

Correlation Between Reading Anxiety and Reading Comprehension of Students at SMA Negeri 3 Palu

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Abstract

This research aims to investigate the correlation between reading anxiety and reading comprehension of the eleventh-grade students of SMA Negeri 3 Palu. This research employed a correlation research design. The sample was 31 students which was taken by using a purposive sampling technique. The data were collected through a reading anxiety questionnaire and reading comprehension test. All the data gained in this research were analyzed using Pearson Product Moment Correlation. The results indicated that there was no significant correlation between anxiety and reading comprehension of the eleventh-grade students at SMA Negeri 3 Palu. The correlation coefficient (r_{xy}) was 0.116, while the significance value ($p = 0.533$) was much greater than 0.05, confirming the lack of a significance. This indicates that students' ability to comprehend texts is not necessarily affected by their level of reading anxiety, suggesting that other factors may contribute to their reading comprehension, such as motivation, reading strategies, limited vocabulary, and the learning environment.

Key words: Correlation, Reading Anxiety, Reading Comprehension

INTRODUCTION

Reading comprehension is a critical skill in academic settings, as it directly impacts students' ability to understand and process information. However, many learners experience reading anxiety, a form of stress or apprehension related to reading tasks, which can hinder their ability to perform well in comprehension activities. Reading anxiety is often linked to factors such as unfamiliar vocabulary, complex sentence structures, or a lack of vocabulary knowledge. These anxieties can lead to poor performance in reading comprehension, impacting academic success across disciplines (Horwitz, 2001).

Reading anxiety is a specific type of anxiety that occurs when individuals engage in reading tasks, particularly in academic or high-pressure environments. It can manifest in various ways, including feelings of nervousness, apprehension, and fear, which negatively affect reading comprehension and overall performance. According to research by Horwitz (2001), reading anxiety is often linked to difficulties in language learning, unfamiliar vocabulary, complex sentence structures, or a lack of prior knowledge on a topic, all of which can trigger anxiety in learners.

Reading anxiety is particularly prevalent among second language (L2) learners, as highlighted by research conducted by Saito et al. (1999). Their study revealed that many L2 learners face heightened anxiety due to the added challenge of processing unfamiliar linguistic and cultural elements. This anxiety can be exacerbated by the fear of making mistakes or being judged by peers, further hindering reading performance. Moreover, Zhao et al. (2013) found that reading anxiety can reduce motivation, increase avoidance behavior, and significantly affect learners' ability to focus, all of which contribute to poor reading comprehension outcomes.

Recent studies have explored the relationship between reading anxiety and reading comprehension. According to MacIntyre and Gardner (1994), students with higher levels of reading anxiety tend to have lower scores in reading comprehension assessments. Reading anxiety can reduce focus, lower motivation, and cause avoidance behavior, all of which negatively impact comprehension performance. According to Zarei (2014), students who experience higher reading anxiety often choose less effective reading strategies, such as avoiding complex texts or relying heavily on translation, which in turn hinders their comprehension and overall reading ability.

Anxiety in reading is not limited to the difficulty of the text, it may also be influenced by the language in which the reading occurs. According to Horwitz (2001), second language learners tend to experience higher levels of anxiety when reading in the second language compared to their native language, further exacerbating challenges in reading comprehension. This is supported by research from Jafarigohar and Behrooznia (2012), which found that distance EFL learners with high levels of reading anxiety were more likely to struggle with extracting meaning from texts, as their anxiety interfered with cognitive processes like working memory and concentration.

Previous studies have shown a negative relationship between the level of reading anxiety and students' reading ability (Fitrawati et al., 2023; Limeranto and Subekti, 2021; Mardianti et al., 2021; Song, 2018). In other words, the higher the level of reading anxiety experienced by students, the lower their ability to comprehend texts. However, these studies are still limited to certain contexts and have not extensively explored students at the senior high school level, particularly in the eastern regions of Indonesia such as the city of Palu. Considering the local context and the importance of reading comprehension in secondary education, this study aims to fill that gap.

This research aims to investigate the relationship between reading anxiety and reading comprehension among eleventh-grade students at SMA Negeri 3 Palu. The research employs a quantitative correlational design to obtain empirical data that illustrates the extent to which reading anxiety affects students' comprehension of English texts. The findings of this study are expected to contribute to the development of reading instruction strategies that are not only methodologically effective but also considerate of students' psychological conditions. Thus, teachers can design more inclusive and supportive teaching approaches, ultimately enhancing the quality of English language learning at the senior high school level.

Although numerous studies have examined the relationship between reading anxiety and reading comprehension, most of them were conducted among university students, particularly English majors or students in academic settings with high proficiency levels and academic pressures. However, little attention has been given to senior high school students. Given the distinct linguistic, cultural, and educational context, it is necessary to explore whether the same correlation applies to this population. This research fills that gap by investigating the issue in a public high school in Palu, where students may have different learning experiences, language exposure, and emotional responses to reading in English.

METHODS

This research employed a quantitative correlational research design to investigate the relationship between reading anxiety and reading comprehension. The correlational research is to examine whether and to what extent a relationship exists between two or more variables. In this research, participants were not assigned into experimental or control groups, nor were any variables manipulated. Instead, the data were collected naturally through a questionnaire and a reading comprehension test. This design was appropriate as the aim of the research was to determine

whether there was a statistically significant correlation between the level of students' reading anxiety and their reading comprehension performance.

The participants of this research were eleventh-grade students of SMA Negeri 3 Palu. The total population consisted of 186 students spread across six classes. The sampling technique used was purposive sampling, where class XI B2, consisting of 31 students, was selected based on teacher recommendations. This class was chosen because the students demonstrated higher enthusiasm for English learning compared to other classes.

The sample size for this research consisted of 31 students, representing approximately 17% of the total population of eleventh-grade students at SMA Negeri 3 Palu. This sample size was considered sufficient for correlation analysis using the Pearson Product Moment technique. The target population of the study was all eleventh-grade students enrolled in the academic year 2024/2025 at SMA Negeri 3 Palu.

Data were collected using two instruments: a reading anxiety questionnaire and a reading comprehension test. The reading anxiety questionnaire used a Likert scale translated by Fariyah (2017) from the Foreign Language Reading Anxiety Scale (FLRAS) developed by Saito et al. (1999). The reading comprehension test consisted of 25 multiple-choice questions adapted from the English textbook for Grade XI by Afrilyasanti (2021). In this research, the researcher conducted a direct assessment of the students. The researcher carried out two sessions as follows: the first session, the researcher distributed the questionnaire to the students. In the next session, the researcher gave the test questions to the students. After the data had been collected, data analysis was carried out in several steps. First, the researcher used the formula proposed by Suharsimi (2006) to determine the students' reading anxiety scores. As follows:

$$P = \frac{\text{The Achieved Score}}{\text{The max score}} \times 100$$

Next, the researcher used the formula proposed by Suharsimi (2006) to calculate the standardized scores of the reading comprehension test. As Follows:

$$\text{Value} = \frac{\text{Obtained Score}}{\text{Max Score}} \times 100$$

Then, the researcher used the formula proposed by Gay et al. (2006) to calculate the mean of all student scores, as follows:

$$M = \frac{\text{Total Score}}{\text{Participants}}$$

Finally, to determine the correlation between the two variables, the researcher used the Pearson Product-Moment correlation coefficient technique from Bungin (2011). The formula is:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{(N(\sum X^2) - (\sum X)^2)(N(\sum Y^2) - (\sum Y)^2)}}$$

r_{xy} = Correlation coffecient

N = The number of students/participant

$\sum X$ = The sum of scores in reading anxiety questionnnaire

$\sum Y$ = The sum of scores in reading comprehension test

$\sum X^2$ = The sum of squared scores in reading anxiety questionnaire

$\sum X^2$ = The sum of squared scores in reading comprehensions

$\sum XY$ = The sum of multiple of score from reading anxiety questionnaire and reading comprehension test in each number.

RESULTS

In order to find out the correlation between reading anxiety (X) and reading comprehension (Y), the researcher applied Pearson Product Moment formula. The researcher presented both of the result in the following table.

Table 1. The Result of Reading Anxiety and Reading Comprehension

No	Initials	X	Y	XY	X ²	Y ²
1	AB	26	84	2184	676	7056
2	ADBT	60	84	5040	3600	7056
3	AF	31	48	1488	961	2304
4	AR	45	28	1260	2025	784
5	ASR	27	84	2268	729	7056
6	BUT	34	8	272	1156	64
7	CH	41	12	492	1681	144
8	CF	42	84	3528	1764	7056
9	CWS	67	24	1608	4489	576
10	FAPRE	45	32	1440	2025	1024
11	FDPRH	40	80	3200	1600	6400
12	FLT	48	68	3264	2304	4624
13	GFM	38	48	1824	1444	2304
14	GK	43	84	3612	1849	7056
15	HF	40	28	1120	1600	784
16	IA	43	12	516	1849	144
17	IPASD	56	76	4256	3136	5776
18	IQ	29	64	1856	841	4096
19	IZ	45	12	540	2025	144
20	JR	20	16	320	400	256
21	KT	37	36	1332	1369	1296
22	KUH	31	32	992	961	1024
23	ME	28	92	2576	784	8464
24	MF	51	72	3672	2601	5184
25	MFRF	53	48	2544	2809	2304
26	NLPL	31	92	2852	961	8464
27	NW	20	8	160	400	64
28	RA	33	8	264	1089	64
29	RH	31	44	1364	961	1936
30	SM	43	96	4128	1849	9216
31	ZM	32	8	256	1024	64
Total		1210	1512	60228	50962	102784
Mean		39.0	48.8			

From the Table above, the total reading anxiety score (X) was 1.210, while the reading comprehension test score (Y) was 1.512. After having the total scores of both variables, the results show that the mean score of reading anxiety score (X) was 39.0%, which means that the category of students reading anxiety was low anxiety. Meanwhile, the mean score of reading comprehension (Y) was 48.8%, which categorized as very low.

The formula to find out the correlation of students' reading Anxiety and their reading comprehension is as follows:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n(\sum X^2) - (\sum X)^2)(n(\sum Y^2) - (\sum Y)^2)}}$$

$$r_{xy} = \frac{31(60228) - (1210)(1512)}{\sqrt{(31(50962) - (1210)^2)(31(102784) - (1512)^2)}}$$

$$r_{xy} = \frac{(1867068) - (1829520)}{\sqrt{(1589822 - 1464100)(3186304 - 2286144)}}$$

$$r_{xy} = \frac{37548}{\sqrt{(115722)(900160)}}$$

$$r_{xy} = \frac{37548}{\sqrt{(104179615520)}}$$

$$r_{xy} = \frac{37548}{322751.17}$$

$$r_{xy} = 0.116$$

Based on the calculation above, it was found that the r_{xy} was 0.116. It is a positive result which means that there is no significant correlation between reading anxiety and reading comprehension.

Furthermore, to make the result accurately, the researcher also used the program of SPSS statistic to find out the correlation between reading anxiety and reading comprehension. The result can be seen on the table below:

Table 2. The Correlation Between Reading Anxiety and Reading Comprehension Using SPSS

Correlations			
		Reading Anxiety	Reading Comprehension
Reading Anxiety	Pearson Correlation	1	.116
	Sig. (2-tailed)		.533
	N	31	31
Reading Comprehension	Pearson Correlation	.116	1
	Sig. (2-tailed)	.533	
	N	31	31

Based on the SPSS program results, the researcher also found a correlation between two variables of 0.116, which is classified as a very weak correlation. Furthermore, the significance of reading anxiety (X) and reading comprehension (Y) was 0.533. In research, the commonly used significance limit is 0.05. Because the value of 0.533 is much greater than 0.05, this means there is no significant relationship between reading anxiety and reading comprehension. Although given very weak correlation (0.116), this relationship is not strong or significant enough to conclude that reading anxiety affects reading comprehension in this sample.

DISCUSSION

From the analysis using the Pearson Product Moment formula and SPSS, it was found that the correlation between reading anxiety (X) and reading comprehension (Y) is 0.116. Additionally, the significance value is 0.533, which is far greater than 0.05, indicating that this relationship is not statistically significant. This means that the null hypothesis (H_0) is accepted, and the alternative hypothesis (H_a) is rejected. In other words, there is no significant correlation between reading anxiety and reading comprehension.

Based on previous studies, there is a consistent pattern showing that reading anxiety has a significant correlation with reading comprehension. All prior studies (Song, 2018; Limeranto and Subekti, 2021; Mardianti et al., 2021; Fitrawati et al., 2023) concluded that the higher the level of reading anxiety, the lower the reading comprehension or critical reading skills of students. However, the findings in the eleventh grade at SMA Negeri 3 Palu differ from this pattern. This means that this research found no significant relationship between reading anxiety and reading comprehension among 11th-grade students at SMA Negeri 3 Palu.

The reason for this difference lies in the characteristics of the sample. Previous studies were conducted in various academic contexts, such as theology students (Limeranto and Subekti, 2021), non-English major students (Mardianti et al., 2021), and English major students (Fitrawati et al., 2023). Meanwhile, this study was conducted on 11th-grade high school students at SMA Negeri 3 Palu. High school students may experience different levels of academic stress compared to university students, which can influence the effect of reading anxiety on reading comprehension. According to Zhao et al. (2013), university students generally experience higher levels of academic stress and have broader learning experiences than high school students, which can affect the relationship between reading anxiety and reading comprehension.

Moreover, the measurement method may also impact the research results. Although this study used a Likert scale and reading comprehension tests similar to previous studies, differences in question difficulty and instrument validity could influence the final outcome. According to Matsuda and Gobel (2004), variations in question difficulty and instrument validity can affect the final results. A study by Saito et al. (1999), showed that the format and difficulty level of reading comprehension tests could influence participants' anxiety levels, potentially leading to differences in the relationship between reading anxiety and reading comprehension.

Other factors that may influence reading comprehension including reading strategies, motivation, vocabulary knowledge, and the learning environment. According to Gardner (1985), language learning motivation can be a dominant factor in reading comprehension, reducing the impact of reading anxiety. Guthrie and Wigfield (2000) also emphasized that motivated readers are more likely to engage in reading tasks and develop a deeper understanding of texts, suggesting that motivation plays a crucial role in reading comprehension outcomes.

Reading strategies also significantly impact comprehension. According to Pressley and Afflerbach (1995), skilled readers use various cognitive and metacognitive strategies, such as summarizing, predicting, and questioning, to enhance their understanding. Students who lack effective reading strategies may struggle with comprehension, regardless of their anxiety levels. This aligns with the findings of Anderson (1991), who noted that strategic readers exhibit better comprehension than those who rely solely on decoding skills. If students do not have effective reading strategies, they will face difficulties in understanding texts, even if their anxiety levels are low.

Limited vocabulary is another crucial factor affecting reading comprehension. Nation (2001), highlighted that vocabulary size strongly correlates with reading comprehension, as students with a richer vocabulary can process texts more efficiently. Learners with a restricted vocabulary may face difficulties in understanding complex texts, leading to lower comprehension scores. Laufer (1996), also found that a lack of vocabulary knowledge could be a more significant barrier to reading comprehension than grammatical knowledge. Students with limited vocabulary struggle more when encountering academic or technical terms, which significantly hinders their ability to grasp meaning from texts.

A supportive learning environment further contributes to reading success. MacIntyre and Gregersen (2012), found that a positive learning environment can help students manage anxiety, thereby reducing its effect on reading comprehension. In this research, the findings show that the average reading comprehension score of students is very low (48.8%), indicating that other factors, such as reading strategies, motivation, and vocabulary knowledge, might be more dominant in determining reading comprehension than reading anxiety itself. Additionally, students with moderate or high anxiety levels may have better coping mechanisms, allowing them to perform well in reading comprehension despite experiencing anxiety.

Cultural differences and educational contexts may also contribute to the differing results. Song (2018), found that Korea's highly competitive learning culture increases the effect of reading anxiety on reading comprehension. In contrast, in Indonesia, particularly in Palu, academic pressure may be lower, so reading anxiety does not significantly impact students' reading comprehension. Horwitz (2001), also stated that the English teaching methods used by teachers can influence students' reading anxiety levels. If the teaching methods at SMA Negeri 3 Palu are more communicative and supportive, reading anxiety may not significantly hinder students' reading comprehension. However, a lack of emphasis on reading strategies, motivation, and vocabulary development may be more responsible for students' low reading comprehension scores.

These findings suggest several instructional implications for students. Since reading anxiety did not significantly affect reading comprehension in this context, students are encouraged to focus on developing effective reading strategies, increasing motivation, and enriching their vocabulary. They can practice techniques such as summarizing, predicting, and questioning while reading to improve understanding. Engaging with English texts through enjoyable activities, such as reading short stories, watching videos with subtitles, or using vocabulary games, may also help strengthen comprehension. Moreover, students should try to create a positive mindset and reduce anxiety by viewing mistakes as part of the learning process. Being aware of their own reading challenges and actively working to overcome them can contribute to better outcomes in reading comprehension.

CONCLUSION

Based on the findings and discussion, this research concludes that there is no significant correlation between reading anxiety and reading comprehension among 11th-grade students at SMA Negeri 3 Palu. The Pearson Product Moment correlation coefficient (r_{xy}) was 0.116. Additionally, the significance value ($p = 0.533$) was much greater than 0.05, confirming that the relationship is not statistically significant. These findings differ from previous research, which generally suggests that higher reading anxiety negatively affects reading comprehension. The discrepancy may be due to differences in sample characteristics, academic stress levels, and external factors such as motivation, reading strategies, limited vocabulary and learning environments. Despite

low levels of reading anxiety among students, their reading comprehension scores were generally low (mean score: 48.8%). This suggests that students' ability to comprehend texts is not necessarily affected by their level of reading anxiety, indicating that other factors may contribute to their reading comprehension. This research is subject to several limitations. First, the sample size of 31 students, taken from a single class, limits the generalizability of the findings. A larger and more diverse sample can yield more representative results. Second, the research focused solely on reading anxiety and reading comprehension without considering other potentially influential factors such as motivation, reading strategies, limited vocabulary and learning environments. Future research can incorporate these variables to provide a more comprehensive understanding.

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