
Test Anxiety and Teacher Candidates at an OHIO Regional Campus

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Ohio Assessments for Educators, or OAE, is a collection of licensure tests required for Teacher Certification for all Ohio educators. Relative to the main campus, Ohio University regional students' first-time pass rate is lower. To prevent delays in licensure and costly retakes, the faculty at Ohio University Chillicothe piloted a year-long test preparation program intended to increase first time pass rates through the alleviation of test anxiety. Of approximately 50 candidates invited to the test preparation session, 32 were elected to participate in the study. All participants were screened for test anxiety and received an informational session designed to reduce anxiety by demystifying the experience and guiding their study and test-taking strategies. They were also granted access to an online test preparation website for self-guided pre-test feedback and study materials through an online program, 240 Tutoring. Those who scored high or extremely high for anxiety were informed of their results so they could seek support if desired. This descriptive case study reports the process and initial findings from the pilot program. Screening revealed candidates' test anxiety ranged from "Comfortably Low" to "Extremely High" with most respondent scores falling in either "High" or "Extremely High" categories. Candidates reported that the test preparation sessions reduced their anxiety and supported their successful completion of the OAE. Data on pass rates is unavailable and student post-intervention responses were very low, limiting the ability to determine causal relationships in the current study.

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Ohio University Chillicothe campus's teacher education majors' first-time pass rates on the Ohio Assessments for Educators (OAE), a state

mandated licensure exam, are lower than main campus teacher education majors. Retaking this assessment is costly and stressful for teacher candidates. Test anxiety, which can negatively influence student performance on tests, can be changed through interventions. The faculty at Ohio University Chillicothe planned and implemented an intervention with these objectives: 1) Reduce candidate test anxiety through screening and referral for mental health supports, relationships with faculty and peers, and test preparation, 2) Increase candidate self-efficacy through peer and faculty relationships and support, and 3) Increase first-time pass rate on the OAE tests and EdTPA, short for Educative Teacher Performance Assessment, on the Chillicothe campus. Ultimately, we wished to remove barriers to building the education workforce in our region by reducing expensive and lengthy test retakes. The current study utilizes pre-intervention data and limited post-intervention data to answer the questions: 1) What is teacher candidate baseline test anxiety as reported on the Westside Test Anxiety Scale? 2) What are teacher candidate perceptions of the test preparation program?

Ohio Assessments for Educators, or OAE, is a collection of licensure tests required for Teacher Certification for all Ohio educators. In 2020-2021, Ohio University's first-time pass rate on the exams was 88.29% while Ohio University Chillicothe's first-time pass rate was 75.2% overall, with pass rates ranging from 50% (Middle Childhood Math) to 100% (Assessment of Professional Knowledge Early Childhood Education). The exams with the lowest pass rates at Ohio University Chillicothe are on the Middle Childhood Education Math (50%), Foundations of Reading (54.17%), and Early Childhood Content (66.67%) (The Patton College of Education, Ohio University, 2021a). A new assessment began in 2022-2023 for Early Childhood and Elementary Education students covering a broader age band, furthering high student anxiety since little information was available about the assessments. The EdTPA is a performance assessment completed during the final semester of the candidate's program and scored by external evaluators. Candidates who do not meet minimum criteria are required to repeat sections on which they were deficient. Of 37 EdTPA performance assessments completed in 2020-2021, four students were required to resubmit at least one portion of their product (The Patton College of Education, Ohio University, 2021b).

In their final year of their education program at Ohio University Chillicothe, students carry heavy financial burdens since their final semester

is a full-time unpaid internship. Additionally, they are charged a higher rate for tuition and fees for the final semester and must pass multiple tests and performance assessments which cost a total of approximately \$650.00. Candidates describe anxiety related to these exams because they are both costly and high stakes since missing the minimum score can delay or prevent them from entering the profession despite the time and money they have invested in their educator preparation program. Financial stressors and employment prospects are the primary causes of college student test anxiety (Alkandari, 2020).

Student academic success is influenced by test anxiety (Abdi et al., 2012; Barrows et al., 2013). Between 15-38% of students experience high test anxiety. Highly anxious students score lower on tests than their less anxious peers (Hembree, 1988). Relationships with peers and faculty can also reduce test anxiety (Hyseni & Duraku, 2018; Yong, 2019). Interventions can support students in overcoming their test anxiety and improve their scores (Driscoll, 2007; Krizpenz et al., 2019;). When students doubt their abilities to be successful, they often limit their own achievement as worry distracts from their ability to focus on learning (Bandura, 1993). High test anxiety, once identified, can be reduced through cognitive behavioral interventions and test preparation (Alkandari, 2020; Hembre, 1988; Krizpenz et al., 2019).

The faculty speculated that factors contributing to high test anxiety included limited peer-to-peer and student-to-faculty relationships, lack of awareness of test anxiety, lack of resource to address test anxiety, and lack of test preparation. Candidates on regional campuses' relationships with both peers and faculty were impacted by COVID-19 and a shift to remote coursework through OneOHIO, a restructuring of Ohio University regional campuses in which teacher preparation is completed through a combination of in-person/ campus-specific, online asynchronous, and online synchronous modalities. Relative to the previously strong cohorts of students and relationship with their faculty, relationships were weaker in the new format. Additionally, while counseling was available to students on the regional campuses in a variety of formats, without identifying the need for test anxiety support, faculty referrals could not be made. Finally, test preparation services and materials were available but often at additional cost, making them out of reach for financially strained students.

Building upon the hypothesized need to address the high-test anxiety among teacher candidates at Ohio University Chillicothe, and the

multifaceted approach proposed to mitigate these anxieties, this study aims to examine the effectiveness of the implemented intervention strategies. By focusing on the pre-intervention baseline of test anxiety and perceptions of the test preparation program among teacher candidates, we seek to better understand the initial conditions that the intervention aimed to improve. The following section delineates the approach taken to gather and analyze data from participants involved in the OAE Test Preparation program, providing a clear picture of the study's design, participant demographics, and the procedural steps undertaken to assess the intervention's impact on reducing test anxiety and improving test performance.

Methods

Participants

Table 1 provides a snapshot of the gender distribution and the distribution of participants across different majors in the OAE Test Preparation program. Among the participants, 84.4% were female, while 15.6% were male. Most participants were Early Childhood and Elementary Education (81.2%) majors, while a smaller percentage were Middle Childhood (18.8%) majors. Age and ethnicity were not collected to assure the confidentiality of the participants with the small sample size. The total number of participants in this study was 32 recruited from approximately 50 potential participants nearing their OAE requirement.

Table 1: OAE Test Preparation Participants

Participant Characteristic	<i>n</i>	%
Gender		
Female	27	84.4
Male	5	15.6
Major		
Early Childhood	26	81.2
Middle Childhood	6	18.8

Note. N = 32.

Program Design and Implementation

The education faculty at Ohio Chillicothe secured funds through an internal Workforce Development Grant to support the development of a test preparation process for education majors. The project was approved through the internal review board (IRB).

Measures and Procedure

Approximately 50 candidates were invited to campus for a test preparation session. While most appropriate for juniors and seniors, any education major was invited to participate in the workshop to become familiar with the assessments and available support. The schedule of events included: 1) an overview of the OAE, including tips to maximize test scores, 2) discussion with recent test takers who described their experiences with the OAE, and 3) information and support regarding EdTPA. Participants were screened for test anxiety using the Westside Test Anxiety Scale (Driscoll, 2007), and pre-intervention results were used to recommend test anxiety reduction through university-sponsored counseling and psychological support.

The Westside Test Anxiety Scale, a brief 10-item instrument, has been validated as a reliable and valid measure of test anxiety impairment. Developed to identify students who may benefit from anxiety-reduction interventions, the scale assesses self-reported cognitive worry and impairment related to test anxiety. Through two separate studies involving anxious college and fifth-grade students, the scale demonstrated strong correlations between reductions in anxiety levels, as measured by the Westside scale, and improvements in test performance. The average validity coefficient of $r = 0.44$ suggests that changes in anxiety impairment, assessed by the Westside scale, accounted for 20% of the variance in objective test scores. These findings indicate that the Westside Test Anxiety Scale is a valuable screening tool for educational settings, given its brevity, ease of administration, and demonstrated reliability and validity (Talwar et al., 2019), making it a useful instrument to support and assist anxious students in achieving academic success.

All participants were provided information in the test preparation session about how to access 240 Tutoring. Upon email request, participants nearing their test date were provided a 30-day subscription to 240 Tutoring (2023), a subscription-based test preparation program. This program presents customized test preparation materials designed for each OAE. OAE

are targeted to subject matter and pedagogy relevant to each candidate's licensure area. Materials within 240 Tutoring include pre-assessments, written review of content, videos, quizzes, interactive study materials such as flash cards, and post-assessments. Additional access codes were granted for students needing longer than 30 days to prepare. The out-of-pocket cost for this service for a student would normally be \$40.00 but through a negotiated agreement access codes were purchased by the University in the form of prepaid access codes for \$10.00 and given to the student at no cost. Using this program in place of printed material allows candidates to practice digital test-taking like the format of the OAE and ensures that study guides will always be current, as test preparation materials are updated and modified when changes are made to the OAE exams. Candidates were encouraged to take advantage of the campus testing center to take a practice assessment online with a proctor and timer to simulate the testing environment. For those who preferred paper resources, we offered a set of paper-based test preparation materials for lending.

Post-intervention data was solicited in the form of a repeated administration of the Westside Test Anxiety Scale (Driscoll, 2007). Additionally, an anonymous open-ended survey was distributed to those who completed the process for feedback on their experiences. Unfortunately, candidate responses to the follow-up scale were limited to such a small number ($n = 2$) that reportable data are not available. Although open-ended questionnaire responses were also very limited ($n = 4$), this qualitative data is reported to illustrate candidate perceptions of their experience in the test preparation program. Overall, little is known about the baseline test anxiety of regional campus teacher candidates making the pre-intervention results a valuable contribution to the literature.

Candidates nearing the OAE requirement were invited to attend via email and in-class communication to three test preparation sessions that were held between April 2022 and March 2023. Workshop participants were recruited to participate in the research study after being provided with an overview of the project. Potential participants were given IRB-approved informed consent documents, and those who consented to participate completed the anxiety scale online in Qualtrics. Thirty-two teacher candidates consented to participate and completed the test anxiety surveys. Of those enrolled in the study, 17 students also enrolled in 240 Tutoring, which allows administrative access to usage and performance data.

A follow-up post-test measuring test anxiety was distributed via email and in professional internship seminar. Of the 35 follow-up surveys sent, just two were returned. We also sent an anonymous open-ended follow-up questionnaire to participants to collect their feedback to improve our process and further illustrate relevant findings. Questions included: 1. Do you think participating in the test preparation process reduced your anxiety? Why or why not? 2. Do you think participating in the test preparation session increased your belief in your ability to pass the OAE? Why or why not? 3. Did you use 240 Tutoring? Why or why not? 4. Have you passed the OAEs? If so, what has been helpful to you? If not, what do you think might help? Four candidates responded to the open-ended questionnaire. The low response rate is possibly due to candidate successful transition into the teaching profession, lack of participant incentives for engagement with the post-assessment, and challenges specific to regional campus students such as responsibilities outside of school and work. Results should be interpreted as descriptive for this sample rather than generalizable to a broader population.

Results

Findings include screener pre-intervention results and the qualitative findings from the post-test preparation questionnaire. The team computed individual Westside Test Anxiety scale scores according to the scale's scoring guidelines and generated aggregate descriptive statistics. We reviewed qualitative responses to the open-ended questionnaire and identified general themes within the responses. Usage data is also reported from 240 Tutoring. We matched study participants with their 240 Tutoring data and calculated descriptive statistics.

Individual Westside Test Anxiety Scale scores are reported in Table 2 in aggregate, with both the number and percent of students scoring within each category. Among respondents on the Westside Test Anxiety scale, more than half (62.6%) scored "Extremely High" or "High" in test anxiety, while only 9.3% scored "Comfortably Low" or "Normal." The remaining 28.1% scored within the "High Normal" and "Moderately High" categories on this measure of test anxiety.

Table 2: Westside Test Anxiety Scores, Baseline Test Anxiety

Score	Frequency (n)	%
Extremely high (4.0- 5.0)	14	43.8
High (3.5-3.9)	6	18.8
Moderately high (3.0-3.4)	4	12.5
High normal (2.5-2.9)	5	15.6
Normal (2.0-2.5)	2	6.3
Comfortable (1.0-1.9)	1	3

Note. N=32

240 Tutoring tracks usage data that are accessible to program administrators. Among the 20 participants who enrolled in 240 Tutoring, engagement with these materials varied greatly, ranging from 2 minutes to 28 hours 18 minutes. The mean use among these students was 10 hours 12 minutes and the median use was 9 hours 32 minutes.

Although only four responses to the open-ended questionnaire were returned (12.5% response rate), these initial findings are described to illustrate the need for further study to understand the potential of test preparation programs to support teacher candidate success. Participants were asked if participating in the test preparation session helped reduce their anxiety about the OAE. All respondents indicated that the test preparation session did indeed reduce their anxiety. They expressed that the preparation session made them feel more prepared for the test content and question types. One participant mentioned feeling extremely prepared after the session and believed they had learned everything necessary. Participants were also asked if the test preparation session increased their belief in their ability to pass the OAE exams. One participant said that the test preparation process had not increased her self-efficacy, writing, "that is because I am awful at taking test no matter how much I study." Participants attributed scoring well on their OAE to studying using 240 Tutoring, being more informed about passing rates and assessment types, and accessing valuable study tools. When asked about the utility of 240 Tutoring, all four participants provided affirmative responses, although one participant mentioned that it went into more depth than necessary in certain subjects, they still found it valuable for their OAE preparations. Three out of four participants reported passing their OAE exams, and the remaining participant was awaiting results. One participant mentioned passing all exams on the first attempt. Interestingly, this candidate used 240 Tutoring

primarily for the reading 090 exam but passed the other exams without extensive study. One student highlighted the value of peer support in their preparation, noting, "I have passed the OAEs and now work as a general classroom educator. I thought that 240 Tutoring and having peer support was the largest contributors to my success. I recommend scheduling your testing time with a friend."

One comment illustrates the complexity and challenge of implementing and evaluating a test preparation program:

Yes! Passed them all on the first attempt. I only used 240 Tutoring to study for the Reading 090, but honestly, I didn't study at all for the other 2 exams. I looked at 240 Tutoring and it was super overwhelming, and I was very close to having a baby (I actually took the 2 subtests and then gave birth 5 hours later!!) so I just planned on taking them and failing. I passed them both! I failed them miserably on 240 Tutoring though.

As illustrated in this example, candidate performance on the OAE is impacted by myriad factors, and their results often surprise them, both positively and negatively.

Overall, the responses from participants in the test preparation session for the OAE exams indicate that the session may have supported them in reducing anxiety and increasing belief in their ability to pass the exams. The use of resources like 240 Tutoring was widely regarded as beneficial, and many participants reported successful outcomes in their OAE exams. These findings underscore the importance of comprehensive test preparation and the positive impact it can have on individuals' confidence and performance in standardized exams.

Discussion

The data indicate a noteworthy prevalence of high anxiety levels among these regional education majors, with 43.8% falling into the "Extremely High" category (score range 4.0-5.0), evidencing higher rates of test anxiety than is reported in the broader population (Hembree, 1988). These elevated levels of anxiety suggest that a substantial portion of the sample experiences significant stress and apprehension when faced with assessments. While a considerable proportion of participants reported "Extremely High" anxiety levels, the data also demonstrate variability in

anxiety experiences. A notable percentage of participants reported "High" (18.8%) and "Moderately High" (12.5%) anxiety levels. Only 9.3% scored "Comfortably Low" or "Normal." The overall distribution of the results reveals that test anxiety among this sample is distributed toward the upper end of the scale, reflecting a general trend toward high test anxiety. The overall variability underscores the importance of recognizing individual differences in anxiety responses and tailoring interventions and support accordingly.

The prevalence of high anxiety levels in this study has several implications for academic performance and well-being. High test-related anxiety can hinder students' ability to absorb and retain information, negatively impacting their academic success. Furthermore, it may contribute to increased stress levels and decreased overall well-being, which can have long-term effects on mental health and academic engagement. Teacher candidates should be screened for test anxiety and provided with resources to support them in managing it. Considering the evidence that standardized assessments often perpetuate long-standing disparities because of their inherent bias (Au, 2011; Bennett, 2006; Carver-Thomas, 2018), we recommend critical evaluation of the effectiveness of this type of assessment as a gatekeeper to teacher licensure.

This descriptive case study provides preliminary evidence suggesting that a test preparation process might play a supportive role in mitigating test anxiety among teacher candidates. Participants reported feeling more prepared for their OAE assessments after engaging in the test preparation session. The use of 240 Tutoring was regarded as beneficial, with participants attributing their success to these tools. Peer support also emerged as a valuable resource in preparation apparent in the limited qualitative results. These findings collectively highlight the potential benefits of comprehensive test preparation programs, not only in reducing test anxiety but also in increasing candidates' confidence in their ability to pass licensure exams. Although the study has encountered significant limitations, including small and non-random sample, attrition, and self-reporting biases, it provides valuable insights into the experiences of teacher candidates facing test-related anxiety and the potential effectiveness of interventions to address this issue, which may support the design of further research.

Limitations

The study is subject to several significant limitations; results should not be generalized. The sample was recruited out of convenience and thus may not match the demographics of the broader population of teacher candidates. While this recruitment method was practical and efficient, it may have introduced selection bias and thus limits the generalizability of the study's findings. Participants in this convenience sample were not chosen randomly, which means that the sample may not accurately represent the broader population. Consequently, the results obtained from such a limited and non-random sample may not be applicable to a larger, more diverse population. The sample size was small and subject to significant attrition in the post-intervention data collection, making longitudinal changes impossible to quantify.

Another limitation is in the use of self-reported data. Self-report measures rely on participants to provide accurate information about their experiences, behaviors, or perceptions. Several sources of bias may influence the quality and reliability of self-reported data such as that reported here including social desirability bias, recall bias, and response bias. Furthermore, cultural and language differences among participants can introduce response bias, as the interpretation of questions and responses may vary based on individual cultural backgrounds and linguistic nuances.

One significant limitation of this study was attrition, the gradual loss of participants over the research time frame. While every effort was made to maintain the integrity of the sample, a notable number of participants dropped out before the post-intervention data collection phase. Due to attrition, the sample size for post-intervention data collection became insufficient to draw meaningful conclusions or conduct statistical analyses as initially intended. The reduced sample size significantly limited our ability to assess the intervention's long-term effects and its impact on the outcome variables. The primary reasons for attrition included loss of interest, lack of personal benefit in continued participation, and personal circumstances beyond the control of the researchers. Despite these limitations, the study offers valuable insights based on the pre-intervention data. The pre-intervention phase provides a baseline understanding of regional campus teacher candidate test anxiety, offering essential context for future research. These insights can inform subsequent studies.

Although the study's generalizability may be limited due to the specific population and context, the findings still contribute to the

understanding of teacher candidate test anxiety. Researchers studying test anxiety related to professional entrance exams may find the results relevant and applicable to their work. Moreover, the study's limitations provide a valuable reminder of the importance of considering context-specific factors when interpreting and applying research findings. In conclusion, while this study has encountered significant limitations, it still contributes to the body of knowledge in meaningful ways and remains a valuable stepping stone in the ongoing exploration of teacher candidate test anxiety in relation to the use of licensure exams.

Conclusion

This study explored the test anxiety of preservice teachers in relation to their participation in a test preparation process focused on their OAE. It offers valuable insights into the prevalence of test-related anxiety among regional campus teacher candidates and the potential role of test preparation programs in alleviating this anxiety. The data indicate that a significant proportion of teacher candidates included in the sample experience high levels of anxiety when faced with assessments, which can have adverse effects on academic performance and well-being (Abdi et al., 2012; Bandura, 1993; Barrows et al., 2013). Recognizing individual differences in anxiety responses is crucial for tailoring support and interventions effectively.

The findings also emphasize the need for continued research to explore the factors contributing to test-related anxiety and to develop strategies for managing it within academic settings, especially for regional campus students. While the study has limitations, including a small sample size and attrition, it contributes meaningfully to the understanding of regional campus teacher candidate test anxiety in the context of licensure exams. Researchers and educators alike can draw valuable lessons from this study to inform future research, intervention design, and support mechanisms for teacher candidates facing the challenges of test-related anxiety.

Recommendations

We intend to continue to support teacher candidates in reducing anxiety through continued test preparation sessions. Since peer support was highlighted as a valuable contribution to their success in the qualitative data, we will continue to offer these sessions in person and will encourage

candidates to use study groups to support one another. Further research should examine pre- and post- test preparation data to determine if test preparation sessions such as those described above reduce anxiety. Additional studies should recruit larger, representative samples to allow for generalization. We recommend that professional preparation programs with culminating professional exams design and implement test preparation programs based on their students' needs. Considering the current data, further investigation is needed to understand how test preparation can best support them in passing licensure exams.

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