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Anxiety Reduction Within the School Setting: What known anxiety reducing interventions are most effective in schools?

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Anxiety Reduction Within the School Setting: What known anxiety reducing interventions are
most effective in schools?

A Quantitative Research Methods Proposal

By

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In Partial Fulfillment of the Requirements for the Degree of Master's of Science in Curriculum
and Instruction

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Abstract

Students in our schools are experiencing anxiety. This anxiety can be disruptive to the educational experience of students and can make for an uncomfortable learning environment. Educators and school systems oftentimes have the goal of creating an equitable environment for all of their learners. Addressing the effects of anxiety in the classroom should be no different. This quantitative study examined the effectiveness of three different anxiety-reducing interventions in the classroom. Students participated in a testing anxiety intervention, a journaling intervention, and a mindful breathing intervention. Students shared their level of anxiety by completing a survey to understand the effects of these interventions. The survey provided different scenarios for students to rank their level of anxiety. Those scenarios included: general anxiety, anxiety while at school, anxiety in the researcher's classroom, and anxiety prior to an assessment. The results of the surveys coupled with observation by the researcher lead to conclusions about the selected interventions. Results indicate potential success of the implemented interventions. There were noticeable decreases in the different categories of anxiety for some of the interventions performed. However, more research is needed to determine if the results are reliable and can be completely attributed to the changes in anxiety levels.

CHAPTER 1

INTRODUCTION

Introduction

Anxiety among students seems to be an increasing issue in secondary school populations (Missden & Campbell, 2019; Mitchell, 2020). Whether this is due to an actual increase of students developing anxiety or whether it be because we can identify and discuss anxiety more easily, it does not matter. The fact is that anxiety can lead to mental health crises among students and ultimately can lead to worse school performance (Humphrey, 2018). Not everyone experiences the same sort of anxiety, but there are ways we can try to help the students who do experience anxiety (Stapp & Lambert, 2020; Kamour & Altakhayneh, 2021; Fisher & Masia-Warner, 2004). As an educator, the researcher wants students to be the best they can be. By introducing anxiety reducing interventions, educators can try and help each student be their best. This action research project will focus on discovering if schools can help reduce anxiety in students by analyzing the effectiveness of anxiety reducing interventions.

Brief Literature Review

Anxiety has been observed in many of our students with an estimated 6-10% of students experiencing anxiety within the school setting (Missden & Campbell, 2019; Mitchell, 2020). There are many suggested ways as to how to address anxiety in schools (Park et al, 2014; McLeod & Boyes, 2021; Mitchell et al, 2020). These interventions vary in methods and success of reducing anxiety (Stapp & Lambert, 2020; Kamour & Altakhayneh, 2021; Fisher & Masia-Warner, 2004). One of the biggest concerns about anxiety in students is testing anxiety

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(McLeod & Boyes, 2021). Along with testing anxiety there are concerns over the overall mental health of students and their overall well-being (Nichols et al, 2013).

Statement of the Problem

Based on the research that is available, there is a significant amount of students who are not receiving the best education they can. This is due to the fact that they are experiencing anxiety in our schools (Humphrey, 2018). Just as if a student has a physical or mental disability, educators need to do everything they can to equalize their educational opportunity for the students suffering from anxiety. Through research, this paper will determine what sort of effect schools can have on student anxiety. The research will also examine current anxiety reducing methods to determine what is most successful.

Purpose of the Study

The author is interested in exploring how to make the education experience the best for students as possible. In education, there is an emphasis on creating an equitable learning experience for all students. In education there are interventions to help students who have mental and physical inhibitions. This is in an attempt to make education equitable for all students. Students who struggle with anxiety are no exception. Students with anxiety can miss out on interventions to make their experience equitable. The goal of the author is to ensure that education is doing everything possible to help out students who struggle with anxiety. By finding out what impact schools can have on reducing anxiety, schools can then begin to implement interventions to help reduce anxiety. The next step to answer this problem after answering the initial question would be to ensure we are using the correct interventions if schools do have the

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ability to reduce anxiety. The author wants all students to have the opportunity to succeed with their educational experience.

Research Question

In order to examine anxiety in schools, the research in this paper will attempt to address the following question:

1: What known anxiety reducing interventions are most effective in schools?

Definition of Variables

Independent variable A: Interventions used to reduce anxiety. These interventions have a goal of reducing the level of anxiety experienced by students and will be rated by the students.

Dependent Variable 1: Number of students feeling anxiety in school.

Dependent Variable 2: Level of anxiety felt in school. Level of anxiety will be defined and rated on a scale of 1-10.

Significance of the Study

This study will help the researcher understand the impact that schools can have on reducing anxiety. By understanding the true impact potential, the researcher can then implement interventions as is necessary to help all students have an equal learning opportunity. Educators must strive for ensuring learning is achievable by all students in the classroom. For some students the only time that might be the case is if an anxiety-reducing intervention is in place. Again, having the knowledge of what interventions work can elevate every classroom including the researcher's.

Research Ethics

Permission and IRB Approval

In order to conduct this study, the researcher will seek MSUM's Institutional Review Board (IRB) approval to ensure the ethical conduct of research involving human subjects (Mills & Gay, 2019). Likewise, authorization to conduct this study will be sought from the school district where the research project will take place (See Appendix X and X).

Informed Consent

Protection of human subjects participating in research will be assured. Participant minors will be informed of the purpose of the study via the Method of Assent (See Appendix A) that the researcher will read to participants before the beginning of the study. Participants will be aware that this study is conducted as part of the researcher's Master Degree Program and that it will benefit his teaching practice. Informed consent means that the parents of participants have been fully informed of the purpose and procedures of the study for which consent is sought and that parents understand and agree, in writing, to their child participating in the study (Rothstein & Johnson, 2014). Confidentiality will be protected through the use of pseudonyms (e.g., Student 1) without the utilization of any identifying information. The choice to participate or withdraw at any time will be outlined both, verbally and in writing.

Limitations

It will be important to factor in that students' emotions and sentiments are not binary. A student can feel anxiety in some classrooms and not in others. A student can also have anxiety in other situations, but not be affected in schools. This research is meant to look specifically at what schools can do in educational settings. In addition, the interventions and results would more than

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likely differ depending on the cultural makeup of students. Different cultural norms and expectations would alter the results of the anxiety-reducing behaviors. While there are limitations, knowledge and information can be discovered from this research study.

Conclusions

This study will focus on the level of control schools can have on students' anxiety. The study will also attempt to discover anxiety-reducing interventions that are most effective. The ultimate goal of the research is to attempt to create an equal education opportunity for students who experience anxiety in schools. The next chapter will explore the existing literature on the topic of anxiety within our schools. Some basic information will be summarized such as prevalence of anxiety, potential reasons why students feel anxiety and how anxiety can negatively affect students. Additionally, the literature review will offer some potential interventions for the classroom. These anxiety reducing interventions will be useful in conducting potential research.

CHAPTER 2

LITERATURE REVIEW

Introduction

Anxiety, whether it be diagnosed or not, is prevalent within our schools. Plainly put, a sizable percentage of our students have anxiety (Missden & Campbell, 2019; Mitchell, 2020). Knowing that students have anxiety, it creates a situation where schools possibly need to tackle the issue head on. In order to address anxiety within the student population, schools must know what interventions and actions they can take. These actions can take place at a schoolwide level or could be actions taken within each individual classroom. Some of the actions will be skills that each individual can use, or it can be interventions led by staff. There are a number of different types of interventions (Park et al, 2014; McLeod & Boyes, 2021; Mitchell et al, 2020). Knowing which ones are supported by research will help determine how much time and money to invest into the different interventions.

Assuming people believe that schools are meant to help our students prepare for life after high school, having the skills to reduce anxiety are skills that should be taught. There are surely disagreements on how much time and money to invest into student mental health, but we know that there are very low-cost interventions that can be effective without a large time investment (Mitchell et al, 2020; Aldrup et al, 2020). We know that anxiety reduces student achievement and can lead to harmful situations for our students (Humphrey, 2018). Most teachers are aware of anxiety that can take place in the school setting (Riel & Froese-Germain, 2012; Missenden & Campbell, 2019). If we can reduce the anxiety in our schools, students will be better off. For this reason, more research needs to be done in order to find the most effective methods of anxiety

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reduction. The researcher will be attempting to implement some of the interventions that have been researched in order to find methods that work for the researcher's students. The researcher's results might not end up being applicable to all schools, but at least the researcher can know they tried to help their students the best they could. Even for those who can not implement sweeping changes, hopefully you can find something that works for your students on a personal level.

Body of the Review

Context

The articles covered discuss a number of aspects in regard to relieving anxiety in schools. The articles will cover the prevalence of anxiety within our schools. The articles will also explore the potential interventions that can be used to relieve anxiety for your students. They will look at a broader perspective in terms of system wide interventions. Some articles will additionally look at interventions at the teacher level as well.

Anxiety in our Schools

Anxiety is found amongst many of our students in secondary school. According to many studies, that number is between 6-10% with that number seeming to increase as time goes on (Missden & Campbell, 2019; Mitchell, 2020). The increase could be due to more people having anxiety, or it could be due to anxiety being better diagnosed while more resources are being put towards student mental health. Either way, this should be a growing concern of educators, administration, and school boards. Schools have an opportunity to support its students in a way that includes more than just providing them with new knowledge. Schools are continually investing in resources to help student's mental health (Fisher et al, 2004; Kamour & Altakhayneh, 2021).

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Some of the consequences for anxiety include decreased test scores and mental health crisis (Ginsburg et al, 2011). One of the types of anxiety that people can experience is testing anxiety. This can lead directly to worse off performance in the classroom (Missden & Campbell, 2019). This is an anxiety that students seem to be most aware of. Many students have experienced some sort of dread at one point or another when it has come to tests and exams. Anxiety in schools can also lead to mental health crises. Anxiety can cause students to not be at their peak socially, academically, and mentally (Humphrey, 2018). This can also lead to increased negative behavior for students whether it be in the classroom or out of the classroom (Nichols et al, 2013).

Schoolwide Interventions

There are many interventions that have been and are being used to help support students with anxiety. Some of the approaches include schoolwide initiatives that involve more systematic changes that can include separate curriculum to help the students (Kamour & Altakhayneh, 2021). Some of the separate curriculum can have an overall focus on social emotional learning rather than just the topic of student anxiety. Students' anxiety can be addressed through the topic of social emotional learning (Fisher et al, 2004). Some of the schoolwide intervention will require the capital to purchase the curriculum itself (Kamour & Altakhayneh, 2021). Some interventions are ones that would take more time commitment than anything else.

Teacher lead Interventions

There are also interventions that are best handled at an individual teacher level. These interventions can vary from class to class and year to year. Each group of students can present unique challenges. These interventions tend to vary in style quite a bit more than the schoolwide

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interventions. There are some interventions that were referenced as content specific. For example, math has a lot of interventions specific to them (Kamour & Altakhayneh, 2021; Aldrup et al, 2020; Beilock & Willingham, 2014). However, many of the interventions seem applicable to most content classes, it just happens that a lot of the study's focus is on math anxiety. Some of the teacher lead interventions are not intrusive into teacher time (McLeod & Boyes, 2021). These interventions seem accessible to most teachers because they do not require much for premade materials. Some interventions involve more time investment as well as more resource investment (Kamour & Altakhayneh, 2021).

Theoretical Framework

Based on current research, it looks like there are many options to try and reduce anxiety. Much of the research does point to student anxiety being an issue for students. It also appears that there are ways to reduce student anxiety. Anxiety is causing students to not reach their full potential and it is evident to many researchers. According to Missenden and Campbell (2019), there are a number of ways to classify anxiety. Teachers in their study classified it as either very severe, severe, moderate, mild, or minimal (Missenden & Campbell, 2019) Someone with moderate anxiety was described as the following in their research, “Fatima is a shy 14 year old girl who prefers to sit alone during morning tea and lunch . Sometimes, she seems nervous when her peers attempt to engage her in social settings. When group activities are conducted in the classroom she participates, however, she is noticeably uncomfortable. When she is alone she is creative and active,” (Missenden & Campbell, pg. 53). This offers a good reference for what anxiety can look like for students in the school setting. This will serve as the reference point as this study and research moves forward.

Research Question(s)

1. What known anxiety reducing interventions are most effective in schools?

Conclusions

In this chapter, the problem of anxiety in students was identified. It was identified as a problem that close to 10% of our students face. Impacts of anxiety were identified including the impact on testing and the impact on overall student mental health. Interventions were then shared and examined. Some of the interventions are to be implemented at a whole school level while others would be best implemented at an individual level. This can be up to the discretion of each individual teacher and can vary from student to student. While many of these interventions look different, the overall goal is to reduce anxiety for our students, hopefully making the educational experience better for them. In the next chapter, the reader will be introduced to the proposed research that will take place in the classroom. This research will utilize three different interventions in an attempt to reduce anxiety for students with that class. Participants will be utilizing an intervention that involves reflection on what students are thinking and feeling (Mitchell et al, 2020). Participants will also be utilizing a mindfulness intervention (McLeod & Boyes, 2021) and an intervention specifically for test anxiety reduction (Park et al, 2014).

CHAPTER 3

METHODS

Introduction

This study will focus on determining the control schools have on reducing anxiety in students. This will include trying to find anxiety-reducing interventions that are most successful. Anxiety is prevalent in students throughout schools. It is important for schools to find ways to attempt to reduce that anxiety. Doing so will create more equity in schools and will allow students to do their best. It will also help reduce the risk of mental illness and the negative impacts that follow it. For the researcher, it is important to make sure all students are able to be the best they can be. Determining what interventions work and do not work will allow the researcher to best assist students in the researcher's classroom. This is also part of the motivation for this study.

Research Question(s)

1: What known anxiety reducing interventions are most effective in schools?

Research Design

The research method is quantitative and quasi-experimental. Participants will be asked to rate their level of anxiety 1-10. The responses will be recorded 4-5 times throughout the duration of the research experiment. After each anxiety-reducing intervention, students will again rate their anxiety. At the end of research study, students will give their final level of anxiety after not having used any methods for a period of time. Students will also have the opportunity to provide written feedback if wanted. The researcher will also provide observation notes based on

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the results of the interventions. Recorded observation will take place 4-5 throughout the duration of the research study. The researcher will look for changes in behavior and atmosphere of the class when recording written observations. This method was selected in order to attempt to collect reliable data. Having quantitative data and observational data will provide multiple perspectives when analyzing the data. With multiple perspectives, the data will have more reliability.

Setting

The research study will take place in southeastern Minnesota. The terrain is mostly hilly plains. The school district it is taking place serves two towns that cooperate together. Both towns have industries based on agriculture and agricultural technology. The population of the towns are 1,989 people and 1,116 people. The school is a public school. The school itself has about 229 students in its senior high program. The school provides many extra-curricular sports and activities for students. The school district is about 90% White in terms of students. About 6% of students are Hispanic. 1% of students are African American. The rest of the students are biracial. 16% of students are on free and reduced lunch. 11% of students have a special education plan. 1% of students are English language learners. Most families are “traditional” nuclear families rather than multigenerational families that you might find in other communities. Most families do participate in agriculture or agriculture related work. The rest of the families primarily work in hospitality or public service.

Participants

Students who will be in this research study will be from the researcher’s World History course and/or U.S. History course. Participants will likely be between the ages 14-18. It is

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estimated that around 63% of the participants will be male while 37% of participants will be female. Participants in the research study will be predominantly white. It is estimated that around 90% of participants will be white. Around 6% of participants will be of Hispanic. Around 1% of participants are African American. While the rest of participants will be of multiple ethnicities. Participants will vary in school grade from 9th-11th grade. Around 11% of participants will be within a special education program. 16% of participants will be on a free and reduced lunch program. About 1% of students are English language learner students. Most participants in this research study come from a “traditional” nuclear family unit. A majority of participants live in a rural setting.

Sampling

All students in World History and all students in U.S. History will be invited to be a part of the research. Having students in those classes be the subjects of the research will result in easier access to those students. The researcher will be able to better control the conditions of those being studied and control the implementation of the interventions to assure that they are being implemented correctly. There will not be any specific choosing of students. This is all up to the choice of the students and their families. This results in the choice being somewhat random. It is all up to who voluntarily participates in the research or not. It is the goal of the researcher to have as many students to participate, but there is no guarantee that all students will be able to participate.

Instrumentation

In order to collect the data during the research study, participants will be recording their feelings on a survey. All participants will take the same survey and will take the survey 4-5 times

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throughout the study. The survey will measure the level of anxiety students are feeling at that particular time as well as in general. A sample of this survey is listed in Appendix B. Students will be given an example of how to complete the survey and examples of different levels of anxiety. There will also be observations conducted by the researcher. These observations will include an analysis of what a teacher might observe based on the interventions used. This will be completed after each intervention is implemented in the classroom. A sample of the observation prompts is listed in Appendix C. The survey and observations will be the only instruments used to collect data.

Data Collection

Data and results will primarily be collected via a survey. Students will indicate the initial level of anxiety on the survey. Students will also indicate how their anxiety increases, decreases, or remains stagnant as the different anxiety-reducing interventions are implemented. The research will also make observations about student performance and student well-being. Having two methods of collecting data will help ensure that the most accurate results are attained. Having student input will allow for more true indications to be made.

Data Analysis

Data will be analyzed based on student student response. Students will provide a rating of 1-10 to rate their level of anxiety. These scores will provide a base when they are first scored. After different anxiety reducing interventions are introduced, scores will be resubmitted. The students will rate their anxiety again and scores will be compared. There will be three different anxiety-reducing interventions used and recorded for. After all research is conducted, results will be compared. Ideally, the scores will show interventions being successful. Along with that,

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scores will answer the first research question of attempting to determine if schools can control factors that reduce student anxiety.

Research Question and System Alignment

The table below (i.e., Table 3.1.) provides a description of the alignment between the study Research Question(s) and the methods used in this study to ensure that all variables of study have been accounted for adequately.

Table 3.1.

Research Question(s) Alignment

Research Question	Variables	Design	Instrument	Validity & Reliability	Technique (e.g., interview)	Source
What known anxiety reducing interventions are most effective in schools?	DV: Levels of anxiety	Quantitative study. Quasi-experimental	Survey	Base levels will serve as a source to compare as a reference. A larger sample size will provide more accurate information as well.	Surveys to measure level of anxiety in students. Ask about anxiety reduction.	Students aged 14-18 from the researcher's History classes.
	IV A: Anxiety-reducing intervention					Estimated 60 participants across 5 classes.
	IV B: Anxiety-reducing intervention					
	IV C: Anxiety-reducing intervention					
					Observations to add	

Procedures

On day one of the research study, students will take an initial survey in order to provide data on student anxiety. This data will be anonymously provided. Students will provide data on their level of anxiety, anxiety in school, anxiety in the researcher's class, and anxiety before an assessment. This data will be our starting point and will determine the success of the different interventions implemented. The week after the first survey, participants will begin to utilize the first intervention. The first intervention will be a reflection on how students are feeling and thinking with some journaling. After 3-4 weeks of the first intervention, participants will again take the survey to determine if the intervention has made an impact. The second intervention will be implemented as a class. Participants will partake in mindful activities and breathing. These activities will attempt to help participants relax and reduce their anxiety. This includes controlled breathing and rhythmic breathing. After 3-4 weeks of the second intervention, participants will again take the survey to determine if the intervention has made an impact. The last intervention will be an intervention related to test anxiety. Students will try an intervention that will attempt to lower testing anxiety. Students will do some stress relieving writing/drawing before the test begins. After the test occurs, participants will again take the survey to determine if the intervention worked. Throughout the research study, the researcher will provide written observation notes. There will be a level of flexibility depending on how much time is allowed. It is critical that each intervention has proper time to be effective. This will likely occur in two

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week increments. The research will be compiled at the end of the study and determinations will be made then.

Ethical Considerations

Maintaining the safety of students is the number one priority. The study poses little risk to students and families, however, students and parents will always have the option of opting out of the study if they no longer feel comfortable with it. The study will also be anonymous and no student data will be identifiable to specific individuals. The interventions used will have no negative effect on students and those not participating in the study will not face any discrimination because of their choice. The interventions used have been selected with safety and efficacy in mind.

Conclusions

This chapter summarized the methods of research that will be implemented in this study. The demographics of the school and school setting were identified. The methods for research were laid out and explained. Students will be utilizing anxiety-reducing interventions and will be tracking the efficacy of those interventions. There will be three total interventions implemented. Those three interventions will vary in terms of method and will vary in terms of how intrusive or time consuming the intervention is to the core content of the class. It was identified that participants will face very little risk by participating in the study. At any time participants can leave the study. In the next chapter the results of the study will be identified and explored.

CHAPTER 4

RESULTS

Introduction

Students have anxiety. This anxiety can affect their performance in the classroom (Missden & Campbell, 2019; Mitchell, 2020). In order to create more equitable learning for students with anxiety, teachers and school systems need to look into ways they can help address the issue. The purpose of this study is to determine which interventions work best for students in the classroom. By determining the most effective anxiety-reducing interventions, schools can create a learning environment and learning conditions that are equitable for all students. By examining multiple interventions, there is a better chance that at least one will be successful. And if multiple interventions demonstrate success, then teachers and school systems will be able to have more options when addressing the needs of their students.

Data Collection

Students will be providing feedback via a survey. This survey will ask them to rate a scale of 1-10 their level of anxiety in different scenarios. A rating of 1 means there is minimal anxiety and it is not impacting their life. A rating of 10 means the student is the most anxious they have ever been and it is severely impacting their learning. The ranking includes general anxiety, anxiety in school, anxiety in the researcher's class, and anxiety prior to assessments. Students will complete a baseline response. After completing the baseline, students will participate in the different interventions. There are three different anxiety-reducing interventions that will be implemented. After the designated length for each intervention is achieved, students will then fill out the survey again. The responses will hopefully reflect the results of the

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anxiety-reducing interventions. The researcher also made observations as the interventions are being completed. These observations will offer another perspective on the success of the interventions.

Research Question

1: What known anxiety reducing interventions are most effective in schools?

Results

The first table provides a summary of student responses to the initial survey that determined baselines for student anxiety. Students were given time during their class period to fill out their copy. In the initial survey they marked their level of anxiety 1-10. Each number was qualified by the impact of the student's level of anxiety (Appendix B). They ranked their general anxiety at any given time, anxiety specifically in school, anxiety specifically when in the researcher's class, and anxiety prior to an assessment in school. This first survey had the most responses of all survey collections. The student average for general anxiety was 3.10. The student average for anxiety in school was 3.97. The student average for anxiety in the researcher's class was 2.15. The student average for anxiety prior to assessment was 5.27. This data was collected before any interventions had been implemented. This data will be the reference to determine if any changes are seen after intervention implementation. It is important to note that each listed student is not the same for each table of information. Student 1 in table 1 is not the same as student 1 in tables 2, 3, or 4.

Table 4.1

Baseline Responses

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Student	General Anxiety	Anxiety in School	Researcher's Class	Prior to Assessment
Student 1	2	1	1	1
Student 2	8	9	3	8
Student 3	1	2	1	1
Student 4	1	1	1	1
Student 5	1	2	1	3
Student 6	1	2	1	2
Student 7	1	1	1	1
Student 8	5	7	1	5
Student 9	3	5	3	10
Student 10	3	3	1	5
Student 11	3	5	4	7
Student 12	3	5	5	6
Student 13	3	4	4	5
Student 14	3	1	1	1
Student 15	6	8	6	9
Student 16	1	3	1	3
Student 17	2	4	2	4
Student 18	3	3	3	5
Student 19	5	6	4	7
Student 20	1	3	1	10
Student 21	4	4	4	6
Student 22	2	2	1	6
Student 23	7	6	4	10
Student 24	1	1	1	3

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Student 25	3	4	0	6
Student 26	3	5	1	10
Student 27	3	2	2	7
Student 28	10	9	7	10
Student 29	1	4	1	4
Student 30	1	8	2	5
Student 31	2	1	1	3
Student 32	3	3	1	6
Student 33	6	7	1	4
Student Average	3.10	3.97	2.15	5.27

The second table includes results of the second survey. This survey was collected after the completion of testing anxiety specific intervention. There were a few less students who were able to submit a response for this intervention than for the baseline survey. In order to implement the intervention, students had three minutes of creative writing and drawing prior to the test for that day. Most students drew, while a handful of students did some writing. After the three minutes were up, students took their test. Students who consented to the research also then completed the survey. The following results were recorded. The student average for general anxiety was 3.59. The student average for anxiety prior to assessment was 3.79. The other two categories were not recorded for this intervention. Compared to the baseline average, the general anxiety was increased. The testing anxiety response was decreased with the use of this intervention. The response average moved from 5.27 to 3.79.

Table 4.2

Test Anxiety Intervention

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Student	General Anxiety	Anxiety in School	Researcher's Class	Prior to Assessment
Student 1	3			7
Student 2	3			2
Student 3	3			6
Student 4	2			6
Student 5	3			5
Student 6	1			4
Student 7	2			1
Student 8	3			4
Student 9	1			3
Student 10	7			2
Student 11	3			3
Student 12	6			3
Student 13	3			5
Student 14	3			3
Student 15	2			3
Student 16	3			2
Student 17	6			3
Student 18	8			5
Student 19	1			1
Student 20	2			3
Student 21	8			4
Student 22	5			2
Student 23	4			4
Student 24	5			6

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Student 25	6		5
Student 26	3		4
Student 27	3		3
Student 28	1		2
Student 29	4		6
Student Average	3.59		3.79

The third table includes results of the third survey. This survey was collected after the completion of a journaling intervention. There were a few less students who were able to submit a response for this intervention than for the baseline survey. In order to implement this intervention, students participated in journaling their thoughts daily for 10 school days. The journaling would take place at the end of class with two minutes left. Students were able to journal about whatever they wanted. Students were encouraged to journal about their thoughts and feelings. They did not have to share their journals and they were completely for the use of the student. After the last day of journaling, students who are part of this research completed the survey. The following results were recorded. The student average for general anxiety was 3.23. The student average for anxiety in school was 4.03. The student average for anxiety in the researcher's class was 2.50. The student average for anxiety prior to assessment was 4.77. Compared to the baseline, every category had a higher score other than students' response to testing anxiety. Testing anxiety numbers decreased from 5.27 to 4.77.

Table 4.3

Journaling Intervention

Anxiety Reduction in Schools

Student	General Anxiety	Anxiety in School	Researcher's Class	Prior to Assessment
Student 1	3	2	2	5
Student 2	4	6	2	7
Student 3	3	3	3	3
Student 4	3	5	3	5
Student 5	5	7	6	8
Student 6	6	6	1	6
Student 7	3	4	4	5
Student 8	5	5	2	6
Student 9	8	8	4	8
Student 10	3	3	2	2
Student 11	3	4	2	3
Student 12	7	8	1	5
Student 13	3	1	3	1
Student 14	5	6	4	7
Student 15	1	3	1	10
Student 16	4	4	4	6
Student 17	1	1	1	3
Student 18	2	6	4	4
Student 19	2	2	2	5
Student 20	4	4	1	4
Student 21	3	4	4	4
Student 22	3	4	5	6
Student 23	1	2	1	3
Student 24	1	2	1	2

Anxiety Reduction in Schools

Student 25	1	1	1	1
Student 26	5	7	1	5
Student 27	3	5	3	10
Student 28	3	1	3	4
Student 29	1	2	2	1
Student 30	1	5	2	4
Student Average	3.23	4.03	2.50	4.77

The fourth table includes results of the fourth survey. This survey was collected after the completion of a mindful breathing intervention. There were a few less students who were able to submit a response for this intervention than for the baseline survey. In order to implement this intervention, students participated in mindful breathing activities. This took place for 10 school days, The mindful breathing took place at the beginning of class and would last for approximately two minutes. This included slowed breathing and just having time to relax. On the last day of mindful breathing exercises, the students recorded their response to the survey. The following results were recorded. The student average for general anxiety was 3.00. The student average for anxiety in school was 3.55. The student average for anxiety in the researcher's class was 2.38. The student average for anxiety prior to assessment was 3.62. Compared to the baseline, every category had a higher score other than students' response to testing anxiety. All categories had a drop in anxiety except for anxiety in the researcher's classroom. That category increased from 2.15 to 2.38.

Table 4.4

Mindful Breathing Intervention

Anxiety Reduction in Schools

Student	General Anxiety	Anxiety in School	Researcher's Class	Prior to Assessment
Student 1	1	1	1	3
Student 2	3	3	2	4
Student 3	2	4	2	3
Student 4	1	2	1	2
Student 5	5	6	4	6
Student 6	8	8	7	9
Student 7	4	3	2	4
Student 8	3	5	3	4
Student 9	1	2	2	1
Student 10	3	3	4	3
Student 11	1	2	1	1
Student 12	6	5	3	4
Student 13	4	5	4	4
Student 14	3	4	4	3
Student 15	2	2	1	1
Student 16	2	2	2	2
Student 17	5	3	3	4
Student 18	8	8	4	8
Student 19	3	3	2	2
Student 20	3	4	2	3
Student 21	3	5	3	3
Student 22	2	2	1	4
Student 23	1	3	1	6
Student 24	4	4	4	6

Anxiety Reduction in Schools

Student 25	1	1	1	3
Student 26	2	6	4	4
Student 27	1	2	1	2
Student 28	1	1	1	1
Student 29	4	4	1	5
Student Average	3.00	3.55	2.38	3.62

The fifth table is a compilation of the baseline responses and the intervention survey responses.

Table 4.5

Compiled Results

Student	General Anxiety	Anxiety in School	Researcher's Class	Prior to Assessment
<i>Table 4.1 Baseline Responses</i>	3.10	3.97	2.15	5.27
<i>Table 4.2 Test Anxiety Intervention</i>	3.59	Not Available	Not Available	3.79
<i>Table 4.3 Journaling Intervention</i>	3.23	4.03	2.50	4.77
<i>Table 4.4 Mindful Breathing Intervention</i>	3.00	3.55	2.38	3.62

Data Analysis

The data produced a number of observable trends. First, all interventions that took place reduced testing anxiety. The baseline score for testing anxiety was 5.27. After each of the three interventions, the score was reduced by an average of 0.50 or higher. The lowest it got to was 3.62. This was a reduction by 1.65 points. This seems to be a significant drop and resulted in a benefit for many students. Second, for each intervention there was an increase in anxiety felt in the researcher's classroom. The increase was recorded during the journaling intervention and the mindful breathing intervention. The increase was by 0.35 or less for both of those interventions. It is interesting that the level of anxiety increased in both instances. The average score for the category of researcher's classroom was already the lowest between all of the categories. Because of the small limited change, it could just be a natural variation in the data. Some other explanations could include the material covered in class that week or the students could have been experiencing outside factors that changed their rating. Third, anxiety in school produced mixed results. The journaling intervention resulted in a slightly higher score for anxiety in schools. While mindful breathing saw a 0.42 drop in average score. Fourth, general anxiety created mixed results as well. Both testing anxiety intervention and the journaling intervention resulted in increased average scores. The journaling intervention created a 0.13 increase while testing anxiety intervention created a 0.49 increase. The testing anxiety would likely be explained by the fact that students did have a text that day, which could have raised general anxiety. Mindful breathing, however, created a 0.10 decrease. That decrease was the best of any intervention for that category.

Based on the results of the research, it seems that there is a benefit to implementing anxiety reducing interventions. Some interventions worked better than others though. Based on

Anxiety Reduction in Schools

the data gathered, the mindful breathing intervention seemed to work best. It had the most consistent drops in all of the averages except for anxiety in the researcher's classroom. Based on observation, it also seems to be the most easily implemented into the classroom. The testing anxiety intervention did a good job reducing anxiety prior to the class assessment. It did however record a raised level of general anxiety. The journaling intervention seemed to be the least effective. It results in an increased average score in all categories except for testing anxiety. Based on observation in the classroom, this also seemed to be the least embraced by students in the classroom when compared to some of the other interventions implemented. There were mixed results for the success of some of these interventions. The researcher would recommend that the mindful breathing intervention be used in the future and viewed as the most successful intervention. The researcher would also recommend that the testing anxiety intervention can also be used when attempting to address testing anxiety specifically.

It is worth mentioning that the data can also be expanded upon in the future. In order to create a more reliable decision on the success of the anxiety-reducing interventions, more research needs to take place. There are many factors that can affect the levels of anxiety a student is feeling. Their response to the survey can vary day to day. Even hour to hour. By conducting this study for a longer period of time and with more participants, the results can become more reliable. It would also be nice to conduct the survey with other grade groups as well. For example, finding data from a middle school classroom or elementary classroom would have additional implications that would be helpful for determining the usage of the interventions in the future.

Anxiety in our Schools

In accordance with literature on the topic, students have anxiety in schools. The level of anxiety can vary from person to person and situation to situation. However, it was common for most students to have some level of anxiety. The average response was around a 3 or 4 on a scale out of 10. When looking at the data, not every student experienced a level of anxiety where it might have affected their educational experience, but there were many instances where students had very high scores. These are the students that need an intervention the most. It is difficult to imagine focusing on school when someone is experiencing that level of discomfort and uneasiness. The highest level of anxiety was seen for the testing anxiety category. The scores in that category were consistently higher than the scores of the other categories. This is an especially important problem because of the relevance of high stakes testing. Students will take many high-stakes tests throughout their educational career including state tests and college placement tests. If students are having anxiety for those tests, it can reduce their score and affect the reliability of those tests. This is not an ideal scenario and is something that needs to be addressed. The best way to do that is with anxiety-reducing interventions introduced either by the school or lead by individual teachers.

Teacher lead Interventions

All of the interventions that were a part of the research can all be implemented on the teacher level. If an individual teacher sees the benefit and needs to implement these interventions it can be done with minimal interruption to the classroom. All the interventions that were a part of this research took three minutes or less to implement. Teachers can be very busy and need every moment they can get in the classroom, however the success of the interventions would justify the instructional time that is lost. The interventions examined in this study were also

Anxiety Reduction in Schools

applicable to every teacher regardless of content. There would be a small amount of opportunity cost for teachers to learn these interventions, but once they did the teachers would be able to implement the interventions whenever they wanted. It would be relatively easy to include some of the interventions, such as mindful breathing and pre-test creative writing, as common procedures and expectations at the beginning of the school year. This would make their implementation go easier and it would become a norm of the classroom. It is also important for educators to understand that improvement of student anxiety will also lead to improved success on student assessments. Improving the competency of student mastery of standards is a goal most educators have.

Schoolwide Interventions

While all of these interventions can start at the teacher level, in order to create widespread change and equitable learning experiences for students with anxiety, schools need to take on these interventions as a school community. One of the biggest inhibitors of providing interventions at a schoolwide level is potential cost. With that in mind, all the interventions that were a part of the research study were free. Each of the interventions only took an investment of time and provided guidance for students as they performed the intervention. A school does not need to purchase a system or spend much money on interventions if they utilize some of the minimal cost options. And the minimal cost options can still provide success. If a school can invest the time, resources, and staffing into finding ways to implement these interventions school-wide, they should. By creating a school culture that emphasizes reducing anxiety and helping students be the best they can be, there is a better chance of a successful school experience and potentially better state assessment scores as well.

Conclusion

Anxiety reducing interventions have the ability to make the school experience better for students. Students are experiencing anxiety in the classroom and before tests. Teachers and schools have an obligation to create an equitable learning experience for all their students. By implementing various anxiety-reducing interventions, you can reduce the overall level of anxiety for a classroom. The most successful intervention in this study was a mindful breathing exercise. This saw a drop in all measured categories except for anxiety in the researcher's class. Staff and school's should also put an emphasis on reducing testing anxiety. By having students free write or creatively draw before an assessment, one can reduce the testing anxiety of their students. It is obvious that the tools are there and that the tools can be successful for students. It is up to schools and teachers to implement them and ensure that all of their students are successful and not missing out because of anxiety.

CHAPTER 5

IMPLICATIONS FOR PRACTICE

Introduction

The purpose of this study was to determine which anxiety reducing interventions are most successful in the classroom. Students are facing anxiety in schools every day. Teachers and schools should look into every possible way to attempt to reduce anxiety for their students. It is a matter of equity and providing every student with the best learning environment possible. In attempting to find the best possible interventions the research process led to a couple of conclusions. The research concluded that anxiety-reducing interventions can reduce the anxiety of students. The researcher notes that more research is needed to come to a clear conclusion. Hopefully more people are willing to invest the research into the topic of anxiety reducing interventions and in turn more teachers will have the ability to make their classroom equitable for students with anxiety.

Action Plan

The purpose of this research and study was to answer the following question. What known anxiety reducing interventions are most effective in schools? In order to better serve students, the researcher wanted to learn how to best address the needs of students who experience anxiety in the classroom. The researcher wants to create an equitable learning environment that supports all students and allows them to be as successful as possible. When going through the research and data collection process, the researcher came to some conclusions about the anxiety-reducing interventions that were studied. The researcher found the most success with the mindful breathing intervention. It saw the best reduction in anxiety ratings and

Anxiety Reduction in Schools

also was observed being implemented in an adequate fashion in the actual classroom. It also did not use many resources and did not take much time away from instruction. It only takes about two minutes for each session and was perceived well by students. The researcher also believes that there could be a benefit in using the testing anxiety creative writing and drawing as well. It also only takes a little bit of time to make use of.

For the future, the researcher plans to continue on implementing a couple of the interventions that were explored during this process. The researcher will plan to implement mindful breathing and testing anxiety reduction in the future. In order to implement it in a timely and organized manner, the researcher will begin the new school year using these interventions. This should help create a standard and procedure that students will be able to expect throughout the school year and will not be introduced to it in the middle of the school year. The researcher would like to continue to study the effectiveness of the interventions and use the observations to change instruction or process if needed.

Plan for Sharing

The researcher will share the results of the research when possible with the Professional Learning Community they are a part of. At these Learning Communities, it is important to share research and pertinent information to improve teaching and the experience of the students. Since most of the teachers within the PLC share students, the information derived from the research can help guide teachers in their approach to reducing anxiety for their students. Reception to the research will hopefully be taken with an open mind. If there is positive reception at the PLC meetings, then the researcher would probably share the research with a larger group of district teachers. This could possibly be done during an inservice day, a staff meeting, or through online

Anxiety Reduction in Schools

communication. Again, most of the teachers share many of the students so having an understanding of what works and what does not is useful.

The researcher would also explore sharing information with colleagues not within the district. Some of the findings could be useful in other districts and with other students. The researcher would connect with the professional network they have and send out the results of the study and what that means for the classroom. There is also potential to share within a professional learning network online and on social media. This would allow for even more people to hear about the research and for it to have a potential impact.

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Appendix A

IRB Approval Letter

Institutional Review Board



DATE: February 2, 2023

TO: Kathy Enger, PhD, Principal Investigator
Cole Walters, Co-investigator

FROM: Dr. Robert Nava, Chair
Minnesota State University Moorhead IRB

ACTION: APPROVED

PROJECT TITLE: [2008961-1] Anxiety Reduction Within the School Setting: What known anxiety reducing interventions are most effective in schools?

SUBMISSION TYPE: New Project

APPROVAL DATE: February 2, 2023

EXPIRATION DATE:

REVIEW TYPE: Exempt Review

Thank you for your submission of New Project materials for this project. The Minnesota State University Moorhead IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to the Minnesota State University Moorhead IRB. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the Minnesota State University Moorhead IRB.

This project has been determined to be a project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of .

- 1 -

Generated on IRBNet

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact the [Minnesota State University Moorhead IRB](#). Please include your project title and reference number in all correspondence with this committee.

This letter has been issued in accordance with all applicable regulations, and a copy is retained within Minnesota State University Moorhead's records.

Appendix B
Principal Approval

**Kenyon-Wanamingo
Public Schools**



District 2172 Office
225 Third Avenue
Wanamingo, MN 55983
Phone 507-789-7001
Fax 507-789-7032

Middle-High School
400 Sixth Street
Kenyon, MN 55946
Phone 507-789-6186
Fax 507-789-6188

Elementary School
225 Third Avenue
Wanamingo, MN 55983
Phone 507-824-2211
Fax 507-789-7033

January 13, 2023

To whom it may concern,

This letter is to grant Cole Walters permission to conduct an action research study at Kenyon-Wanamingo High School during Semester II of the 22-23 school year. I understand that this study involving anxiety reducing interventions within the classroom will pose no risk to those persons involved or to the Kenyon-Wanamingo School District. I also understand that all information received will be kept confidential and will only be used for the purposes of this study.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Ryan'.

Matt Ryan
Principal 7-12
Kenyon-Wanamingo Schools
507 789-6186 ext. 7006
mattryan@kw.k12.mn.us

Bryan Boysen
Superintendent/Principal K-6

Matt Ryan
Principal 7-12

"An Equal Opportunity Employer"

Appendix C

Informed Consent Letter

Kenyon-Wanamingo Public Schools



District 2172 Office

225 Third Avenue
Wanamingo, MN 55983
Phone 507-789-7001
Fax 507-789-7032

Middle-High School

400 Sixth Street
Kenyon, MN 55946
Phone 507-789-6186
Fax 507-789-6188

Elementary School

225 Third Avenue
Wanamingo, MN 55983
Phone 507-824-2211
Fax 507-789-7033

January 18th, 2023
400 6th St
Kenyon, MN 55946

Dear parent or guardian,

Your student is being invited to partake in a research study to analyze potential anxiety-reducing interventions and their effect on student anxiety. The title of the study is *Anxiety Reduction Within the School Setting: What known anxiety reducing interventions are most effective in schools?*

Your student was selected because they are in one or more of my classes at Kenyon-Wanamingo High School. The study will take place over the course of second semester. If you decide to participate, the student will be asked to take part in the following. Each of these will involve minimal risk to your student.

Students will anonymously identify levels of anxiety. This will be done with surveys throughout the course. Participate in interventions meant to reduce anxiety in the classroom. There will be three different interventions that will be implemented. The interventions will vary in method.

Although principal Matt Ryan has already granted my permission to conduct my study, since this information is helping me receive my master's degree from Minnesota State University Moorhead, I must receive parental consent in order to use the research in my master's paper. All information will be confidential with no names used. These are interventions that one might conduct even without any sort of research happening. This research is meant to improve the learning opportunity for all students. If you or your student wishes to stop participating at any time, you are free to do so without any consequences.

Feel free to ask any questions you have about the study. You can reach out to me with your questions at email cwalters@kw.k12.mn.us or you can reach me through my school phone at 507-789-6186 ext.4274. You may also contact the principal investigator Dr. Kathy Enger at email Kathy.Enger@mnstate.edu with any questions. You may also contact the IRB Chair, Dr. Robert Nava at email robert.nava@mnstate.edu or on phone at 218-477-4308.

You will receive a copy of this form to complete. You will make the decision as to whether you wish to authorize participation or not. Your signature indicates you have read through this document and wish to participate. You will have the opportunity to withdraw at any time without any consequence even after starting the research.

Anxiety Reduction in Schools

Student name (Printed) _____

Parent/guardian signature _____

Date _____

Investigator signature _____

Date _____

Bryan Boysen
Superintendent/Principal K-6

Matt Ryan
Principal 7-12

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Appendix D
Anxiety Learner Survey

Anxiety Level Survey

Date:

How would you rate your general level of anxiety (at any given time):

How would you rate your general level of anxiety in school:

How would you rate your level of anxiety in Mr. Walters' class:

How would you rate your level of anxiety before an assessment (test, essay, presentation, etc.):

Use a 1-10 scale when answering all questions. Level of feeling examples listed below for your reference.

1- I am not anxious/very easy to learn

3-I am slightly anxious/anxiety is having a small effect on learning

5-I am anxious/anxiety is starting to interfere with learning

7-I am noticeably anxious/anxiety is having a large effect on learning

10- I am the most anxious I have been/it is extremely difficult to learn

Appendix E
Observation Notes Guide

Observation conducted by:

Observation date:

Anxiety-reducing intervention used:

Class observed:

Class description:

General observations:

Changes in anxiety observed: