

Determiantion of Reading Anxiety of Primary School 4th Grade Students

Yalcin Bay

Anadolu University, Turkey

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Abstract

One of the factors that emotionally affect the education-learning process is anxiety. Considering students' anxiety in teaching how to read and write, anxiety will positively contribute to effective and productive learning. This study aimed to determine the "Reading Anxiety" of primary school students. A 29-item "Reading Anxiety Scale" was developed based on the 42-item draft scale that Çeliktürk and Yamaç (2015) used in her research titled "Developing a Reading Anxiety Scale for Primary and Secondary School Students: Validity and Reliability Analysis." Çeliktürk and Yamaç permitted using the developed "Reading Anxiety Scale" in this study titled "Determination of Reading Anxiety of Primary School 4th-grade Students". Descriptive survey model was used in the study. This study was conducted with the voluntary participation of 1049 students attending the 4th grade of primary school in the central districts of Eskisehir (Odunpazari and Tepebasi). Convenience sampling determined the schools, and the data obtained were tabulated and interpreted using the SPSS program in the computer environment. The reliability coefficient of the 29-item reading anxiety scale was 0.957 (95.7%). Confirmatory Factor Analysis (CFA) was applied, and the acceptable fit of $0.90 \leq CFI \leq 0.95$ was checked. Standardized factor loads were higher than 0.3 and at an acceptable level of fit. No significant difference was found regarding the district of the school, gender, and father's working status. However, there were significant differences in reading anxiety according to age, parents' education level, and mother's working status within the 95% confidence interval. Accordingly, it was concluded that students' age, parents' education level, and mothers' working status affect students' reading anxiety. However, no significant difference was found regarding the district of the school, gender, and fathers' working status. No significant difference was found between the reading anxiety levels of the students according to the district where the school is located, their gender and the working status of their fathers. It was determined that as the education level of the students' parents increased, the level of reading anxiety decreased. It was determined that the

working status of the mothers of the students caused a significant difference between the reading anxiety levels, while the working status of the fathers did not cause a significant difference.

Keywords: Reading, Anxiety, Reading Anxiety, Fluent Reading, Reading Motivation

Introduction

The two most essential elements in the development and survival of a language are the act of reading and writing. A language that is not written, read, and spoken adequately is doomed to be forgotten and lost. Language is defined in TDK's Turkish Dictionary as "A system of consensual audible or visual signs that enable understanding between people" (Türk Dil Kurumu, 2023). Taking language as a tool that helps express feelings and thoughts and provide an agreement between people is the correct approach (Demir, 2016). Providing students with fluent and correct reading skills is vital for transferring the language to future generations.

Reading

Reading is a complex process in which various cognitive and linguistic processes are intertwined (Babür, 2018). Reading skill has an important place in the school and daily life of the individual. Individuals who read fluently and correctly are successful in school and daily life to the extent that they understand, make sense of and interpret what they read. Reading skill is extremely important for an individual's self-development and realization. Dozens of definitions have been made in the literature on reading. Anderson, Hiebert, Scott & Wilkinson (1985) defined reading as the process of extracting meaning from written texts, while Harris and Sipay (1990) defined reading as a meaningful interpretation of written language. Razon (1992) defined reading as vocalizing written and printed signs by following specific rules; The Turkish Language Association defines reading as "Understanding a text only by looking at letters and signs or vocalizing the text." (Türk Dil Kurumu, 2023). Ontario (2003) defined reading as the process of giving meaning to written text. Effective primary reading education ensures that children become good readers who understand what they read, apply their knowledge and skills to new cases, and are highly motivated to read. According to Coltheart (2005), reading is information processing by transforming writing into oral language or writing into meaning. According to Güneş (2007), reading is a complex process in the brain, including seeing, perceiving, vocalizing, understanding, and restructuring things, like images, sound, and perception, in the brain. Johnson (2008) defines reading as using text to make sense; according to Akyol (2011), reading is a dynamic meaning-making process that requires a

dynamic and interactive relationship between the author and the reader. These definitions emphasize that reading skill requires the harmony of many relevant information sources (Çevik et al., 2019). According to Wixson et al. (1987), reading is a meaning-making process that includes the reader's prior knowledge, textual knowledge, and reading context. Grabe (1991) defines reading as an interactive process between readers and texts, resulting in reading fluency. Based on these definitions, defined reading as an activity of perceiving, interpreting and structuring in the mind the shapes, symbols and pictures determined according to the societies in order to make universal feelings, thoughts, experiences and impressions permanent and to transfer them to the other party (Bay, 2010). The definitions underline that reading is a multifaceted activity, having cognitive, affective, and behavioral dimensions.

Anxiety

The concept of anxiety emerges in the act of reading. There are many different definitions of anxiety; for example, the online dictionary of Türk Dil Kurumu (2023) defines anxiety as "Sadness, worrying thought, grief, worry." Freud (1936) defines anxiety as an unpleasant emotional state characterized by subjective feelings of tension, sadness, and worry. According to Elliott and Smith (2010), anxiety is the occurrence of emotions such as restlessness, worry, delusion, and fear. Other definitions of anxiety are examined "suffocation, dizziness, anxiety, a heavy fist sitting on the heart, vague fear" (Burkovik, 2010; Karataş, 2011; Köroğlu & Güleç, 1997; Özcan & Karakaya, 2020; Ünlü, 2007). According to Rachman (2013), anxiety is a threatening but uncertain tension and an unsettling expectation, a feeling of tension that causes restlessness (Cited by Dursun & Özenç, 2019).

Jalongo and Hirsh (2010) define anxiety as a feeling that threatens an individual's self-esteem and negatively affects learning. Pekrun et al. (2011) emphasized that anxiety should have a motivational dimension besides affective, physiological, and cognitive dimensions. Pekrun et al.'s control value theory states that emotions, affective, cognitive, motivational, and physiological elements are of primary importance, and they are formed by a series of psychological processes that interact with each other (Pekrun et al., 2005, Pekrun, 2006; Pekrun et al., 2011). An excessive and uncontrollable level of anxiety causes mental and physical health problems and negatively affects an individual's personal and social life and professional and educational work (Zahrakar, 2008). Excessive anxiety carries the individual's daily life to an irregular and disturbing dimension (Crişan & Copaci, 2014). Excessive anxiety causes children to fail to realize and care about their own skills (Jalongo & Hirsh, 2010).

Reading Anxiety

Reading skill has an important place in the lives of individuals. A significant part of what an individual learns at school or in his daily life occurs through reading (Dursun & Özenç, 2019). There is numerous research on reading. However, research on the affective dimension of reading is limited. For example, the individual's reading anxiety during the reading activity underlines the affective aspect of the reading act (Alverman & Guthrie, 1993). Reading anxiety is assumed to be one of the biggest obstacles to gaining the habit of reading (İzci & Kaya, 2021). Reading anxiety is based in primary school years, and this anxiety negatively affects an individual's reading habits and attitudes toward reading (Yıldız & Ceyhan, 2016).

Especially primary school students, who are at the beginning of their education life, often have problems with fluent reading and reading comprehension, which can cause students to feel anxiety about reading (Çeliktürk & Yamaç, 2015). Reading anxiety is a negative attitude that an individual shows towards reading. This negative attitude emerges as a state of thrill, fear, and uneasiness that the individual shows during the reading process (Kuşdemir & Katrancı, 2016). According to Piccolo et al. (2017), reading anxiety causes an individual to show an unusual emotional reaction while reading. Psychologists consider anxiety an emotional state that negatively affects learning (Daly & Miller, 1975; Jalongo & Hirsh, 2010). Getting rid of reading anxiety will positively affect children's academic and professional life (Özcan & Karakaya, 2020). However, recent studies have shown that reading anxiety is a phenomenon that affects students' fluent reading and reading comprehension processes. Therefore, it is crucial to reveal how reading anxiety affects students' reading skills through comprehensive studies.

The studies on reading anxiety are mainly related to foreign language teaching, and they examine the effect of reading anxiety on foreign language acquisition (Altunkaya, 2017; Brantmeier, 2005; Capan & Karaca, 2013; Ialongo et al., 1995; Mills, et al., 2006; Liu & Hu, 2009; Saito, et al., 1999). These studies on bilingualism; In addition to determining the reading anxiety of students, it reveals striking results related to foreign language acquisition (MacIntyre & Gardner, 1989; Mills et al., 2013; Rajaba et al., 2012; Young, 1986; Zhao et al., 2013; Zoghi, 2012). In recent years, studies were conducted to determine the effects of primary and secondary school students' reading anxiety on fluent reading, reading comprehension and reading motivation (Aygün, 2021; Baki, 2017; Baki, 2019; Çeliktürk & Yamaç, 2015; Çevik et al., 2019; Dursun & Özenç, 2019; Grills-Taquichel et al., 2012). The common purpose of these studies was to determine the effect of reading anxiety on fluent reading, reading comprehension, reading performance, and reading motivation (İzci & Kaya, 2021; Katrancı & Kuşdemir, 2016; Melanlıoğlu, 2014; Özcan & Karakaya, 2020; Şahin, 2019; Taşdemir & Taşdemir, 2020;

Tonka, 2020; Uçgun, 2016; Yamaç & Sezgin, 2018; Yıldız & Akyol, 2011; Yıldız & Ceyhan, 2016).

Fluent Reading

Although there is no standard definition for fluent reading yet, numerous research has recently been done on fluent reading skills (Rasinski et al., 2011). Edmund Burke Huey first defined fluent reading in 1908. According to Huey (1968), encountering the exact words several times will help the readers read the related word more fluently with less attention and effort in their next reading. Therefore, fluency in teaching, development, and evaluation should always be related to reading comprehension (Pikulski & Chard, 2005). Another variable of successful reading skills is the reading comprehension strategies. For example, Ateş and Yıldırım (2014) emphasize fluent reading and word recognition as two critical prerequisites. In addition, cognitive processes come into play in deriving meaning from texts, and these processes include various comprehension strategies. Finally, there is a significant relationship between fluent reading and reading comprehension strategies, where fluent reading is known to support reading comprehension strategies (Beydoğan, 2012).

Fluent reading requires performing three different skills simultaneously in the reading process (Zarain, 2007). The development of these skills interacts with each other. For example, Dowhower (1991) reported that as students' reading speed increases, they read fluently and correctly, and accordingly, their comprehension level increases. He determined that prosodic reading levels also improved with a fluent and correct reading. Regarding the relationships between fluent reading and reading comprehension, fluent reading contributes to reading comprehension and positive reading. All elements of fluent reading improve the reading comprehension process holistically (Hudson et al., 2005; Klauda & Guthrie, 2008; Kuhn et al., 2010). In addition, reading fluency indirectly and positively contributes to reading comprehension through reading anxiety. For example, the level of reading comprehension increases as fluent reading reduces reading anxiety. Therefore, fluent reading enables cognitive capacity to focus more on understanding what is read, resulting in an increase in comprehension (Klauda & Guthrie, 2008). This finding is supported by many studies (Denton et al., 2011; Kim, 2015; Kim et al., 2014; Klauda & Guthrie, 2008; Schwanenflugel et al., 2006).

Fluent reading consists of three basic components: correct reading, reading speed, and prosodic reading (Aşıkcan & Saban, 2021; Hudson et al., 2005; Schrauben, 2010). Correct reading, reading speed, and prosodic reading exercises are extremely important for fluent reading.

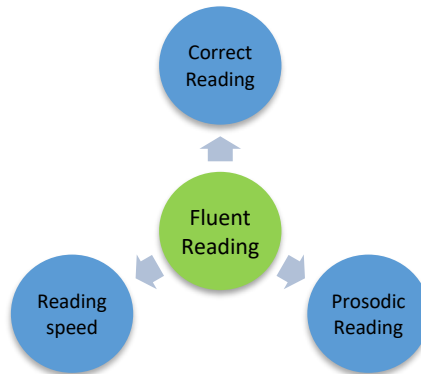


Figure 1. Fluent Reading Skills

Reading Comprehension

RRSG (RAND Reading Study Group, 2002) defines reading comprehension as the simultaneous extraction and restructuring of meaning in the mind while reading written texts and interacting with them. According to Güneş (2009), it is the process of restructuring the meanings that are formed through the processing of reading comprehension in various mental processes (i.e., examining, sorting, classifying, associating, questioning, and evaluating the information obtained through reading) and associating it with the reader's prior knowledge. In order to improve reading comprehension skills, factors related to the student's intrinsic and extrinsic motivation should be taken into consideration, as well as cognitive processes because motivation plays a role as necessary as cognitive processes in understanding the text read (Wang & Guthrie, 2004). Comprehension is the activity of extracting and constructing meaning from spoken or written texts. This action is a constructivist process (Duke & Carlisle, 2011). Kintsch and Rawson (2005) addressed understanding the text read as a complex process that occurs in the mind. Comprehension emerges from the interaction of different elements, different knowledge, and complex mental processes. Reading anxiety is assumed to affect students' reading comprehension skills and reading motivation.

Reading Motivation

"Motivational Structural Model of Text Comprehension" was developed by Wang and Guthrie (2004). This model emphasizes that students' reading skills affect their intrinsic and extrinsic motivation, affecting the joy of reading, fluency, reading level, and reading amount. The reading comprehension arising from intrinsic motivation and extrinsic motivation is different. A student is very likely to have both intrinsic and extrinsic motivation (Lepper & Henderlong, 2000; Linnenbrink & Pintrich, 2000). Students can exhibit intrinsically and extrinsically motivated behaviors to

meet their own interests and school needs. Intrinsic motivation is assumed to be effective. There are two types of reading done by students. Reading for their own interests and school reading are assumed to be related to intrinsic and extrinsic motivation (Gottfried, 1990; Guthrie et al., 1998). Yıldız and Akyol (2011) analyzed the model in their study, concluding that reading comprehension is positively affected by internal motivation and negatively by extrinsic motivation. There is no significant relationship between reading amount and reading comprehension level. In this research, it is assumed that students' reading anxiety affects both intrinsic and extrinsic motivation.

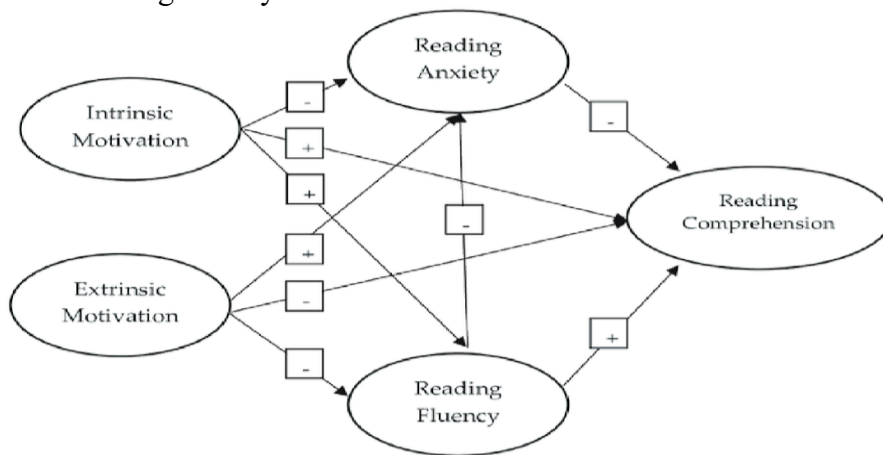


Figure 2. Hypothesized Structural Model of Reading Motivation, Reading Anxiety, Reading Fluency and Reading Comprehension (Yamaç & Sezgin, 2018).

Reading anxiety is one of the situations students encounter during reading and oral expression activities, and it negatively affects the reading process. For example, it aimed to determine primary school students' reading anxiety considering the negative effect of fluent and meaningful reading anxiety. A measurement tool, whose validity and reliability had been checked, was used in the study to determine reading anxiety.

Purpose

This study aimed to determine the reading anxiety of primary school 4th-grade students. It is expected to contribute to the field by offering suggestions to classroom teachers and parents who aim to provide a more qualified and efficient reading education.

The sub-objectives addressed for this purpose are listed below:

Do primary school 4th-grade students' Reading Anxiety differ significantly according to the followings?

- The district where their school is located
- Gender and age
- Education level of their parents

- Working status of their parents

Method

Research Model

A descriptive survey model was used in this study, which aims to determine the reading anxiety of primary school students. The descriptive survey model reveals and explains what is present, lived, and experienced at a particular time (Sönmez & Alacapınar, 2017).

Study Group

This study, which was designed to determine the reading anxiety of 4th grade primary school students, was conducted with the voluntary participation of 4th grade primary school students studying in schools with different socio-economic levels in Odunpazari and Tepebasi, the central districts of Ekişehir. In addition, a short interview was held with classroom teachers of the students to whom the measurement tool was applied. Finally, they evaluated the items on the scale and expressed their opinions about where the students' reading anxiety stemmed from among them.

Regarding the participants' demographic information, 47.5% of the students attended primary schools in Tepebasi and 52.5% in Odunpazari districts. 49% of the students were female, 51% were male, and the distribution by age was 9.5% 9-year-old, 77% 10-year-old, 13% 11-year-old, and 0.5% 12-year-old. Regarding students' mothers, 20.9% were primary school graduates, 19.9% were secondary school graduates, 31.9% were high school graduates, 27.3% were university/master's graduates, 65.4% were homemakers, and 34.6% were working. Regarding students' fathers, 10% were primary school graduates, 17.9% were secondary school graduates, 35.6% were high school graduates, and 36.5% were university/master's graduates; 6.5% were unemployed, 93.3% were working.

Data Collection Tool

Within the scope of this study, the reading anxiety of primary school 4th-grade students in the central districts of Ekişehir was determined by using the "Reading Anxiety Scale" developed by Çeliktürk and Yamaç (2015) within the scope of "Developing the Reading Anxiety Scale for Primary and Secondary School Students: Validity and Reliability Analysis." The permission to use the scale was obtained via e-mail.

The scale consists of 29 items to determine students' reading anxiety and has one dimension. In order to determine the demographic status of the students, variables such as the school district, gender, age, parent's education level, and working status were investigated.

Data Collection and Analysis

The researcher administered the developed scale form to the students attending the 4th grade of primary school. Students and teachers were informed of the principle of volunteering before the implementation, and those who wanted to participate were informed about the research topic. During the data collection process, scale forms were given to students who wanted to participate in the research, and a total of 1,049 students filled out the form. Since the students are at the 4th-grade level of primary school, the classroom teachers informed the students about the scale beforehand.

The obtained data were transferred to the SPSSTM (version 28), and the extreme, outlier, missing, or erroneous values were corrected before starting the analysis. Frequencies and percentages of personal data were determined and tabulated. A normality test was applied to the data, and the normal distribution was confirmed. After the corrections, normality distribution was checked, validity and reliability analyzes were made, and confirmatory factor analysis was performed.

The Independent Mann-Whitney U test was performed to see whether the district of the school and gender created a significant difference in Reading Anxiety ($p < 0.05$). The independent Kruskal-Wallis test was applied to see the differentiation of Reading Anxiety of primary school 4th-grade students according to age, parent's education level, and working status ($p < 0.05$). The results of the tests were tabulated and interpreted according to their significance level.

Reliability Validity Analysis

Before starting the factor analysis for students' reading anxiety, Cronbach's Alpha test was performed to test the reliability of the measurement method, and the results are shown below.

Tablo 1. Reliability Analysis Results for Reading Anxiety Scale

Cronbach's Alpha	Number of Items
.957	29

Table 1 shows that the reliability coefficient of the 29-item Reading Anxiety Scale applied to 1,049 students participating in the research is 0.957 (95.7%), showing that the reliability of the measurement method is excellent and suitable for the analysis.

In addition, the item-total correlations of all statements were higher than 0.30. Then, the existing items were subjected to Explanatory Factor Analysis (EFA) by choosing the Principal Components method. The 29-item structure was factored in a single dimension. Moreover, the adequacy of the sample size was tested before factor analysis.

Table 2. *Kaiser-Meyer-Olkin (KMO) Test Results performed before the Factor Analysis of the Reading Anxiety Scale*

Kaiser-Meyer-Olkin (KMO)		.976
Sample Size Test Statistics		
	X ²	16646.691
Bartlett's Test of Sphericity	df	406
	p	.000

X²: Approximate chi-square value, df: Degrees of freedom, p: Bartlett Sphericity test statistic probability

Kaiser-Meyer-Olkin Test (1960) and Bartlett's Test (1950) measure the sampling adequacy. KMO values closer to 1.0 are considered ideal, while values greater than 0.5 are acceptable. The Bartlett (1950) test of sphericity checks if there is a redundancy between the variables. The test's null hypothesis is that the variables are orthogonal, i.e., not correlated. The null hypothesis is accepted or rejected regarding the P-value and significance levels.

Regarding Table 2, the KMO value is close to 1, and the p-value is less than 0.05 for the Ateş, Ateş test. Therefore, it can be said that the data are suitable for factor analysis. The results of the factor analysis are given in the table below. The obtained factor loads are from a single factor.

Table 3. Factor Loads for the Reading Anxiety Scale

Items	Factor
	1
Reading1	.623
Reading2	.590
Reading3	.626
Reading4	.631
Reading5	.703
Reading6	.716
Reading7	.707
Reading8	.637
Reading9	.641
Reading10	.617
Reading11	.630
Reading12	.583
Reading13	.701
Reading14	.679
Reading15	.676
Reading16	.662
Reading17	.681
Reading18	.685
Reading19	.689

Reading20	.717
Reading21	.752
Reading22	.655
Reading23	.682
Reading24	.738
Reading25	.700
Reading26	.741
Reading27	.726
Reading28	.747
Reading29	.729

As a result of the Principal Component Analysis iterations, the optimum model was obtained from the structure consisting of 1 factor. In this factor structure, factor loads take values between 0.58 and 0.76, and the validity of the structure is ensured as the factor loads over 0.3 are within acceptable limits. In addition, this structure explains 46.1% of the changes in the total variance. Confirmatory Factor Analysis (CFA) was performed on the structure obtained from EFA using the Lisrel 8.5™ program, and the results are given below.

Confirmatory Factor Analysis

CFA was carried out to test the suitability of the scale items. Since the Reading Anxiety Scale consists of one dimension, the reliability in Table 2 is also valid for CFA. The results are given in the table below.

Table 4. CFA Goodness of Fit Values for the Reading Anxiety Scale

Fit Parameter	Fit Statistics	Acceptable Fit	Good Fit
RMSEA	0.078	$0.05 \leq \text{RMSEA} \leq 0.08$	$0 \leq \text{RMSEA} \leq 0.05$
SRMR	0.043	$0.05 \leq \text{SRMR} \leq 0.08$	$0 \leq \text{SRMR} \leq 0.05$
GFI	0.84	$0.90 \leq \text{GFI} \leq 0.95$	$0.95 \leq \text{GFI} \leq 1.00$
AGFI	0.82	$0.85 \leq \text{AGFI} \leq 0.90$	$0.90 \leq \text{AGFI} \leq 1.00$
CFI	0.98	$0.90 \leq \text{CFI} \leq 0.95$	$0.95 \leq \text{CFI} \leq 1.00$
NFI	0.97	$0.90 \leq \text{CFI} \leq 0.95$	$0.95 \leq \text{CFI} \leq 1.00$

RMSEA: Root Mean Square Error of Approximation, **NFI:** Normed Fit Index, **GFI:** Goodness Of Fit Index, **AGFI:** Adjusted Goodness of Fit Index, **CFI:** Comparative Fit Index, **SRMR:** Standardized Root Mean Square Residual.

The criteria taken for acceptable and good fits are as follows: $0.90 \leq \text{CFI} \leq 0.95$ acceptable fit, $0.95 \leq \text{CFI} \leq 1.00$ good fit; $0.05 \leq \text{SRMR} \leq 0.08$ acceptable fit, $0.00 \leq \text{SRMR} \leq 0.05$ good fit, $0.05 \leq \text{RMSEA} \leq 0.08$ acceptable

fit, $0.00 \leq \text{RMSEA} \leq 0.05$ good fit, $0.90 \leq \text{GFI} \leq 0.95$ acceptable fit, $0.95 \leq \text{GFI} \leq 1.00$ good fit, $0.85 \leq \text{AGFI} \leq 0.90$ acceptable fit, $0.90 \leq \text{AGFI} \leq 1.00$. The values equal to or higher than 0.30 were taken regarding the standardized factor loads. The CFA PATH diagram showing standardized factor loads is given below.

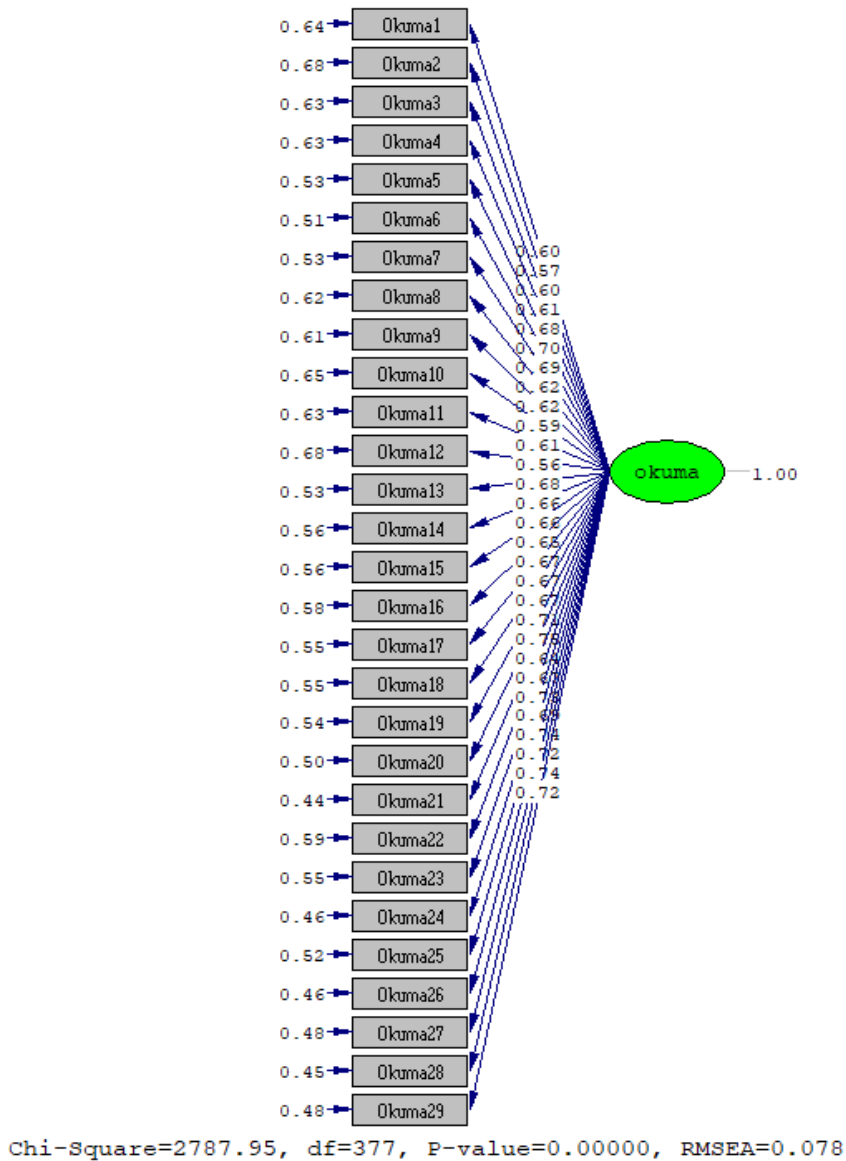


Figure 3. PATH Diagram for Reading Anxiety Scale

Figure 3 shows that the standardized factor loads are higher than 0.3 and are at an acceptable level of fit. After the validity and reliability of the

scale were confirmed, difference tests were applied to investigate the effect of demographic variables on reading anxiety.

Descriptive statistics and normality tests of the scale are given below.

Table 5. Descriptive Statistics

Dimension	Minimum	Maximum	Mean	Std.Deviation	KG.	p
Reading Anxiety	1.00	5.00	1.6958	.74123	.174	.000
Number of Observations (N):			1,049			

Kolmogorov and Smirnov (KS) Test Statistics (Massey, 1951), H_0 : *The data distribution fits the normal distribution.*

Regarding Table 5, the null hypothesis, which assumes that the calculated dimensions fit the normal distribution, is rejected with 95% confidence according to the Kolmogorov & Smirnov Test. Therefore, non-parametric methods should be preferred in different tests.

Findings and Interpretation

The results of the different tests were tabulated, and the results were interpreted. The results' differentiation according to the school district, gender, age, parent's education level, and working status were examined. Mann-Whitney U test results, showing the significance of the difference between students' reading anxiety according to their school's district, are given below.

Table 6. Mann-Whitney U Test Results for the District of School

Dimension	District	N	Mean	Std.Deviation	p
Reading Anxiety	Tepebasi	498	1.6729	.70149	0.860
	Odunpazari	551	1.7164	.77545	

* $p < 0,05$, $H_0: \mu_1 = \mu_2$

Table 6 analyzed, the null hypothesis claiming that the difference between students' reading anxiety is statistically insignificant according to their school district cannot be rejected with 95% confidence. In this case, it can be said that their school's district is not effective on their reading anxiety. Mann-Whitney U test results, showing the significance of the difference between students' reading anxiety according to gender, are given below.

Table 7. Mann-Whitney U Test Results for Gender

Dimension	Gender	N	Mean	Std.Deviation	p
Reading Anxiety	Female	514	1.6614	.69083	0.528
	Male	535	1.7288	.78584	

* $p < 0,05$, $H_0: \mu_1 = \mu_2$

According to Table 7, the null hypothesis claiming that the difference between students' reading anxiety is statistically insignificant according to their gender cannot be rejected with 95% confidence. Therefore, gender does not significantly affect students' reading anxiety.

Kruskal-Wallis test results, showing the significance of the difference between students' reading anxiety according to age, are given below.

Table 8. Kruskal-Wallis Test Results for Age

Dimension	Age	Mean	Std.Deviation	p
Reading Anxiety	9	1.8890	.86350	0.019*
	10	1.6509	.70579	
	11	1.8111	.81138	
	12	1.9448	.95112	

* $p < 0,05$, $H_0: \mu_1 = \mu_2 = \dots \mu_n$

Table 8 analyzed, the null hypothesis claiming that the difference between the means of students' age groups is statistically insignificant ($H_0: \mu_1 = \mu_2 = \dots \mu_n$) can be rejected (* $p < 0,05$). In this case, it can be said with 95% confidence that age makes a statistically significant difference in reading anxiety. This difference is in favor of 10-year-old students. Considering that the texts read by the students mainly belong to 4th-grade, 10-year-olds are more appropriate for 4th-graders regarding reading anxiety. Considering that only 0.05% of the students participating in the study were 12 years old, there is no linear relationship between the student's ages and reading anxiety.

Kruskal-Wallis test results, showing the significance of the difference between students' reading anxiety according to their mother's education, are given below.

Table 9. Kruskal-Wallis Test Results for Mother's Education

Dimension	Mother's Education	Mean	Std.Deviation	p
Reading Anxiety	Primary School	1.7726	.71021	0.000*
	Secondary School	1.7811	.74371	
	High School	1.6123	.67935	
	University/Master	1.6016	.73256	

* $p < 0,05$, $H_0: \mu_1 = \mu_2 = \dots \mu_n$

According to Table 9, the null hypothesis claiming that the difference between the means of the groups is statistically insignificant ($H_0: \mu_1 = \mu_2 = \dots \mu_n$) can be rejected with 95% confidence (* $p < 0,05$). So, mothers' education is effective on students' reading anxiety. In other words, the higher the mother's education level, the lower the students' reading anxiety.

Kruskal-Wallis test results, showing the significance of the difference between students' reading anxiety according to their father's education, are given below.

Table 10. Kruskal-Wallis Test Results for Father's Education

Dimension	Father's Education	Mean	Std.Deviation	p
Reading Anxiety	Primary School	1.8555	.74112	0.000*
	Secondary School	1.7931	.71958	
	High School	1.6322	.70291	
	University/Master	1.6142	.70830	

* $p < 0,05$, $H_0: \mu_1 = \mu_2 = \dots \mu_n$

Table 10 analyzed, the null hypothesis claiming that the difference between the means of the groups is statistically insignificant ($H_0: \mu_1 = \mu_2 = \dots \mu_n$) can be rejected with 95% confidence for reading anxiety (* $p < 0,05$). Therefore, fathers' education is effective on children's reading anxiety. In other words, the higher the father's education level, the lower the students' reading anxiety.

The people with whom primary school students interact most outside of school are their parents. Conscious parents with a high level of education better guide their children in correct reading, fluent and prosodic reading, and positively contribute to reducing their reading anxiety.

The results of the Mann-Whitney-U test show the significance of the difference between students' reading anxiety according to their mother's working status.

Table 11. Mann-Whitney U Test Results for Mother's Working Status

Dimension	Mother's Working Status	N	Mean	Std.Deviation	p
Reading Anxiety	Housewife	677	1.7335	.76437	0.038*
	Working	358	1.6194	.68324	

* $p < 0,05$, $H_0: \mu_1 = \mu_2$

According to Table 11, the null hypothesis claiming that the difference between students' reading anxiety is statistically insignificant according to the mother's working status can be rejected with 95% confidence. Therefore, the working status of children's mothers creates a statistically significant impact on their reading anxiety in favor of those with a working mother. In other words, students whose mothers are working have lower reading anxiety.

Finally, Mann-Whitney U test results, showing the significance of the difference between students' reading anxiety according to their father's working status, are given below.

Table 12. Mann-Whitney U Test Results for Father's Working Status

Dimension	Father's Working Status	N	Mean	Std.Deviation	p
Reading Anxiety	Unemployed	69	1.8801	.87597	0.145
	Working	964	1.6771	.72133	

* $p < 0,05$, $H_0: \mu_1 = \mu_2$

According to Table 12, the null hypothesis claiming that the difference between students' reading anxiety is statistically insignificant according to the father's working status cannot be rejected with 95% confidence. Therefore, the father's working status does not significantly affect students' reading anxiety.

Discussion and Interpretation

This study examined the reading anxiety of primary school 4th-grade students in terms of the school's district, gender, age, parent's education level, and working status using the descriptive survey model. The reading anxiety scale consisted of 29 items and was administered to 1049 students; its reliability coefficient was 0.957 (95.7%). As a result of the factor analysis based on Principal Component Analysis, the optimum model was obtained from the structure consisting of 1 factor. As the scale consisted of one dimension, the reliability in Table 2 was also valid for the Confirmatory Factor Analysis. The standardized factor loads were higher than 0.3, and there was an acceptable fit (Tabachnick et al, 2013).

This study, there was no significant difference between the students' reading anxiety according to the school district. Similarly, the study of İzci and Kaya (2021) also showed no significant difference between the reading anxiety of the students according to the settlement where the school is located. This study, no significant difference was observed in the reading anxiety of the students according to gender. The literature review showed similar results, reporting that there is no significant difference between reading anxiety according to gender (Altunkaya, 2017; Arslan, 2017; Ateş & Bahşi, 2019; Baki, 2019; Çevik et al., 2019; Kılınç & Yenen, 2016; Öy, 1990; Şahin, 2019; Taşdemir & Taşdemir, 2020; Yamaç & Sezgin, 2018; Yıldız & Ceyhan, 2016). However, some studies (Alisinanoğlu & Ulutaş, 2003; İzci & Kaya, 2021; Jafarigohar & Behrooznia, 2012; Park & French, 2013; Plotnik, 2009; Toros & Tataroğlu, 2002; Uçgun, 2016) reported a significant difference according to gender, in favor of male students. In other words, female students had higher

reading anxiety than males. This situation may vary according to the region where the school is located.

The students' age levels make a statistically significant difference in reading anxiety, which does not depend on whether the student is younger or older. Şahin (2019) and Tonka (2020) reported that there was no significant difference between students' reading anxiety according to their grades and age. On the other hand, Taşdemir and Taşdemir (2020) reported a significant difference between students' reading anxiety according to their grades, in favor of the high-grade students. In other words, secondary school 5th-grade students' reading anxiety is higher than 6th-grade and 7th-grade students.

A significant difference was found according to the parents' education levels of the students; this difference was in favor of students whose parents had a high level of education. Similar results were reported in some studies (İzci & Kaya, 2021; Taşdemir & Taşdemir, 2020; Uçgun, 2016). However, some other studies found no significant relationship between students' mother and father education levels and their reading anxiety (Çevik et al., 2019; Yamaç & Sezgin, 2018; Yıldız & Ceyhan, 2016). This study, Uçgun (2016) found a significant relationship between students' mother and father education levels and their reading anxiety against university graduate mothers and fathers. The review of the studies on reading anxiety and parent's education level showed that reading anxiety decreases as the parents' education level increases, which supports the results of this research (Alisinanoğlu & Ulutaş, 2003; Durkan & Özen, 2018; Katrancı & Kuşdemir, 2016; Özen & Durkan, 2016; Yenilmez & Özbey, 2006). The people with whom primary school students interact most outside of school are their parents. Conscious parents with a high level of education better guide their children in correct reading, fluent and prosodic reading, and positively contribute to reducing their reading anxiety.

Regarding the parents' working status, there was a significant difference in favor of students with working mothers. However, no significant difference was observed in the father's working status. This significant difference was in favor of students whose mothers were working. In other words, students whose mothers do not work have higher reading anxiety.

Conclusions and Recommendations

Conclusion

In this research, the following results were obtained. In this study, it can be said that their school's district is not effective on their reading anxiety. In this process, it was not determined why there was a difference in terms of their genders on reading anxiety. In this study, it can be said with 95% confidence that age makes a statistically significant difference in reading anxiety. This difference is in favor of 10-year-old students.

Considering that the texts read by the students mainly belong to 4th-grade, 10-year-olds are more appropriate for 4th-graders regarding reading anxiety. Considering that only 0.05% of the students participating in the study were 12 years old, there is no linear relationship between the student's ages and reading anxiety.

It has been determined that students' mother's education level has an effect on reading anxiety. The people with whom primary school students interact most outside of school are their parents. Conscious parents with a high level of education better guide their children in correct reading, fluent and prosodic reading, and positively contribute to reducing their reading anxiety. A significant difference was revealed according to the parents' education levels of the students, in favor of those whose parents had higher education levels. In other words, the higher the parents' education level, the lower the students' reading anxiety.

Regarding the parents' working status, there was a significant difference according to the mother's working status in favor of students with working mothers. It was determined that the working status of the mothers of the students caused a significant difference between the reading anxiety levels, while the working status of the fathers did not cause a significant difference. It was determined that the significant difference in students' reading anxiety was in favor of working mothers. In other words, it can be said that the children of working mothers have lower reading anxiety levels. Therefore, the working status of children's mothers creates a statistically significant impact on their reading anxiety in favor of those with a working mother. In other words, students whose mothers are working have lower reading anxiety.

No significant difference was found between the reading anxiety levels of the students according to the district where the school is located, their gender and the working status of their fathers. It was determined that as the education level of the students' parents increased, the level of reading anxiety decreased. It was determined that the working status of the mothers of the students caused a significant difference between the reading anxiety levels, while the working status of the fathers did not cause a significant difference.

Suggestions

The following results were obtained in the research;

In the research, it was determined that there was no significant difference between the students' reading anxiety levels according to the district where the students attended school and their gender. It was determined that the age level of the students made a statistically significant difference on their reading anxiety levels, and this difference did not depend on whether the student was younger or older. A significant difference was found between the educational levels of the students' parents. This significant difference was

found to be in favor of students with higher levels of parental education. In other words, it was determined that the higher the level of education of the parents, the lower the reading anxiety of the students. When the students' reading anxiety was analyzed in terms of their parents' working status, a significant difference was found between the working status of the mothers, while no significant difference was found between the working status of the fathers. This significant difference was found to be in favor of students whose mothers were working. In other words, it was determined that students whose mothers do not work have higher reading anxiety.

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