators' II Levels by Administrative Experience

The Kruskal-Wallis H test, conducted to compare the II levels of school administrators in terms of their administrative experience, is presented in Table 6.

Table 6

Comparison of School Administrators' II Levels by Administrative Experience

Subdimensions General	Administrative Experience	N	Rank Mean	s.d.	X^2	p	Diff.
Resistance to Change	0-10 years	161	156.09	3	7.057	0.070	
	11-20 years	113	154.37				
	21 years and longer	28	108.00				
Opinion Leadership	0-10 years	161	139.79	3	10.735	0.063	
	11-20 years	113	158.08				
	21 years and longer	28	189.53				
Openness to Experience	0-10 years	161	150.11	3	3.733	0.292	
	11-20 years	113	150.20				
	21 years and longer	28	158.41				
Risk-Taking	0-10 years	161	146.49	3	1.836	0.607	
	11-20 years	113	156.16				
	21 years and longer	28	160.83				
IIS	0-10 years	161	150.24	3	0.753	0.861	
	11-20 years	113	154.81				
	21 years and longer	28	141.25				

Examining Table 6, it was observed that the scale scores of school administrators do not show a significant difference in the sub-dimensions of "Resistance to Change" ($\chi2$=7.057, p=0.070), "Opinion Leadership" ($\chi2$=10.735, p=0.063), "Openness to Experience" ($\chi2$=3.733, p=0.292), and "Risk Taking" ($\chi2$=1.836, p=0.607), nor in the overall individual innovativeness tendencies ($\chi2$=0.753, p=0.861) by the variable of years of administrative experience.

3.2.3. Comparison of School Administrators' II Levels by Educational Status

The Mann-Whitney U test, conducted to compare the individual innovativeness levels of school administrators by their educational status, is presented in Table 7.

Table 7

Comparison of School Administrators' II Levels by Educational Status

Subdimensions	Educational Status	N	Rank Mean	Rank Sum	U	p
Resistance to Change	Undergraduate	214	147.50	31564.5	8559.5	0.207
	Postgraduate	88	161.23	14188.5		
Opinion Leadership	Undergraduate	214	142.89	30578.5	7573.5	0.007
	Postgraduate	88	172.44	15174.5		
Openness to Experience	Undergraduate	214	145.66	31170.5	8165.5	0.054
	Postgraduate	888	165.71	14582.5		
Risk Taking	Undergraduate	214	152.31	32595.0	9242.0	0.768
	Postgraduate	888	149.52	31158.0		
IIS	Undergraduate	214	145.63	31164.0	8159.0	0.068
	Postgraduate	888	165.78	14589.0		

Examining Table 7, it can be seen that there is no statistically significant difference in the II levels of school administrators by their educational status (U=8159, p=0.068). However, given the Mann-Whitney U test results, there is a statistically significant difference in the "Opinion Leadership" sub-dimension favoring school administrators with a master's degree (U=7573.5, p=0.007). No statistically significant difference was observed in the "Resistance to Change" (U=8559.5, p=0.207), "Openness to Experience" (U=8165.5, p=0.054), and "Risk Taking" (U=9242, p=0.768) sub-dimensions between school administrators with a bachelor's degree and those with a master's degree.

3.3. Relationship Between School Administrators' LLL Tendencies and II Levels

The Spearman correlation coefficient results, calculated to determine whether there is a relationship between the LLL tendencies and II levels of school administrators, are presented in Table 8.

Table 8

Relationship Between School Administrators' LLL Tendencies and II Levels

		Willingness to Learn	Openness to Development	LLL Tendency
Individual Innovativeness	r_s	.350**	.407**	.416**
	p	.000	.000	.000
	N	302	302	302

Examining Table 8, it can be seen that there is a moderately significant positive relationship between the II levels of school administrators and the "Willingness to Learn" sub-dimension (rs=0.350, p=0.000), as well as the "Openness to Development" sub-dimension (rs=0.407, p=0.000). Examining the scale of LLL tendencies and the total II scores, the relationship was again found to be moderately significant and positive (rs=0.416, p=0.000).

4. Conclusion and Discussion

This study aims to examine the differences in school administrators' LLL tendencies and their II levels by variables such as gender, administrative experience, and educational background, as well as the relationship between their LLL tendencies and II levels. Given the results achieved in this study, there is no difference in the LLL tendencies of school administrators by gender and administrative experience, whereas a significant difference favoring those with a master's degree was observed when considering the educational background. In the relevant literature, different results regarding the LLL tendencies of school administrators by gender were found. A study carried out by Yılmaz and Beşkaya (2018) on educational administrators concluded that the LLL tendencies of administrators varied by gender, with this difference favoring female administrators. Similarly, in a previous study, Özkorkmaz (2016) determined a significant difference in favor of women in the perceived IB competencies of public education center directors. Conversely, a study carried out by Gürkan (2017) revealed that the LLL tendencies of school principals varied by gender, with this difference favoring male administrators. Some studies on teachers reported a difference in LLL tendencies by gender (Çetinkaya, Gülaçtı, Çiftçi & Kağan, 2019; Sevinç & Çelebi, 2020), whereas others reported no such difference (Altın, 2018; Arslan, 2019; Ayaz & Ünal, 2016; Bozkan, 2018; Taş, 2020; Yaman & Yazar, 2015). The differences in study results are thought to be due to the different sample groups and scales used in the studies. Furthermore, the results of studies that reported LLL tendencies by administrative experience and educational background are similar to those reported in this study. Studies carried out by Gürkan (2017) and Yılmaz and Beşkaya (2018) determined that administrators' LLL tendencies did not differ by administrative experience and that the LLL tendencies of administrators with a master's degree were significantly higher than those of administrators with a bachelor's degree. Özkorkmaz (2006) found no change in the II competency perceptions of public education center directors by administrative experience, and studies on teachers found no difference in LLL tendencies by experience (Kaya, 2018; Gedik, 2019; Çetinkaya, Gülaçtı, Çiftçi & Kağan, 2019; Sevinç & Çelebi, 2020). These results suggest that, regardless of gender and experience, individuals' personal attitudes and motivations may influence their LLL tendencies, and their attitudes toward learning may be more decisive. Additionally, the higher LLL tendencies among school administrators with a master's degree may indicate that these administrators are more open to knowledge, constantly willing to improve, and inclined toward innovation. Master's programs generally focus on developing deeper academic knowledge and research skills, which may have contributed to these administrators developing a positive attitude toward continuous learning.

Given the results achieved here, it can be concluded that the II levels of school administrators do not significantly differ by variables such as gender, administrative experience, and educational background. However, there is a significant difference in favor of administrators with a master's degree in the opinion leadership sub-dimension of IIS. Similarly, studies carried out by Çetin (2017) on school administrators and by Başaran and Keleş (2015) and Yüksel (2019) on teachers reported no significant difference in II levels by gender. Additionally, other studies concluded that there is no difference in II levels among teachers concerning experience (Keskin, 2021; Sarı, 2019; Yılmaz, 2019) and educational background (Keskin, 2021). The lack of gender differences in II levels among school administrators may indicate an increased emphasis on gender equality efforts and opportunities in the field of education. Furthermore, the consistency of II levels across different administrative experiences and educational backgrounds suggests that similar opportunities for innovation are provided to administrators at all levels in schools.

The present study also revealed a positive, moderate, and significant relationship between school administrators' LLL tendencies and their II levels. This result can be interpreted to mean that

school administrators' II levels increase with an increase in their LLL tendencies. Supporting studies reported positive and significant relationships between LLL tendencies and II levels among administrators (Gür Erdoğan & Ayanoğlu, 2021; Yılmaz & Beşkaya, 2018), teachers (Gür Erdoğan & Ayanoğlu, 2021; Kılıç & Ayvaz-Tuncel, 2015; Yüksel, 2020), teacher candidates (Öztürk Yurtseven & Aldan Karademir, 2017), and university students (Mülhim, 2018; Biricik, Karababa & Sivrikaya, 2022). The relationship between LLL and II is crucial for school administrators to succeed in a constantly changing world and to create new opportunities. This process can enable administrators to better understand themselves and their surroundings, adapt to changing conditions, and generate creative solutions. Administrators inclined toward LLL generally exhibit a more positive attitude toward change. Those open to change can adopt new information and approaches, thereby improving their II levels. Moreover, LLL can enhance individuals' problem-solving skills. Consequently, when school administrators continually seek new knowledge and strategies to address challenges, these abilities are strengthened, and their IB levels increase.

To strengthen the positive relationship between school administrators' LLL tendencies and II levels, in-service training programs on LLL and innovation could be implemented. These programs can help administrators update their knowledge and skills, learn new management techniques, and encourage innovative thinking. Additionally, schools can offer innovative project opportunities in which school administrators can actively participate. By supporting and actively engaging in innovative projects, administrators can enhance their II levels. This process can also contribute to administrators finding creative solutions to problems and implementing new ideas.

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Development of Curriculum Practices Proficiency Scale for School Principals: A Study of Validity and Reliability

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Abstract

The main aim of this study is to test the construct validity of the scale of school principals' self-efficacy perceptions in managing curriculum implementation through confirmatory factor analysis (CFA). The study group consisted of 297 school principals working in primary, secondary and high schools affiliated to Trabzon Provincial Directorate of National Education. The data of the study were obtained by using the Self-Efficacy Perceptions of Managing Curriculum Implementation Scale. In the CFA analysis conducted to test the scale structure, $\chi 2$/sd ratio was calculated as 1.68; RMSEA: 0.05; SRMR: 0.04; IFI: 0.95; TLI: 0.94; CFI: 0.95; GFI: 0.88; AGFI: 0.86; RMR: 0.02. These values indicate an acceptable fit. Cronbach Alpha value for the entire scale was measured as 0.94. Alpha value indicates that the reliability level of the scale is high. The Confirmatory Factor Analyses suggest that the scale assessing school principals' perceptions of self-efficacy in managing curriculum implementation, comprising 28 items across 4 factors, demonstrates construct validity.

Keywords: Construct validity, curriculum implementation, curriculum management, school principals

1. Introduction

One of the basic components of education is the curriculum. No matter how well developed a curriculum is, it is effective implementation that brings it to life. Implementation is the totality of the joint efforts of students, teachers and school principals to ensure the effective implementation of the curriculum. Curriculum implementation is the means of achieving the desired goals, and the new curriculum needs to be transformed into practice in order to yield results (Fullan, 2015). Neglecting the implementation process may lead to program breakdown or inefficiency (Wiles, 2016). It is the responsibility of the school administration to provide support and a conducive environment for the implementation of the curriculum. The school principal plays an important role in the process of developing, organizing, implementing and evaluating the curriculum (Chan, Ridley & Morris, 2022).

Despite the critical nature of curriculum implementation, most of the literature on curriculum focuses on curriculum development (Bahtilla & Hui, 2020). Curriculum researchers believe that curriculum implementation is a much more complex and difficult process than curriculum development (Cooper, 2017; Fullan, 2015; Lewy, 1977; Snyder, Bolin & Zumwalt, 1992).

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Teachers, who are primarily responsible for the implementation of the curriculum, face various difficulties in introducing the curriculum, setting goals, limiting and organizing content, and determining the teaching approach and assessment methods (Bennie & Newstead, 1999; Chaudhary, 2015; Fullan, 2015; Mkandawire, 2010).

Several factors may negatively impact curriculum implementation. Chaudhary (2015) listed the factors that hinder curriculum implementation as teacher, students, resources and materials, interest groups, school environment, culture and ideology, and supervision of teaching. Fullan (2015) stated that difficult classroom conditions, lack of training, inappropriate school environments, inadequate resources, and underperforming classes can negatively affect curriculum implementation.

The implementation of the curriculum requires strong and robust management support (Coleman 2003; Fullan, 1983). Tomlinson (2004) pointed out the importance of school management to implement the curriculum within a stipulated time. One of the important tasks of school principals is to supervise the curriculum implementation. Efforts to implement the curriculum without the support of the school principal are doomed to failure (Oliva & Gordon, 2018). If principals can create a school environment characterized by positive relationships among teachers, curriculum changes can be implemented more easily (Ornstein & Hunkins, 2014). In addition, principals have the roles of supervising teaching, coordinating the school curriculum, and monitoring student progress. By performing these roles effectively, principals can improve teaching and learning (Leithwood, Harris & Hopkins, 2008). Indeed, teachers expect principals to be instructional leaders and supporters of curriculum initiatives, and also to be highly visible and active in the school environment (Marsh, 2004).

The driving force that principals provide to education has a significant impact on the success of curriculums (Garner & Bradley, 1991). As instructional leaders, principals focus more on curriculum development and improvement than on administration and personnel (Lunenburg, 2013). Hallinger (1992) defined the instructional leader as "the primary source of information for the school's curriculum". Principals' effectiveness in curriculum implementation relies on their skills, expertise, and thorough knowledge of curriculum areas. (Kabiro, 2013). Taylor (2006) suggested that principals who neglect to highlight the importance of curriculum information and lack an understanding of it will be unsuccessful in providing effective leadership to teachers.

Curriculum implementation requires sound and strong management. School principals' leadership of curriculum implementation can contribute to the improvement of the instructional climate in schools. Instructional leadership, which emphasizes the technical basis of instruction, curriculum, and assessment, directs and influences the daily activities of teachers and students in schools (Marks & Printy, 2003). Hallinger & Murphy (1985; 221-223) proposed three dimensions for the principal's instructional leadership role: (1) “defining the school's mission”, (2) “managing the instructional curriculum”, and (3) “promoting a positive school learning climate”. The Wallace Foundation (2013: 6) stated that a principal has five key responsibilities when assuming a curriculum leadership role: (1) “shaping a vision of academic academic for all students”, (2) “creating a climate hospitable to education” (3) “cultivating leadership in others” (4) “improving instruction” and (5) “managing people, data, and processes to foster school improvement.” In addition, curriculum leadership includes the managerial behaviors of coordinating the curriculum, monitoring and evaluating teacher practice, encouraging teachers' professional development, and supporting a collaborative work culture. Therefore, school principals are expected to have sufficient knowledge and skills to manage the curriculum implementation process.

One of the dimensions of instructional leadership is managing the curriculum. In this dimension, the administrator has the duties of supporting the teacher, creating a positive environment, supervising and evaluating teaching, explaining the educational objectives of the curriculum to employees and parents, solving problems that prevent the implementation of the curriculum, preparing an environment suitable for learning, supervising and evaluating the educational process (Başaran, 2006). The level of implementation of educational curriculums largely depends on the competencies of school principals to fulfill these roles. In this regard, the extent to which school principals consider themselves competent in managing curriculum implementation processes is an important research topic. The findings from studies conducted at each school level on school principals' perceived competence in curriculum implementation roles and responsibilities are expected to guide improvement initiatives and managerial decisions. This contribution is anticipated to enhance the literature in this field.

The effectiveness of the curriculum implementation process in a school is largely related to the self-efficacy of school principals who are responsible for implementation. Research shows that self-efficacy beliefs are determinant for behaviors (Bandura, 1986). Therefore, in order to predict the administrative behaviors of school principals, there is a need for a valid and reliable instrument to measure their self-efficacy perceptions in managing curriculum implementation. This study aims to assess the construct validity of Akyıldız's (2017) "Development of Curriculum Practices Proficiency Scale for School Principals: A Study of Validity and Reliability" using confirmatory factor analysis (CFA). Exploratory Factor Analysis (EFA) was used tothe develop the first form of the scale. CFA is a statistical technique used to confirm the factor structure of a set of observed variables (Suhr, 2006). While EFA is generally used in the early stage of the scale development process (Brown & Moore, 2012), CFA is used as a second step to examine whether the factor structure defined by EFA works in a new sample (Harrington, 2009). As emphasized in the literature, Confirmatory Factor Analysis (CFA) was employed to test the theoretical structure of the scale, which was previously identified through Exploratory Factor Analysis (EFA), using a different sample. It is anticipated that this study will enhance the validity and reliability of the scale.

2. Method

2.1. Research Model

The survey model was adopted to test the structure of the 'Self-Efficacy Perception Scale for Managing Curriculum Practices' obtained through Exploratory Factor Analysis (EFA) using Confirmatory Factor Analysis (CFA) for school principals. "A survey is a research model aimed at determining situations that have existed in the past or currently exist as they are." (Karasar, 2019, p. 109). "The survey method enables the quantitative determination of trends, attitudes, or opinions in the population through studies on a sample selected from that population" (Creswell, 2013, p. 155).

2.2. Study Group

The study group of this research consists of principals working in schools affiliated to Trabzon Provincial Directorate of National Education. The research data were collected on a voluntary basis in an in-service training seminar attended by school principals. The study group consisted of 297 school principals, 19 of whom were female (6.4%) and 278 of whom were male (93.6%). Of the school principals, 138 (46.5%) had 1-5 years of seniority (time spent as a school principal), 63 (21.2%) had 6-10 years of seniority, 36 (12.1%) had 11-15 years of seniority, 26 (8.8%) had 16-20 years of seniority, and 34 (11.4%) had 21-25 years of seniority. 66 (22.2%) of the principals work in primary schools, 101 (34.0%) in secondary schools and 130 (43.8%) in high schools. Of

the school principals, 151 (50.8%) have bachelor's degrees and 146 (49.2%) have postgraduate degrees. There are different views on sample size in the literature. According to Anderson and Gerbing (1984), CFA sample size should be more than 100, and according to Hu and Bentler (1999), sample size should be more than 250 for variables that do not show normal distribution.

2.3. Data Collection

The research data were obtained using the "Development of Curriculum Practices Proficiency Scale for School Principals: A Study of Validity and Reliability". The scale developed by Akyıldız (2017) has a four-factor structure, namely "Curriculum Knowledge", "Supporting the Teacher", "Creating a Positive Environment" and "Supervising Teaching". There are 6 items in the first factor, 8 items in the second factor, 6 items in the third factor and 8 items in the fourth factor, respectively. The scale consists of 28 items.Cronbach Alpha coefficients for the dimensions are as follows: curriculum knowledge, 0.84; supporting the teacher, 0.91; creating a positive environment, 0.86; and 0.94 for the overall scale. The correlation coefficients between the factors of the scale ranged between 0.43 and 0.87. A positive relationship was observed between the sub-factors of the scale at p=<0.01 significance level.

SSPMCI is a 5-point Likert-type scale. To ensure equal spacing of scores between 1 and 5 on the scale, score intervals were established as 0.80 using the formula (n-1)/n. Accordingly, the intervals were determined as 1,00-1,79 "Not at all adequate", 1,80-2,59 "Not adequate", 2,60-3,39 "Partially adequate", 3,40-4,19 "Adequate" and 4,20-5,00 "Fully adequate". The lowest score that can be obtained from the scale is 28 and the highest score is 140. As the factor scores of the scale increase, the self-efficacy perceptions of school principals in managing curriculum implementations related to the dimensions also increase.

2.4. Data Analysis

AMOS 22 program was used in the analysis of the data. Before proceeding to CFA, the normal distribution of the data was checked. Chi square statistics were used for model fit. A lower chi-square statistic indicates better model fit (Alavi, Visentin, Thapa, Hunt, Watson & Cleary, 2020). When the chi-square statistic is affected by the sample size, the ratio of the chi-square statistic to the relevant degrees of freedom ($\chi 2$ /sd) is preferred (Wheaton, Muthen, Alwin & Summer, 1977).

Many fit indices are used in CFA to test the models. There are different opinions in the literature about which of the fit indices to use. For example, Brown (2006) stated that RMSEA, SRMR, CFI and NNFI (TLI) fit indices, and Kline (2005) stated that reporting RMSEA, $\chi 2$, CFI and SRMR fit indices would be sufficient. However, in the literature, it is recommended to use multiple fit indices to test the model (Jöroskog & Sörbom, 1993; Kline, 2005; Schumacker and Lomax, 1996; Tabachnick & Fidell, 2013). Generally, $\chi 2$, $\chi 2$/ df, GFI, IFI, CFI and RMSEA values are reported in the studies, and RMR, NFI and AGFI values are also included in some studies (Meydan & Şeşen, 2015: 72). In this study, the model was tested using the following fit indices: $\chi 2$ (Chi-Square Goodness), $\chi 2$/df (Chi-square divided by the degrees of freedom), RMSEA (Root Mean Square Error of Approximation), SRMR (Standardized Root Mean Square Residual), IFI (Incremental Fit Index), TLI (Tucker Lewis Index), CFI (Comparative Fit Coefficient), GFI (Goodness of Fit Index), AGFI (Adjustment Goodness of Fit Index) and RMR (Root Mean Square Residual). Cronbach Alpha values were calculated to determine the reliability of the scale.

2.5. Ethics Committee Permission

In this study, all the rules specified in the Scientific Research and Publication Ethics Directive for Higher Education Institutions were strictly followed. The ethical approval for this study was obtained from Trabzon University's Ethics Committee for Social and Humanities Research (07.07.2023/2023-7/1.7).

3. Findings

Before conducting CFA, the sample size and whether the data showed a normal distribution were examined. In this study, the sample size is 297. According to Hu & Bentler (1999), the sample size should be more than 250 for variables that do not show normal distribution. Therefore, it can be claimed that the sample size is sufficient for CFA. In the normality test, Skewness and Kurtosis values were determined as 0.105 and -0.028, respectively. It is accepted that the distribution is normal if the Kurtosis and Skewness values are between -1.5 and +1.5 (Tabachnick & Fidell, 2013). Thus, these values indicate the normality of the distribution. It was observed that there were no missing data and outliers in the data set.

Firstly, the chi-square maximum likelihood method was used to evaluate the fit between the hypothesised model and the data from the observed variables. The $\chi 2$ /sd of the scale was found to be 1.68. When the $\chi 2$ /df value is ≤ 2, it indicates good fit (Cole, 1987). As a result of the analysis, it was observed that some of the fit indices were close to the accepted reference values but did not fully represent the desired values. In cases where the values for CFA do not comply with the fit indices, modifications can be made between the appropriate items in order to improve the model, while remaining within the same factor (Evci & Aylar, 2017). In order to make the obtained values more compatible with the fit indices, modifications were made between items e16 and e17; e19 and e20; e22 and e23; e24 and e25 under the same factor in order to obtain a better fit by taking into account the modification suggestions made by the AMOS program. The factor loadings of the scale are given in Figure 1.

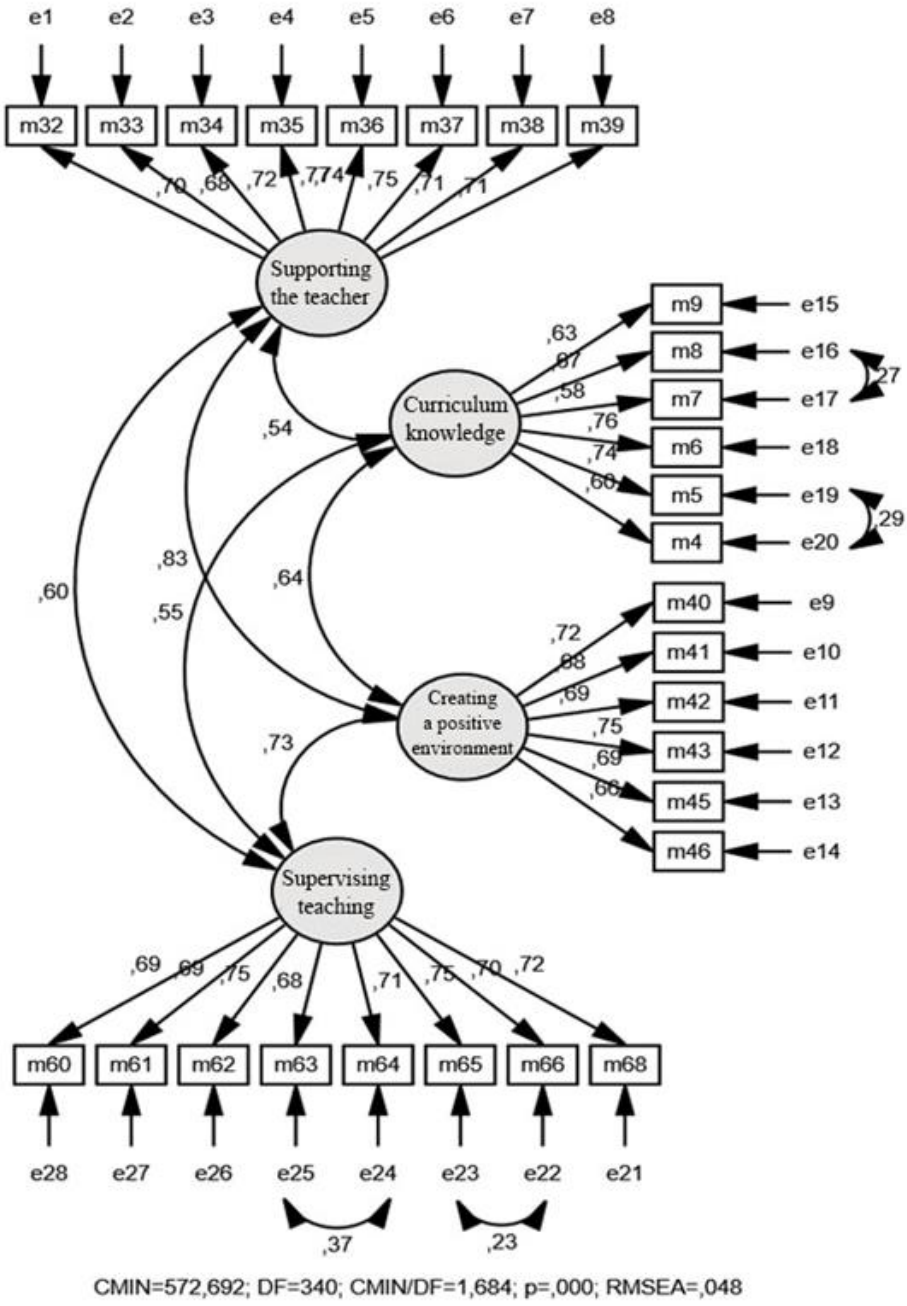

Figure 1. *Four-factor Structure of the SSPMCI Scale*

Figure 1 shows the item loadings of the "school principals' self-efficacy perceptions of managing curriculum implementation scale". The distribution of item loadings on the sub-factors ranged between 0.68 and 0.77 for supporting teachers; 0.58 and 0.76 for curriculum knowledge; 0.66 and 0.75 for creating a positive environment; and 0.68 and 0.75 for supervising teachers.

In the study, $\chi 2/df$, RMSEA, SRMR, IFI, TLI, CFI, GFI, AGFI and RMR values were reported. The fit index values for the scale and the reference values for the standard fit indices in the

literature are given in Table 1. The values obtained for the scale were interpreted by considering the CFA values referenced in the relevant literature (Anderson & Gerbing, 1984; Bayram, 2013; Browne & Brown, 2006; Cudeck, 1993; Hooper, Coughland & Mullen, 2008; Hu & Bentler, 1999; Kline, 2005; Seçer, 2015; Schermelleh-Engel, Moosbrugger & Müller 2003; Şimşek, 2007; Tabachnick & Fidell, 2013).

Table 1

CFA Values of "The Scale of School Principals' Self-Efficacy Perceptions In Managing Curriculum Implementations"

Fit Indices	Perfect Fit	Acceptable Fit	Values Related to the Scale	Compatibility of the Scale
χ2/df	0≤ χ2/df≤2	2≤ χ2/df≤3	1,68	Perfect fit
RMSEA	0≤RMSEA≤0,05	0,05<RMSEA≤0,10	0,05	Perfect fit
SRMR	0<SRMR ≤ 0,05	0,06<SRMR ≤ 0,10	0,04	Perfect fit
IFI	0,95≤IFI≤1,00	0,90≤IFI<0,95	0,95	Perfect fit
TLI	0,95≤TLI≤1,00	0,90≤TLI<0,95	0,94	Acceptable fit
CFI	0,95≤CFI≤1,00	0,90≤CFI<0,95	0,95	Perfect fit
GFI	0,90≤GFI≤1,00	0,85≤GFI≤0,89	0,88	Acceptable fit
AGFI	0,90≤AGFI≤1,00	0,85≤AGFI≤0,89	0,86	Acceptable fit
RMR	0,00≤RMR≤0,05	0,05≤RMR≤0,08	0,02	Perfect fit

When the fit values obtained for the scale in Table 1 are examined, it is seen that the χ2/df ratio is 1.68 (χ2/df =572,692/340). A calculated χ2/sd value lower than 3 indicates that the factor structure is perfectly compatible (Kline, 2005). According to Table 1, RMSEA value of 0.05 and SRMR value of 0.04 indicate perfect fit (Kline, 2005; Schumacker & Lomax, 1996), IFI value of 0.95 and CFI value of 0.95 indicate perfect fit (Çokluk, Şekercioğlu & Büyüköztürk, 2012; Kline, 2005; Thompson, 2004) and RMR value of 0.02 indicates perfect fit (Brown, 2006). The TLI fit value of the scale was calculated as 0.94. A TLI value of 0.95 and above indicates a good fit, and a TLI value above 0.90 indicates an acceptable fit (Hu & Bentler, 1999). The table also shows that the GFI value is 0.88 and the AGFI value is 0.86. GFI and AGFI values greater than 85 are considered acceptable fit values (Bayram, 2013; Schermelleh-Engel, Moosbrugger & Müller 2003; Seçer, 2015). Accordingly, the calculated TLI, GFI, AGFI values of the scale show acceptable fit values. Based on these results, it can be concluded that the Scale of School Principals' Self-Efficacy Perceptions of Managing Curriculum Implementation has construct validity. Factor number, reliability coefficients and reliability levels of the scale are shown in Table 2.

Table 2

Number of Items, Factor Loadings, and Cronbach Alpha Reliability Coefficients of Sub-Factors

Factors	Number of Items	Cronbach Alpha coefficients (α)	Confidence level
1. Curriculum Knowledge	6	0,84	Highly Reliable
2. Supporting the Teacher	8	0,90	Highly Reliable
3. Creating a Positive Environment	6	0,85	Highly Reliable
4. Supervising teaching	8	0,90	Highly Reliable

Cronbach Alpha values were calculated for the reliability of the scale. These values were calculated as 0.84 for the "curriculum knowledge" factor, 0.90 for the "supporting the teacher" factor, 0.85 for the "creating a positive environment" factor and 0.90 for the "supervising teaching" factor. In the interpretation of alpha values, if $0.80 \leq \alpha < 1.00$, the scale is considered

highly reliable (Özdamar, 2002). Cronbach Alpha values indicate that the reliability level of the scale is high.

4. Discussion and Conclusion

In the existing literature, Akyıldız (2017) has introduced a scale designed to assess school principals' perceptions of competence in managing curriculum practices. The factor structure of the scale developed with EFA method was tested with CFA in this study. As a result of the analyses, it was concluded that the Chi Square ($\chi 2$) Goodness of Fit Test: 1.68, RMSEA: 0.05, SRMR: 0.04, IFI: 0.95, TLI: 0.94, CFI:0.95, GFI: 0.88, AGFI: 0.86 and RMR: 0.02 values confirmed the factor structure of the SSPMCI determined by EFA and that the scale has a four-factor structure. Cronbach and Alpha values of the scale ranged between 0.84 and 0.94. Cronbach and Alpha values in the range of $0.81<\alpha<1.00$ indicate that the scale is highly reliable (Özdamar, 2002). Based on these findings, it can be concluded that SSPMCI is a valid and reliable measurement scale suitable for data collection in studies involving primary, secondary, and high school principals.

The validity and reliability of the scale can be tested on different sample groups. Research can be conducted to examine the relationship between school principals' self-efficacy perceptions of managing curriculum practices and other variables such as instructional leadership and curriculum commitment. In addition, the teacher form of the scale can be developed.

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Ethics Committee Permission:

In this study, all the rules specified in the Scientific Research and Publication Ethics Directive for Higher Education Institutions were adhered to. The ethical approval for this study was obtained from Trabzon University's Ethics Committee for Social and Humanities Research (07.07.2023/2023-7/1.7).

Appendix: Scale of School Principals' Self-Efficacy Perceptions in Managing Curriculum Implementations. (Researchers can use the scale in their studies by adhering to ethical rules.)

Curriculum Knowledge	
1. (8)	Having knowledge about the tools and materials required by the curriculum.
2. (5)	Having knowledge about the methods and techniques required by the curriculum.
3. (4)	Having knowledge about the teaching approaches to be used in the teaching of the curriculum.
4. (7)	Having knowledge about the helpful resources required by the curriculum.
5. (6)	Having knowledge about the teaching environments required by the curriculum.
6. (9)	Having knowledge about testing and evaluation techniques required by the curriculum.
Supporting the Teacher	
7. (39)	Making necessary suggestions at teachers' board meetings regarding the implementation of the curriculum.
8. (34)	Supporting all kinds of collaboration between teachers on curriculum implementation.
9. (38)	Encouraging teachers to participate in activities such as courses, seminars, etc. related to the implementation of the curriculum.
10. (32)	Encouraging teachers to review course syllabuses.
11. (35)	Guiding teachers to consider curriculum objectives together with student goals and expectations.
12. (37)	Preparing environments where teachers can share their knowledge and experiences regarding the implementation of the curriculum with each other.
13. (36)	Encouraging teachers to develop learning and teaching strategies tailored to students' individual differences.
14. (33)	Coordinating cooperation between teachers to ensure unity between course curricula and practices.
Creating a Positive Environment	
15. (40)	Guiding teachers in organizing alternative learning activities appropriate to students' individual differences.
16. (41)	Developing solutions and suggestions along with teachers to the problems that arise during the implementation of the course curriculum.
17. (43)	Providing guidance to teachers on employing testing and evaluation methods aligned with the objectives and learning outcomes of the curriculum.
18. (42)	Guiding teachers to take students' individual characteristics (interest, needs, expectations, etc.) into consideration when preparing learning activities.
19. (45)	Collaborating with teachers to identify the strengths and weaknesses of the curriculum.
20. (46)	Encouraging teachers to implement new curriculum.
Supervising Teaching	
21. (64)	Comparing and analyzing the questions prepared to measure the student success with the learning outcomes of the curriculum.
22. (63)	Ensuring that exam questions for students are aligned with the learning outcomes specified in the course curriculum.
23. (65)	Conducting monitoring studies to assess the implementation of course curricula. (Observation, supervision, interview, examining students' works, etc.)
24. (62)	Checking whether alternative measurement and evaluation methods and techniques are reflected in practice by teachers.
25. (68)	Determining the achieved and unachieved objectives/learning outcomes of the curriculum based on the exam results and sharing them with teachers.
26. (60)	Checking the measurement tools (Exam paper, performance and project evaluation scale, etc.) prepared by teachers to measure the objectives/learning outcomes in the curriculum of the courses before applying them.
27. (61)	Organizing meetings to make a general evaluation of the curriculum of the courses.
28. (66)	Observing the implementation process of course curriculum in the learning environment.