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Private Room Testing Accommodations for Students with ADHD

Benjamin J. Lovett, Ph.D. and Lawrence J. Lewandowski, Ph.D.

Keywords: testing, accommodations, ADA, SAT

Many students with ADHD receive accommodations on tests; most often these are extended time or a separate testing location (Pritchard et al., 2016). Extended time accommodations have been widely researched and discussed, in part because they have been criticized as potentially providing an unfair advantage (e.g., Lerner, 2004). Separate locations, such as private testing rooms, have *not* received similar attention, despite their wide use. Several recent empirical studies conducted on this type of accommodation fill in the gap to provide guidance for deciding when to recommend or provide it. In this article, we discuss those studies and their implications, but first we consider the legal and conceptual framework for accommodations.

WHY PRIVATE ROOM TESTING ACCOMMODATIONS?

Many students have disabilities that interfere with their ability to access tests given under standard administration conditions. Some students with ADHD experience impairments like slow reading speed or distractibility that require testing accommodations. These accommodations are provided

under the auspices of disability discrimination laws (the Americans with Disabilities Act, or ADA, and Section 504 of the Rehabilitation Act of 1973). Some students with ADHD in public schools qualify for services under special education law, specifically the Individuals with Disabilities Education Act, and those services can include testing accommodations (Lovett & Lewandowski, 2015). Accommodations may be made for teacher-made classroom exams in schools and universities, as well as on high-stakes tests used for school accountability, admissions decisions, and certification or licensure requirements.

The purpose of an accommodation is to allow the student to *access* a test, that is, to provide equal opportunity to obtain a valid test score for that student. This access does *not* guarantee high performance, though appropriate accommodations do tend to increase the scores of students with disabilities. In addition, accommodations should have effects that are specific to students with relevant disabilities, rather than students as a whole; this is sometimes known as the “differential boost” criterion (Fuchs & Fuchs, 2001). Extended time accommodations have been faulted for failing to meet this criterion, as research has often found

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Russell A. Barkley, Ph.D.
Virginia Treatment Center for Children
Virginia Commonwealth University
School of Medicine
Send correspondence to
drbarkley@russellbarkley.org

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that students with *and* without disabilities benefit from it (for reviews of this literature, see Cahan et al., 2016; Lovett, 2010). While extended time appears to be the most common testing accommodation, a separate testing location (e.g., a private or semi-private room) is also regularly used, especially by students with ADHD. A large-scale survey by Lewandowski et al. (2014) found that a majority of college students both with (64%) and without disabilities (60%) expected a separate room to have a positive effect on their performance on high-stakes exams, suggesting a lack of *perceived* differential boost. The empirical question remains; do students with ADHD experience a greater boost from testing in a private room?

In the case of ADHD, the argument is made that students with the disorder show greater distractibility; therefore, a separate testing location will reduce distractions. The logic here is clear enough, but upon close inspection, the leap from ADHD to a need for a private room is not so simple. First, distractibility is only one of the DSM symptoms of ADHD, and a student may have the disorder without having that particular symptom to a clinical degree. Second, many of the distractions that individuals with ADHD report experiencing are *internal* (i.e., mind-wandering; Lanier et al., 2019), and changing the testing environment is unlikely to address this problem. Finally, students with ADHD often take medications, many of which have been shown to improve attention and reduce distractibility, which may lessen the need for any accommodation.

There are other reasons to be cautious when recommending a separate room without evidence that it is necessary for a student. For instance, in classroom settings, students who receive separate location accommodations typically take their tests away from teachers, who cannot provide clarification or other answers to students' questions about exam items. In addition, in younger children with ADHD, being surrounded by peers working on an exam may provide good modeling of on-task behavior, or increase motivation through the related principle of social facilitation (Aiello & Douthitt, 2001). Separate room accommodations can also be logistically

intensive. For example, on a state exam day, some schools do not have enough proctors or separate rooms to provide a private testing location to each student with an ADHD diagnosis, and for certain high-stakes exams, a private room costs thousands of dollars to provide due to the need to rent an entire testing center for a single examinee taking an admissions test, or renting a separate room for several days for a lengthy licensure exam. Finally, although private rooms do not have additional examinees, they may have other, worse distractions; for instance, some schools use an administrative office or copy room as the separate testing location, where adults congregate or banter. In short, diagnosticians and treating professionals who recommend a private room do not work in the settings where the accommodations are provided, and so must consider how recommended strategies will actually be implemented before assuming that a private room can do no harm.

Given the concerns reviewed above, what does relevant research tell us? Do private rooms typically provide a specific benefit to students with ADHD, allowing them to better access tests?

PRIVATE ROOM ACCOMMODATIONS: THE EMPIRICAL LITERATURE

Experimental Studies of Private Room Effects

Some of the most relevant empirical studies have directly compared students' test performance across private room and group testing conditions. Lewandowski and colleagues (2015) examined this in 62 *nondisabled* college students, to determine if a private room might provide a general benefit to all students as extended time has been shown to do. These investigators administered two parallel forms of the Nelson-Denny Reading Test timed reading comprehension task (NDRT) to the same group of research participants, one form in a private room and one in a group setting. The NDRT simulates most typical reading-based exams, containing passages followed by sets of multiple-choice questions, all

completed under a strict time limit. Surprisingly, there was a small but statistically significant benefit when taking the NDRT in a *group* setting. This was not a substantial benefit in a practical sense, but at the very least it suggested that there was no benefit to the private room for nondisabled students.

Lovett and colleagues (2019) followed up on this finding by extending it to college students with ADHD diagnoses as well. In this study, all students (27 with a diagnosis, 42 nondisabled) again took two parallel forms of the NDRT. The investigators looked at both how well students performed on the NDRT as well as how many items were reached (as a possible better measure of test *access*). More specifically, the investigators tested for a statistical interaction between the students' ADHD status and their testing condition on performance to determine whether differential boost was present. No such statistically significant interaction was found for either performance or number of items reached, and a more detailed analysis suggested that any effects of testing conditions were small. Again, there seemed to be no clear evidence suggesting that the average student with an ADHD diagnosis needs a separate room.

Lovett and colleagues (2019) also tried to determine if certain individual students experienced a uniquely large benefit from a private room, by calculating a gain score (performance in private room minus performance in group setting). Of the participants in the ADHD group, 41% showed what the investigators considered a substantial gain (i.e., more than 3 items), but most did not, and some even showed a decline in performance. Even more interesting is that 31% of *nondisabled* participants showed a substantial gain, but again, many did not, or showed a decline. Of course, it is quite possible that the gains (or declines) shown on a single pair of exams are not based on any consistent needs, but rather random changes in performance or imperfect reliability across test forms.

Weis and Beauchemin (2020) performed a slightly different type of study, in which a large sample of individuals ($n = 1634$) attending an orientation

session for new college students took a Spanish language placement test, and were randomly assigned to take it in either a private room or a group setting. The investigators found that the students who reported a history of ADHD and/or learning disabilities performed substantially better in the *group* setting, whereas nondisabled students did not show a difference across settings. Oddly, it was the group setting—not the separate room—that equalized performance between students with and without LD/ADHD diagnoses. Although this study involved different groups of students taking the exams under different formats, the investigators did statistically control for extraneous variables, and the sample sizes were large, so it is more reasonable to conclude that the setting actually had a causal effect.

Finally, Lewandowski et al. (2020) conducted an intensive study of six college students with ADHD who completed 10 parallel forms of an algebra test administered across as many as three conditions: a private room, a small group setting (5-12 students), and a special “high-distraction” condition in which a montage of movie trailers was played (audio and video) in a group setting at between 60 and 85 decibels. This was done to determine if there might be a linear effect of distractibility, such that a regular group setting would impair test-taking relative to a private room, and a high-distraction room would be even more impairing than a regular group setting. In phase one of the study, three students were tested under conditions of a private room, small group setting, and high-distraction small group. Performance showed little difference in items attempted in the private room versus small group setting. By contrast, there was a large difference between private and high-distraction settings, with all three students attempting more items in the private room. In phase two of the study, the small group condition was dropped. Three additional students alternated between private room and high-distraction group conditions. Once again, students completed more items in the private room than in the high-distraction condition. Of the six students tested in the study, three showed a strong effect and three a weak

effect in favor of the private room, but this was only in comparison to an exaggerated level of distractions that are not likely to be present in typical group testing settings.

Studies of Related Test Alterations

Several studies have examined performances of children taking a variety of tests in different settings. For example, Hart and colleagues (2011) arranged for children attending a summer treatment program for ADHD to complete test-like worksheets in both a large group setting (33 students, about the size of a typical classroom) and a small group setting (between 4 and 6 students). No difference was found for on-task behavior during testing, and work productivity was actually significantly higher in the large group setting. While not about a private room per se, the study nonetheless failed to find that a smaller group administration (which would presumably have fewer distractions) aided performance of students with ADHD.

Vaughan et al. (2014) tested 313 children individually and 626 in a group on a battery of post-concussion, cognition, and symptom measures. Students were matched on age, sex, and ADHD diagnosis. Results indicated no statistically significant group differences on measures of visual memory, verbal memory, visual motor speed, reaction time, or symptoms of concussion. In other words, students with ADHD received no benefit from private room testing on these particular measures.

Finally, Pritchard et al. (2016) conducted a record review of 96 children with ADHD, 60 of whom received test accommodations. Of those, 77% received a reduced-distraction test environment. The authors examined student records that included a variety of test scores including Maryland School Assessments (i.e., reading and math). Their results indicated that students with ADHD receiving accommodations performed no differently from those not receiving accommodations on state math and reading measures; they also noted that a reduced distraction setting did not significantly predict performance on the state tests. The authors concluded that none of the

accommodations included in the study (i.e., extended time, reduced distraction setting) is associated with better reading or math performance.

IMPLICATIONS AND RECOMMENDATIONS

What is most striking from the review of research is what is *absent* from the research base—namely: any evidence suggesting that separate location testing accommodations tend to uniquely benefit students with ADHD. There is similarly no clear evidence that typical classroom settings prevent students with ADHD from accessing tests; in fact, some evidence suggests that students with disabilities are actually disadvantaged in separate rooms. The logic that “students with ADHD are more distractible and will need a less distracting setting” is evidently too simplistic. This is an important conclusion, since many diagnosticians appear to recommend accommodations for students with ADHD in a “boilerplate” manner, equating the diagnosis to a list of accommodations, without specific evidence suggesting a need for each accommodation (see e.g., Weis et al., 2019). Admittedly, professional resources often contain such lists, but they should be viewed as things to *consider* rather than things to automatically recommend based on the diagnosis. The list should be applied to an individual student through evidence of *that student’s* functional limitations.

Admittedly, making individualized decisions is not easy, in that research has not yet established any particularly strong predictors of need for (or benefit from) a private room. Therefore, we recommend a hybrid model of decision making. In children and adolescents with ADHD diagnoses who are taking exams in classroom settings, we recommend an experimental approach, in which student performance and access is monitored under different conditions in the actual educational setting. Students can complete classwork, quizzes, or unit tests on different days in either a separate room or in the whole class setting for one marking period, and both performance (grades) and access (items reached) can then be

compared across conditions to determine if there is a substantial benefit for that student. Data can be analyzed using single-case research designs described in Lovett and Lewandowski (2015, chap. 3); the alternating treatments design is particularly useful for this. Briefly, all task data would be transformed to either percent correct or percent of items answered, and then plotted on the same graph for analysis. See Morley (2017) for more advanced guidance on formal data processing for these types of case study designs.

For situations involving older students, particularly when postsecondary students or young adults are being considered for accommodations on a high-stakes test for admissions, certification, or licensure purposes, a different approach is needed. Here, two types of data are especially relevant. First, examine the student’s history of test performance carefully. If you are considering providing an accommodation for the first time, the student likely has an extensive record of real-world test performance from K-12 schooling (possibly admissions or school accountability tests as well) without any accommodations. Given that ADHD is a child-onset disorder, if the student’s ADHD prevented test access in a group setting, this should be evident in poor performance. If the student did well on, for instance, the SAT, without a private room, that indicates they were able to access the test even if they report the subjective experience of distractibility. Second, use information from the diagnostic evaluation (or from supplemental testing) to gauge accommodation need. This information would include self and informant ratings of distractibility, indices from continuous performance tests that specifically measure distractibility, and clinical observations of distractibility during the evaluation. Each individual indicator may not strongly predict need (see e.g., Lovett et al., 2019), but the more convergent indicators there are of high distractibility to external extraneous stimuli, the more likely it is that a student will have unique test access needs, if those data are corroborated by the historical information already mentioned.

Two general points about individualized decision making should be kept in mind. First, always ensure that the diagnosis of ADHD is well-supported in the first place before considering accommodations. Empirical research has found that students who are seeking disability accommodations for ADHD often have poorly documented diagnoses (e.g., Nelson et al., 2019). Second, when obtaining information about accommodation need during a diagnostic evaluation, always consider that the student has an incentive to demonstrate impairment, and so judge effort, motivation, and honesty accordingly (Suhr & Berry, 2017).

We believe that the hybrid model just presented is sound, based in the current available research. However, more studies are needed, specifically to measure distractibility in students of different ages and relate that empirically to performance on academic tests. Optimally, a diagnostic evaluation would include academic skill measures given in the presence of realistic distractions akin to what would be expected in a group testing situation (e.g., occasional noise or movement), but no protocols for such a simulation are currently available, and it may not be logistically feasible. Admittedly, with the advent of online testing, and particularly in the time of the COVID-19 pandemic, it is possible that many high-stakes examinations will be available to be taken at home or in individualized test centers in the near future, reducing a need for difficult decisions over separate location accommodations. However, at least in educational settings, group testing is likely to be present in the future, and in any case, clinicians should utilize principled, consistent decision procedures for handling this surprisingly complex accommodation.

Dr. Lovett is an Associate Professor in School Psychology at the Teachers College of Columbia University in New York, NY. Dr. Lewandowski is Professor Emeritus in Psychology at Syracuse University, Syracuse, NY. Dr. Lovett can be contacted at the School Psychology Program, Teachers College, Columbia University, Box 120, 525 W. 120th Street, New York, NY 10027. E-mail: BL2799@tc.columbia.edu

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Leveraging Emerging Workforces to Increase ADHD Service Provision for Children and Families: Family Peer Advocates as an Exemplar

Brittany Matthews, EdM, Carla C. Allan, PhD., Ami Norris-Brilliant, PsyD, and Anil Chacko, Ph.D.

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ADHD: DISPARITY IN TREATMENT

Recent data suggests that less than half of children diagnosed with ADHD receive psychosocial treatment, and of those that do, 24% receive psychosocial interventions that are not evidence-based (Danielson, 2018). The difficulty in obtaining evidence-based psychosocial treatment

for ADHD has been a long-standing issue, particularly in socioeconomically disadvantaged communities in which there is a dearth of mental health providers (Hoagwood et al., 2000). Given that the prevalence rates and the complexity of ADHD are increased in socioeconomically disadvantaged communities (Rowland et al., 2018), the need to

improve access to evidence-based treatments is crucial. The US Department of Health and Human Services (2010) has identified increasing the proportion of children with ADHD who receive evidence-based treatment, including behavioral parent training (BPT), as a critical objective for the improvement of the nation's health.