The Prevalence of Test Anxiety in Rural Appalachia:

A Proposed Study and Analysis of Symptoms Post-Covid

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ABSTRACT

Test anxiety as a construct has been understood and assessed in a modern context since the 1950's through the work of Irwin Sarason, who was one of the first to develop a measure for test anxiety. The present research builds upon the established body of work on this topic by providing a small analysis of test anxiety symptoms present in elementary through adolescent aged students in rural west Carolinian Appalachia. An adaptation of the Westside Test Anxiety Scale was conducted, and the test was given to this student population in the form of an online survey. This was done in conjunction with both a student report, and teacher report checklist of behavioral, physical, emotional, and thought symptoms commonly associated with or indicative of test anxiety. The student checklist contained emotional, somatic, and thought based symptoms while teachers were asked to report behaviors observed around testing. Students and teachers were asked if they experienced these symptoms either before or during important examinations, and the frequency of these experiences is reported. The purpose of this study is to provide a measure of the prevalence of test anxiety in this student population and to observe its differences across this range of students. This study was intended to show a high association of somatic and behavioral symptoms amongst younger students who had low exposure to standardized testing and would likely not meet the cognitive criteria for being measured as experiencing test anxiety.

INTRO / GOALS / OBJECTIVES

Research Problem:

There is a limited amount of research into the effects and impacts of test anxiety in elementary aged, and older, students, especially in rural Appalachia.

Research Questions:

- Is the prevalence rate of test anxiety in rural Appalachia consistent with reported national and global trends?
- Does test anxiety as a construct develop alongside the introduction of large, standardized end of grade (EOG), and beginning of grade (BOG) tests?
- Do elementary aged students experience more, or less physical symptomology as a presentation of test anxiety compared to cognitive symptoms in older groups?
- Does test anxiety express the same way across measured groups?
- Do teachers of these students recognize anecdotal physical expressions of test anxiety in their students?

Hypothesis: Test anxiety impacts and affects elementary aged and adolescent school children in Appalachia at least as much as nationally reported prevalence rates, and these students experience a higher level of physical symptoms related to test anxiety.

Current Prevalence Rates:

20-50% of students nationally in the US experience elevated symptoms of test anxiety at some point during their academic journey.

METHODS

Students and Teachers from local elementary, middle, and high schools will be given an adapted measure of test anxiety, and a student or teacher report checklist for symptoms related to test anxiety. This will be done in the format of an online survey that also asks demographic information. Results will be collected and analyzed to describe current prevalence rates as well as intensity of symptoms. The information will then be used to compare this population to national rates, as well as to determine differences between ages, grades, and other demographic splits.

Students will have to provide parental consent, and assent in order to participate. Class rewards will be offered to improve participation motivation among schools that participate in the survey.

Other incentives may be offered

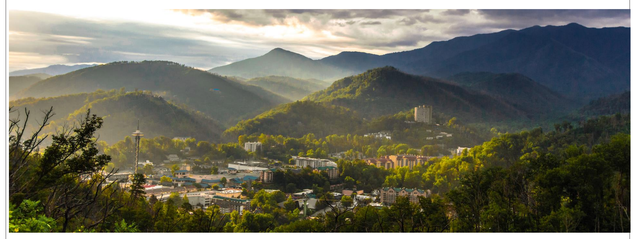
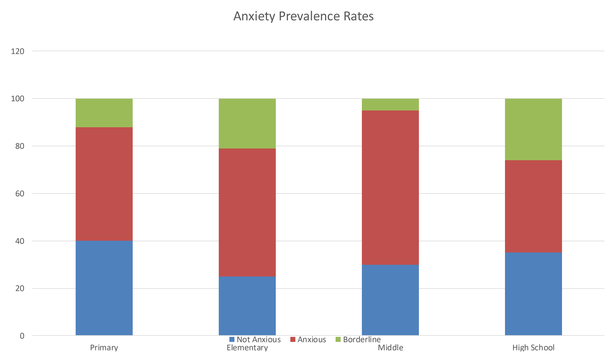


Photo Caption: Western Carolina University in North Carolina, set in the Blue Ridge mountains of southern Appalachia

Prevalence Rates by group (example)



Elementary ages students, Middle school students, and High-school students that meet the criteria for Test Anxiety, and the national average prevalence rates (~40%).

Differences described, significance, alignment with hypothesis, etc.

RESULTS

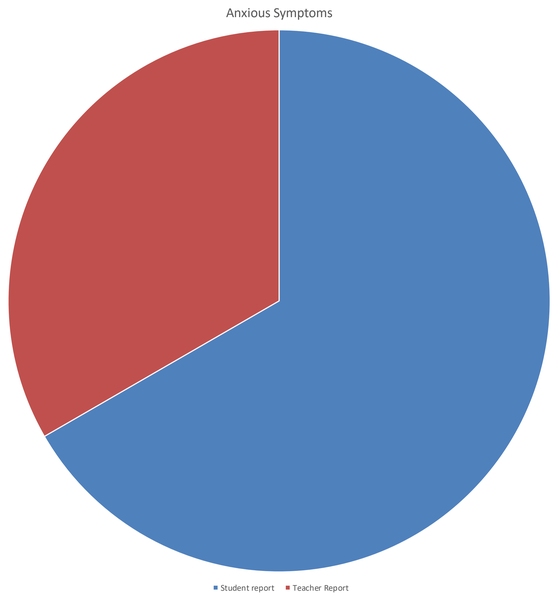
Students are hypothesized to report experiencing anxious symptoms equal to or greater than the national averages of between 20-50%. Students will self-identify if they experience test anxiety in the survey, and will then have answered questions determining if they meet criteria for falling in that category

Results will be compared and analyzed between groups depending on the number of respondents able to be grouped. For example, if there are enough respondents (~43 using G power analysis) in both elementary school age ranges, and middle school ranges, then results between these groups will be analyzed. This will be done for as many between group comparisons as data allows.

Furthermore, teachers will be asked to rate student behavior using survey items specific to test anxiety symptoms. This observational rate from teachers will be compared to rates reported by students, and potentially between groups of teachers if analysis allows.

Sample graph below displays comparative rates of reported anxiety symptoms between teachers and students.

Teacher ratings of anxious behavior compared to student data (possible results)



Teachers rated students as experiencing or exhibiting anxious behavior before or during test time at an average X% rate.

CONCLUSIONS AND RECOMMENDATIONS

Potential outcomes include correct hypothesis of average to above average rates of test anxiety, or the null hypothesis, lower rates of test anxiety in the rural Appalachian population of students compared to national averages. If the null hypothesis is true:

- Results could indicate that there are protective factors in this population not at work in the general population
- There are errors in sampling, methods, or analysis
- Average rates of anxiety prevalence have decreased, and data is representative

If Hypothesis is true

- Factors that contribute to higher rates of test anxiety need to be explored
- Interventions for this population will be suggested in order to positively effect these increased rates
- Comparative analysis between groups, and between teachers and students should be explored further to determine the differences and potential impacts

References

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Extended Information