

# The Relationship Between Mental Health Symptoms and a Student's Misbehaviors in Class

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Math Senior Seminar  
May 2025

**Abstract**

The purpose of this study was to find the relationship between depression, anxiety, and stress, and misbehavior. In previous research, a mixture of results in mental health was found; some found that there was a relationship between mental health and misbehavior, and others found that there was not any relationship between the two. We hypothesized that there is a relationship between depression, anxiety, or stress symptoms and the frequency of students' misbehavior in the classroom. Second, we hypothesized that there is a relationship between depression, anxiety, or stress symptoms and the types of misbehavior in the classroom. The misbehaviors of twenty-four high school students at The Neighborhood Academy were counted in a variety of classes, and then they completed the DASS-21. We found that there was not any relationship between depression, anxiety, or stress and misbehavior in class; we also did not find any relationship between the types of misbehaviors and mental health symptoms. Our data suggest that mental health and misbehavior at TNA are not related.

## Introduction

Students misbehave in school for many reasons. One might be that they struggle with mental health (3). According to the CDC, 42% of students report feelings of hopelessness and sadness, and 29% say they have had poor mental health in the past year (7). Since the pandemic, 70% of teachers report that school behavior has worsened (8). This suggests that students might misbehave because of their struggles with their mental health. Research suggests social maladjustment, or poor behavior, can be connected to anxiety, stress, depression, or even hopelessness (1-6). When students misbehave, this can lead to lower grades in school and even youth delinquency (5). Understanding everyday misbehavior in the classroom and whether it is related to mental health can help teachers react better to the situation and support students. In our study, we measured students' misbehaviors in classes and measured their anxiety, stress, and depression symptoms to see if the two are related.

We are interested in looking at the relationship between behavior and mental health. Poor behavior is often described as social maladjustment in research. Social maladjustment is a series of behaviors that ignore accepted norms in the majority society, even though they might be accepted by members of a subculture (1). Social maladjustment usually looks like controlling behavior, having no remorse or sympathy for others, and being manipulative towards others. In a school setting, social maladjustment comprises poor social relationships, poor interpersonal dynamics, and poor educational performance (1). Maladjusted students have social relationships that are often in conflict and are good at manipulating people but know right from wrong. In interpersonal dynamics, they often blame others and don't take accountability for their actions. In education settings, they tend not to follow rules, rebel against structure, and are often late or absent. Social maladjustment is characterized by students who understand right and wrong and make choices to break the rules, unlike people with emotional disabilities or disorders (1).

Mental health is composed of three sets of symptoms: anxiety, depression, and stress (2). Anxiety is a state of uneasiness, concern, fear, and self-doubt. Symptoms of anxiety can be muscle tension, difficulty focusing, restlessness, intense worry, and fear. Depression is a mood disorder that impacts your feelings, thoughts, and behavior. Symptoms of this can be lack of energy, loss of interest, more or less sleep, and ongoing sadness (2). Stress is the body's or mind's reaction to difficulties. Symptoms of that are being overwhelmed, headaches, struggle sleeping, low energy, and moodiness. When these symptoms are so bad that they affect daily life, these can be disorders that need treatment, but most people feel these things as a part of life when hard things happen (2). The way to measure these symptoms is called the DASS21, or Depression, Anxiety, and Stress Survey (21 questions). People read the statements and circle how much it applies to them and the scores are added up for each category. This allows us to tell how much depression, anxiety, or stress they have and if that amount is normal or concerning (2).

Bernaras et al. looked into child depression in schools, focusing on the rate of depression in a specific region in Spain (3). The study involved 8-12 year old students (1102 students) and used a behavior assessment system to measure school maladjustment. The

results showed that 4% of the sample had clinically significant depressive symptoms. Low self-esteem was a predictive factor for depression, but only for girls. Boys had a higher percentage (6%) of depression than girls (3%). For boys, levels of depression fell as they got older, and for girls, they got higher, up to the age of 12. The study also found a significant positive weak relation between school-maladjusted students and depression ( $r=0.18$ ). In conclusion, students who are maladjusted in school tend to be more depressed than other students, but the connection is weak (3). This is important because we are interested in similar behaviors and mental health symptoms but in a sample of American teenagers.

Other researchers focused on how hopelessness affects kids who have behavior problems (4). They investigated whether hopelessness in high school students is higher based on their behavior (4). This is a replication or a copy of the exact same study as one elsewhere. The Beck Hopelessness Scale was used in this study, which involved high school students in the Bahamas. Two groups, one that often conducts itself well and the other that normally doesn't, as determined by the principal. This study was done during the fall semester of the 1999-2000 school year. The results showed that students with behavior problems were not more hopeless than students without behavior problems. This was the opposite of the other version of the study, which found misbehaving students were more likely to be hopeless. This might be because of the cultural differences in the study, they may have different living styles and different life experiences (4). This is important because while we are not looking at hopelessness, we are looking at stress, anxiety, and depression, which are more common and might be found in students who misbehave.

Frojd et al. focused on the relationship between middle-aged boys' and girls' depression and academic achievement in Finland (5). It aims to show that depression increases with decreased grades, suggesting that middle-aged children should be checked for depression if their academic performance is dropping. A study of 2,266 adolescents in Pori, a city in Finland, ages 13-17 found that depression was linked to a wide range of depression in both sexes. The theory suggests that people with lower GPAs or failure-related triggers usually suffer from depression. Those with lower GPAs were more unhappy; 1.1% of boys and 18.4% of girls were considered depressed. Children who were depressed also had trouble focusing and forming social bonds and felt that their schoolwork was too much (5).

McLeod. et al's focus was on academic achievement, behavioral issues, and adolescent mental health (6). They hypothesized that previous research on the link between mental health and academic achievement is limited due to its inability to consider multiple issues simultaneously or control for academic aptitude. Over 62315 participants participated in this study, using data from a national longitudinal study of adolescent health and substance use with two indicators of academic achievement. The data was used for the study's procedure, which included the students' GPA, mental health issues (6), and behavior (such as drug and alcohol use, graffiti, and assaulting someone with a weapon). This study demonstrated that, independent of other mental diseases, early-onset depression is not linked to later educational attainment (6). For depression, they found a significant effect that vanished when other behavior disorders were taken into account. They also found that the causations run predominantly from

disadvantage to distress rather than the reverse. Overall, they discovered that depression is caused by misbehavior (drugs, alcohol, etc.) and not that poor behavior is caused by depression (6).

Overall, the evidence shows that students who misbehave in school may experience depression and that students who experience depression or other mental health challenges may misbehave in and out of school (6). This study contributes to an understanding that some students struggle with depression, and this may play out in their behavior in the class. Teachers must be aware of this. If teachers knew what was wrong with their students, this could help build more understanding of their misbehaving in school. In our study, we monitored students' misbehavior while observing classes. The students' behaviors were then tallied and categorized. After following and tracking the classes, we presented the DASS21, a 21-question survey measuring depression, anxiety, and stress. We then looked for relationships between the frequency and types of misbehavior and mental health.

We hypothesized that there is a relationship between depression, anxiety, or stress symptoms and the frequency of students' misbehavior in the classroom. This is because researchers say students with depression, stress, and anxiety tend to misbehave more than others (3, 5). Second, we hypothesized that there is a relationship between depression, anxiety, or stress symptoms and the types of misbehavior in the classroom. We don't know which types of behaviors are related to these mental health symptoms; to our knowledge, there's no study showing this.

### **Method and Materials**

A total of 24 high school students from The Neighborhood Academy participated in the study. All participants were African American, composed of males (58%) and females (42%) from 12th grade between the ages of 17 and 18.

The participants were given a survey known as the DASS21, to get their baseline scores on their stress, anxiety, and depression symptoms (2). The survey consisted of 21 statements in total with 7 statements about either stress, anxiety, or depression symptoms. For example, anxiety had statements such as "I was worried about situations where I might panic and make a fool of myself." For depression, there were statements such as "I couldn't seem to experience any positive feeling at all". Lastly, for stress, there were statements such as "I found it hard to wind down." Based on the participants' responses to those statements, they would answer 0, meaning that the statement did not apply to them at all, and 3, meaning that it applied to them very much or most of the time. The participants were scored by their ratings being added up on the scale for each statement on anxiety, stress, or depression. Those totals for each disorder would then determine the severity of their symptoms for each disorder..

First, we asked 8 teachers if it was okay for us to watch over their classes to tally up their misbehaviors. All the teachers agreed. Once I got permission, we watched over all their classes, looking for different misbehaviors. The misbehaviors I was looking for were "Disruptive Answering, Calling Out, Talking, & Off-Task". These misbehaviors were also used in another

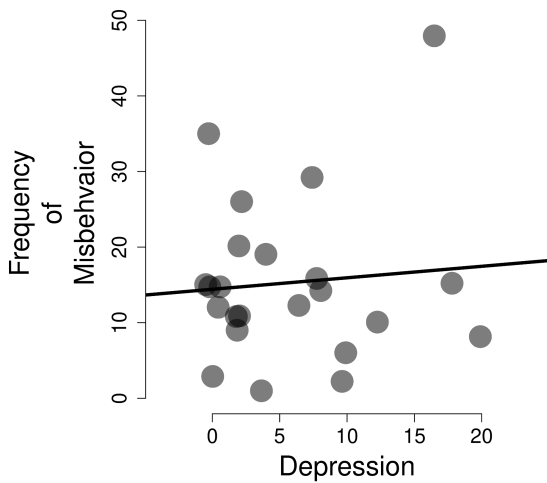
Senior Seminar project on student behavior (9). After watching over the classes, I gave them the DASS21 survey for their stress, anxiety, and depression symptoms. Then, based on the results we considered the relationship between mental health symptoms and misbehaviors.

Our first hypothesis was that there is a relationship between mental health symptoms and how frequently a student misbehaves in the classroom. This was measured using a correlation coefficient r-test. Our second hypothesis is that there is a relationship between mental health symptoms and the types of misbehavior in the classroom. This investigated the expected frequency of different types of misbehaviors and compared them to the actual frequency. All tests were calculated using vassarstats.net with a 0.05 significance threshold.

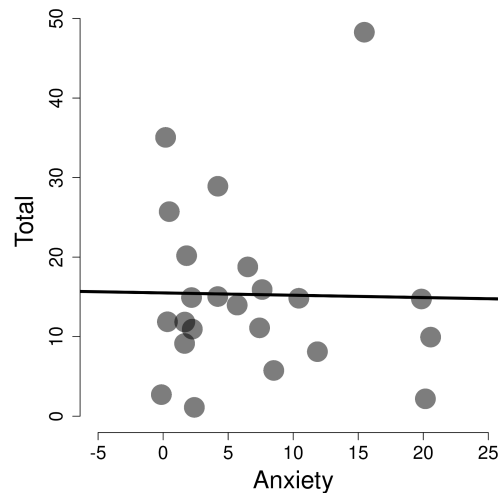
## **Results**

The purpose of this study was to identify the relationship between mental health symptoms and a student's misbehavior in class. We observed 2 classes of seniors and counted their misbehavior, then gave them the DASS21 to measure their depression, anxiety, and stress levels.

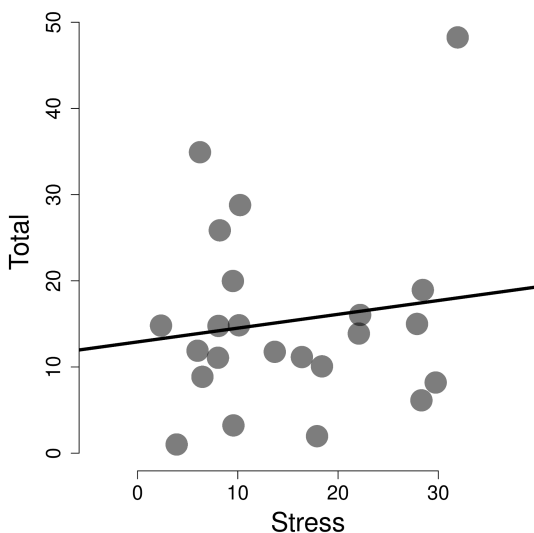
Our first hypothesis was that there is a relationship between mental health symptoms and a student's misbehavior in the classroom. After doing our experiments, we found there was no relationship between any of the three mental health symptoms and misbehavior. Depression ( $r = 0.10$ ,  $p = 0.33$ , Figure 1), anxiety ( $r = 0.02$ ,  $p = 0.42$ , Figure 2), and stress ( $r = 0.13$ ,  $p = 0.27$ , Figure 3) all had no relationship with how often a student misbehaved.



**Figure 1. No relationship between depression and misbehavior in class.** A total of 23 students at The Neighborhood Academy were observed for their misbehavior in class, then took the DASS21 for their depression levels. The *r*-test found no significant relation between the two ( $r = 0.10$ ,  $p = 0.33$ ).



**Figure 2. No relationship between anxiety and misbehavior in class.** A total of 23 students at The Neighborhood Academy were observed for their misbehavior in class, then took the DASS21 for their anxiety levels. The *r*-test found no significant relation between the two ( $r = 0.02$ ,  $p = 0.42$ ). **F**



**Figure 3. No relationship between stress and misbehavior.** A total of 23 students at The Neighborhood Academy were observed for their misbehavior in class, and then took the DASS21 for their stress levels. The *r*-test found no significant relation between the two ( $r = 0.13$ ,  $p = 0.27$ ).

Our second hypothesis was a relationship between mental health symptoms and the type of misbehavior in the classroom. In Table 1 below, the number inside the cells shows how many misbehaviors occurred, and the percentages show the expected frequency, which is how far off a number should be if depression, anxiety, or stress didn't matter. An example of this would be disruptive answering for people with normal amounts of depression; 5 out of 17 people were disruptive, and this was 16% lower than what it should've been if depression didn't matter. Disruptive answering was the least common misbehavior for those with normal and abnormal amounts of mental health symptoms. There was no clear pattern for the types of misbehavior; all the percentages appeared small, and nothing stood out in terms of positive or negative trends.

Depression	Disruptive Answering	Calling Out	Talking	Off Task
Normal (n=17)	5 (-16%)	57(-2%)	102(+1%)	89(+1%)
Not (n=6)	3 (+48%)	21(+6%)	33(-4%)	29(-3%)

Anxiety	Disruptive Answering	Calling Out	Talking	Off Task
Normal (n=15)	4(+10%)	62(+5%)	108(-3%)	86(+0.4%)
Not (n=8)	1(-27%)	19(-14%)	46(+9%)	32(-0.9%)

Stress	Disruptive Answering	Calling Out	Talking	Off Task
Normal (n=13)	3(-35%)	43(-8%)	80(+2%)	72(+5%)
Not (n=10)	5(+48%)	38(+11%)	55(-3%)	46(-7%)

**Table 1. Table of types of misbehavior by people with normal and not normal mental health symptoms.**

## Discussion

In this study, we determined if there was a relationship between students' mental health symptoms and their misbehavior in class. Our first hypothesis was that there is a relationship between mental health symptoms and how frequently a student misbehaves in the classroom. This was not supported because there were no relationships found between mental health symptoms and the students' misbehavior in class for depression, anxiety, or stress (**Figures 1, 2, & 3**). Our second hypothesis was that there is a relationship between mental health symptoms and the types of misbehavior in the classroom. This was not supported because there weren't any clear patterns found between the types of misbehaviors and mental health symptoms (**Table 1**).



Our results are consistent with the study by Anja B. Farquharson (4). Farquharson found that students with behavior problems were not more hopeless than students without behavior problems (4). Our study found that there was no relationship between misbehavior and depression, stress, or anxiety, and there also was no relationship between the types of misbehaviors and depression, stress, or anxiety. This study did not strengthen the claim that there was a relationship between mental health symptoms and misbehavior in a classroom. Ultimately, students who misbehaved in class didn't struggle with mental health symptoms more than those who didn't misbehave as much.

Another study that had different results from ours was by Bernaras et al. (3). Bernaras et al. found that students who are maladjusted in school tend to be more depressed than other students (3). Compared to our study, which found no relationship between mental symptoms and misbehaviors or the types of misbehaviors in the classroom. This study does not strengthen the claim that there's a relationship between mental health symptoms and misbehavior because it turned out to be right in their results but not in our school. Additionally, looking at Bernaras et al.'s study, which was done at a bigger school and comparing it to Farquharson's or our study, which were done at smaller schools, mental health symptoms and misbehaviors may or may not have an relationship depending on the school size and how relevant the students are in the bigger school compared to a smaller one. Students at larger schools may receive less support than those at smaller ones because teachers are unable to attend to every student, which makes learning more difficult for them and could lead to mental health issues.

An additional study with a different focus than ours was by Frojd et al. (5). Frojd et al. found that those with lower GPAs were more unhappy; 1.1% of boys and 18.4% of girls were considered depressed (5). Compared to our study, which looked for the relationship between misbehavior and stress, depression, and anxiety rather than grades and depression. Although our study found no relationship between mental health and misbehavior, it is possible that those with higher mental health scores could have lower grades but did not misbehave more. Ultimately, looking at Frojd et al.'s study, we agree with the idea that mental health may be related to grades, even though we did not test this idea directly.

Our study had multiple limitations. Our first limitation was the small number of students in each of the two 12th-grade classes; as a result, it was challenging to prove whether or not there was an actual connection between misbehavior and mental health. Another limitation was our participants' demographics; they were all primarily the same age. If we used different age groups, we may have found a relationship between the two.

A future improvement could be testing more participants of different age ranges. By testing more people of different ages, we could've found the relationship we were looking for. More misbehavior would possibly show up, which could lead to different DASS21 scores and show the relationship between mental health symptoms and misbehavior in the classroom.

According to our research, there was no relationship between depression, anxiety, or stress and misbehavior or types of misbehavior in class. Therefore, misbehavior may not cause

mental health issues. When looking to see why a student is misbehaving in class, teachers and counselors should look into other ways to figure out why students are acting the way they are.

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