

The Relationship between the Stress from Learning English and Defense Mechanism of Elementary Students

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Abstract

This study aims to examine the relationship between the level of stress included in elementary school children as a result of learning English and their resulting defense mechanisms. This study also investigates the relation between the types of defense mechanisms and the English achievement of those same children. The subjects were 106 fifth grade students in a metropolitan area in Korea, and a survey was employed to collect data. A Multivariate Analysis of Variance (MANOVA) was conducted in order to test the differences across the four types of defense mechanisms that were observed between low and high levels of stress of the students. In addition, a *t*-test was conducted in order to compare the English achievement of the two groups of students. The results indicate a strong relationship between the level of stress from learning English and the particular type of defense mechanism. The findings imply that there is a need to consider elementary students' stress from learning English and helping them to control stress in appropriate ways.

Keywords: Defense Mechanism, Elementary English, Learning Stress, Teacher Role

1. Introduction

In most Asian countries, including Korea, the emphasis on academic achievement has placed great pressure on children. The situation leads to 'academic stress,' which is a risk factor that adversely affects the physical health of and induces psychological distress in students¹⁻³. Previous research on stress in Korea shows that in recent years, academic stress has become one of the biggest sources of stress in students, and that most students experienced academic stress^{4,5}. However, such studies have generally focused on adolescent or parental stress, and relatively fewer studies have addressed the academic stress induced in children. Moreover, little research has been conducted on academic stress in the area of language education, particularly in stress from learning English. Therefore, the purpose of this study is to examine the relationship between stress from learning English and the defense mechanisms used by elementary school students. This study also investigated the relationship

between the level of stress and the English achievement of the students. In addition, the study examined if there is a gender difference in the use of such defense mechanisms.

The research questions in this study were as follows.

- (1) What is the relationship between stress from learning English and the defense mechanism of fifth grade children?
- (2) What is the relationship between the level of stress and English achievement in fifth grade children?
- (3) Is there any gender difference in the use of such defense mechanisms?

2. Literature Review

2.1 Childhood Stress

According to Patterson and McCubbin⁶, stress is "the organism's physiological and psychological response to ... stressors, particularly when there is a perceived imbalance between environmental demands (life changes) and

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the individual's capability to meet these demands". Honig⁷ states that stress is "a nonspecific response of the body to any demand that exceeds the person's ability to cope, as a person-environment relationship that threatens ... and as a mental state in response to strains or daily hassles". On the other hand, Jung, Kudo, and Choi⁸ noted, "Stress is a response to positive or negative demands".

Recently Schafer⁹ suggested that stress can be caused from "too much or too little arousal resulting in harm to mind and body". Similarly, Yerkes and Dodson mentioned that in order for an individual to perform his or her best, a decent amount of both perceived stress and physiological arousal are necessary. This is referred to as, 'eustress,' which is the optimal level of stress. According to the Yerkes-Dodson curve shown in Figure 1¹⁰, the optimal performance level is in the (C) area. On the other hand, distress results from both conditions (A) and (B). Specifically, if a source of stress is perceived to exceed one's capacity to cope, it belongs to the condition (B), and if a source of stress perceived to be negligible, it belongs in (A).

Lazarus and Folkman¹¹ also developed a model for stress; they developed two distinct actions through which stress can be appraised. The first appraisal is the initial perception of a stressor, which can be judged to be positive, negative, or benign. The second appraisal is the coping response of the individual. They emphasized that, the perception of stress was the most important because the perception subsequently affects one's well-being¹². Therefore, it would be helpful for peers, parents, and teachers to promote initiatives that address a student's perception of the initial source of stress. Networking and interactive relationships could offer strong support for students to experience their optimal levels of performance.

In general, there is little agreement in the literature over, the definition of stress, and likewise, there is no

consistency in how stress in children can be defined. Researchers who work such issues have tried to identify the possible sources of stress in children. For example, Sarafino and Armstrong¹³ explained that stress in children has three main sources: family, peers, and illness. They also identified other key factors that include stress in children, including competition, success, and expectations, and they also proposed factors that are mainly associated with stressful situations. Others have also described similar stressors in children, like anxiety, depression and fear.

According to Tufnell¹⁴, children's perception of a stressful event is determined by three factors: their developmental stage, the circumstances surrounding and following the incident, and the support that is subsequently available. In fact, childhood stress is directly linked to health, and it is also closely related to emotions. Roosa, Gensheimer, Short, Ayers, and Shell¹⁵ noted, "high levels of stress in the environment contribute to the risk of experiencing mental health problems and that other environmental factors or personality factors can either increase or decrease a person's vulnerability to this stress".

Meanwhile, others have focused on cognitive issues related to stress in children by emphasizing the importance of interpreting stressful events¹⁶. They suggest that cognitive variables are more likely to affect children's stress levels than the events themselves. In sum, stress affects both the physical and mental health of a child, and various factors are related to such stress. Those factors affect the child's individual coping or defense mechanisms, and a common research finding related to children's stress is the notion that stress negatively influences their health.

Most children begin to experience a sense of stress from the moment they begin their school experience. School children understand that academic competence is a reflection of their self-competence, and they tend to perceive their self-image as tied to their academic performance. Parents play a role in introducing this concept to children, so that is the reason why children may perceive academic achievement as a stressor. Academic stress can be defined as a disturbance induced by a student's appraisal of academic stressors, and the academic stress experienced by students normally comes from examinations and assessments, parent and teacher expectations, conflicts or tensions between the teacher and the student, and intense competition with their peers^{4,17}.

In fact, academic stress is the most prevalent form of stress for many students in Asian countries, such as China, Hong Kong, and Korea. In those countries, educational

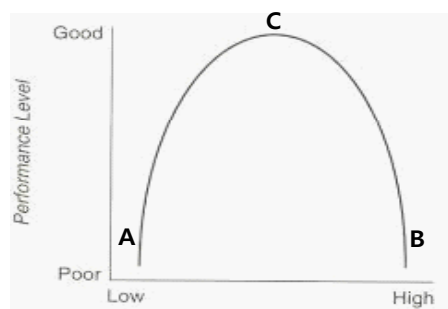


Figure 1. The Yerkes-Dodson curve.

achievement is emphasized, and students often receive academic pressure throughout their studies. For example, Leung, Yeung, and Wong³ found that academic stress in primary school children in Hong Kong was a risk factor that increased student anxiety levels. Academic stress is the most common stress experienced by school children, and it negatively affects self-esteem and self-efficacy of children¹⁸. Previous studies show a high correlation between negative emotions and academic stress.

In Korea, elementary school students in public schools begin to learn English from the third grade. Parents expect their child to receive good results in their examinations, and this situation induces stress in children's while learning English. In fact, elementary school students' emotions or perceptions toward learning English are very important as they continue to study in further years. Since English is a long-lasting subject throughout their entire life, children's understanding and coping with stress from learning English may have a largely influence on their attitude and self-confidence in later years as they continue to study English. Even though academic stress in children is important, as mentioned above, there has not yet been enough research that focuses neither on identifying stress caused by learning English nor on the pattern or types of defense mechanisms used by elementary school-level English language learners, and as such, it is meaningful to investigate these two stress-related situations.

2.2 Stress and Defense Mechanism

Grohol¹⁹ stated that, defense mechanisms are "one way of looking at how people distance themselves from a full awareness of unpleasant thoughts, feelings and behaviors." It is also known that the effect or outcome of stress can be different according to the defense mechanism that an individual expresses in response to said stress²⁰. In addition, the defense mechanism can lead to different effects depending on how the individual interprets or understands certain stressful situations. A considerable number of studies have been conducted on defense mechanism used by elementary students in Korea. However, most such studies examined the relationship between the defense mechanism and the mental health or psychological well-being^{21,22}, and there is a lack of research on the defense mechanisms in response to stress from learning English.

Researchers who have studied childhood stress have found that children respond to stress in different ways. In addition, teachers are known to be able to predict stress responses in school-aged children²³. This is a positive signal

for educators in that once a teacher recognizes stress in a child, the teacher can appraise the possible stressors and can identify the degree of stress in the child. Although, various kinds of defense mechanisms can be identified, researchers have normally limited such to four types of defense mechanism for children: immature, adaptive, self-restrain, and conflict avoidance. Each defense mechanism consists of several sub elements. For example, the immature mechanism includes fantasy, passive aggression; the adaptive mechanism includes humor, anticipation; the self-restrain mechanism includes reaction formation; and conflicting avoidance includes denial.

2.3 Academic Stress and Teachers Role

In terms of the role of the teacher, Chandler²⁴ suggested that teachers can help children under stress. Chandler emphasized that a teacher has a vital role as a mediator who can filter the negative experiences of students and can buffer the impact of stress. Teachers also can create a low-stress learning environment by providing clear and appropriate academic expectations, by reducing ambiguity, and by minimizing the opportunities for frustration. In particular, a teacher is the most important and powerful factor that can effect change in children's lives. Therefore, teachers should try to detect, predict and cure children's stress by communicating effectively and taking an active role as an environmental manipulator.

Regarding the effect of the teacher's role on the academic stress of the student, Woo²⁵ tested whether a group counseling program could decrease academic stress in elementary school students, and found that the academic stress experienced by students significantly decreased in the experimental group. The results indicate that the teacher's role is crucial in decreasing the levels of stress in elementary school students increasing individual internal-control. This suggests that English teachers also play an influential role in decreasing academic stress in elementary school students from learning English.

3 Method

3.1 The Subject

The subjects of this study were 106 male and female fifth grade elementary school students in a metropolitan city in Korea. The study employed a convenience sampling approach, and most of the students in the study had taken additional English classes at private institutes after school.

The school is located in a central area of the city, and their parents' academic expectations toward their child were very high.

3.2 The Instrument

Survey instruments were used in the study. In order to measure the students' stress from learning English, an edited version of Koo's Questionnaire²⁶ was used. The questionnaire consists of three parts: examination stress, class stress, and learning stress. The students' type of stress defense mechanisms were measured by using The Korean Version of Defense Style Questionnaire (K-DSQ) developed by Cho²⁷. The Questionnaire consists of sixty-five items and is divided into four types of defense mechanisms: immature, adaptive, self-restraining, and conflict avoiding.

3.3 Data Collection and Analysis

The survey response and the final exam scores were collected. In order to identify the students' level of stress from learning English, the mean score and the median value were used. A Multivariate Analysis of Variance (MANOVA) was conducted in order to compare the differences in the use of the defense mechanisms between the low- and high-stress groups. In addition, a paired t-test was conducted in order to compare the English achievement of the two groups.

4. Result and Discussion

The results of this study can be organized in three parts according to the answer given for the research questions: (1) the difference in the use of the defense mechanism according to stress level in elementary students; (2) the difference in English achievement according to stress levels in elementary students; and (3) the difference in the use of defense mechanisms by gender. The detailed results are presented below.

4.1 Stress from Learning English and Use of Defense Mechanism

In terms of the difference in the use of defense mechanisms according to the level of stress, the results revealed that the group with high-stress from learning English had 'immature', 'self-restraining', and 'conflict-avoiding' defense mechanisms with more frequently than the low-stress group. The results were statistically significant, but no significant difference was found in the use of

the 'adaptive' mechanism. The results are consistent with previous research which states that elementary school students used the 'adaptive' defense mechanism and a 'self-restraining' defense mechanism the most²¹.

Therefore, the pattern for using defense mechanisms may be a significant predictor in identifying the level of academic stress suffered by elementary school students. In particular, the students who showed a high level of stress used the immature and self-restraining stress the most in the current study. As previously mentioned, the immature defense mechanism includes fantasy and passive aggression. Thus, the result implies that students seem to be overly optimistic or frustrated with their own English ability. On the contrary, students with a low level of stress do not seem to use various defense mechanisms to cope with the stress from learning English.

4.2 Stress from Learning English and Academic Achievement

The comparison of the academic achievement of the two groups revealed a significant difference according to the level of stress. In particular, the students in the low-stress group of students gained higher scores in English achievement than those in the high-stress group.

Table 1. The difference in the use of defense mechanism according to the level of stress

Dependent Variable (Defense Mechanism)	Group Means		F
	Low (n = 56)	High (n = 50)	
Immature	2.10	2.56	12.11**
Adaptive	2.93	2.83	.44
Self-restraining	2.42	2.88	11.46**
Conflict-avoiding	1.93	2.37	7.65**
F-value	3.903*		

**p<.01

Table 2. The difference in English achievement by the level of stress

Dependent Variable	Level of Stress		t	p
	Low (n = 56)	High (n = 50)		
	M SD	M SD		
Achievement	97.28 5.15	92.2 7.36	3.79	.000

***p<.001

This result demonstrates that the level of learning stress and achievement are inversely proportional to each other. Previous studies support this finding. For example, Koo²⁴ found that students who presented a low level of stress from learning English achieved good scores, and those with a high level of stress yielded low English test score.

These results indicate that there is a strong relationship between stress from learning English and English achievement. In other words, more stress seems to be associated with a lower achievement. Therefore, academic stress can be considered to be an important learning condition in English classrooms.

4.3 Defense Mechanisms and Gender

No statistical difference was found in this study across gender in the use of defense mechanisms toward stress from learning English. The results can be interpreted to mean that the use of defense mechanism largely relies on individual feelings or thoughts rather than on a gender difference. The result is inconsistent with previous studies that found a gender difference between children's stress and school adjustment²⁸. However, the current study specifically focused on stress induced by learning English. Thus different findings might be possible with respect to other measurements.

5. Conclusion and Implications

The findings of this study indicate that elementary school students who suffered from a high level of stress while learning English tended to use a wider variety of defense mechanisms than those who suffered from a low level of stress. Moreover, students who endured less stress while learning English showed a higher achievement in their English exam than those in the group with high stress.

Table 3. Difference in the use of defense mechanisms by gender

Dependent Variable (Defense Mechanism)	Group Means		F
	Male (n = 59)	Female (n = 47)	
Immature	2.36	2.26	.50
Adaptive	2.85	2.93	.32
Self-restraining	2.61	2.67	.19
Conflict-avoiding	2.18	2.03	.31
F-value	622.892*		

Jung et al.⁸ mentioned that the level of stress from learning English affects the types of defense mechanism used. The results of the present study imply that elementary students need to be trained on how to use appropriate defense mechanisms to cope with stress from learning English. Therefore, teachers should support students who experience a substantial amount of stress and should develop a program for students who are vulnerable to suffering from academic stress while learning English.

In fact, elementary school children still require adequate support from adults, such as teachers and parents when dealing with academic stress. For instance, Dubow and Tisak²⁹ suggested that support from an adult is beneficial in moderating or protecting against academic stress. In particular, the amount of support provided by teachers is specifically related to the levels of academic stress, and therefore, elementary school children who are under a lot of stress from learning English can benefit from English teachers who make an effort to help them manage their stress. Furthermore, teachers should be mindful of how to create or provide classroom environments with reduced levels of stress. In addition, they need to help their students practice effective use of defense mechanisms against stress when throughout every English class.

The result of the previous studies indicated that children can display greater stress behaviors in a classroom that is developmentally inappropriate than in a developmentally appropriate classroom³⁰. In other words, schools and teachers should consider providing appropriate classrooms where educational practices fit the children's level of development.

Some limitations should be taken into account for this study. First, participants were selected from a metropolitan city. Therefore, the result of this study cannot be generalized to other groups of children. In addition, one source of information used in this study, a survey, may not reflect other aspects of stressors or give a detailed mode of defense mechanisms of children. Thus, additional data sources such as observations and diagnostic criteria need to be included in further studies. Moreover, a qualitative research would shed light on the children's stress from learning English with ongoing and chronic data sources that might reveal more rigorous and in-depth findings.

In conclusion, this study has investigated the relationship between English learning stress and defense mechanisms expressed by elementary students. This study suggests a need to consider the academic stress including

in elementary school students when learning English and the need for English teacher's awareness and support as a critical part of the learning environment that affects their students' stress levels.

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