

**ASSESSING ADAPTIVE BEHAVIOR OF CRIMINAL DEFENDANTS
IN CAPITAL CASES: A RECONSIDERATION**

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A key aspect of the diagnosis of mental retardation, particularly for defendants in Atkins cases, is the assessment of deficits in adaptive behavior. Recently, Denkowski and Denkowski proposed a comprehensive model for the assessment and evaluation of adaptive behavior of such defendants. This comprehensive model has many aspects that are inconsistent with accepted professional standards for the administration and scoring of psychological measurements. We discuss what we see as the major problems with the comprehensive model, citing research literature that conflicts with their recommendations. We close by offering suggestions regarding how adaptive behavior deficits might optimally be assessed.

The diagnosis of mental retardation can be a contentious matter in general, but the level of dispute is probably never greater than in a court of law, for in a court of law the applicability of the death penalty hangs on the diagnosis. As we discuss below, one key aspect of the diagnosis of mental retardation is documenting deficits in adaptive behavior. Adaptive behaviors are those that an individual uses to live life independently and to meet the demands and expectations of his or her environment. Recently, Denkowski and Denkowski (1) presented a "comprehensive model" and related procedures for ensuring the accuracy of evaluations of a defendant's levels of adaptive behavior. Although Denkowski and Denkowski pursued their model for a justifiable goal, we argue that they went too far, and use of their "comprehensive model" will lead to decidedly less accurate and more biased assessments of adaptive behaviors of criminal defendants.

In the well-known case of *Atkins v. Virginia* (2), the United States Supreme Court ruled that the death penalty represents cruel and unusual punishment if the defendant has mental retardation. Consistent with professional opinion among experts in mental retardation (e.g., Jacobson and Mulick [3]), the Supreme Court argued that persons with mental retardation have diminished mental or cognitive capacities in a number of crucial areas, including

difficulties in processing information, learning from experience, and engaging in logical reasoning. Due to these cognitive shortcomings, persons with mental retardation are less able to understand the implications of their actions. In short, these cognitive deficiencies render persons with mental retardation less culpable for their actions. In addition, because crimes by persons with mental retardation are less likely to be the result of premeditation and deliberation, the deterrence justification for the death penalty would not be served for these individuals. Finally, relative to persons without mental retardation, persons with mental retardation are expected generally to have greater difficulty assisting counsel in their defense, be more likely to give false confessions, and be poorer witnesses. Given the preceding, persons with mental retardation are at special risk of wrongful execution. Considering all of the foregoing reasons, the U.S. Supreme Court ruled that the death penalty is an unconstitutional form of punishment for persons with mental retardation.

Although the Supreme Court ruled in this manner, the systematic diagnosis of mental retardation in such cases remains elusive. Presently, three professional organizations have current manuals for the diagnosis of mental retardation: the American Association on Intellectual and Developmental Disabilities (AAIDD, formerly the American Association on Mental Retardation, or AAMR), the American Psychological Association (APA), and the American Psychiatric Association (which publishes the *Diagnostic and Statistical Manual, Version 4, Text Revision*, or DSM-IV-TR). Hereinafter, we refer to the manuals published by these three organizations, respectively, as the AAMR manual (4), the APA manual (3), and the DSM-IV-TR (5). All three organizations agree that, to be diagnosed as having mental retardation, an individual must satisfy the following three criteria (or prongs): the person must (a) have significant limitations in general intellectual functioning, (b) exhibit concurrent deficits in adaptive behavior, and (c) exhibit these problems during the developmental period.

As discussed by Denkowski and Denkowski (1), notable similarities and differences exist across the three professional organizations in details for diagnosis. Considerable similarities occur in the first prong: limitations in general intellectual functioning. All three agree that a full-scale IQ score on a standardized, individually administered intelligence test that falls approxi-

mately two or more standard deviations (-2SD) below the population mean satisfies this diagnostic prong. Because intelligence tests are typically normed to have standardized IQ scores that have a mean of 100 and SD of 15, a score of approximately 70 or below meets the -2SD criterion. To account for unreliability of tests reflected in the standard error of measurement of test scores, all three organizations also state explicitly that a score in the range from 71 to 75 can be used to support a diagnosis of mental retardation if the individual also has deficits in adaptive functioning (3-6). In addition to raising the IQ cutoff score to the 71-75 range to account for unreliability of test scores, corrections for outdated test norms must be considered. For a quarter century, Flynn (7, 8) has documented the rise in IQ scores that has occurred over the past 50 years and more, a rise at the rate of 3 IQ points per decade. If an IQ score is obtained using an outdated intelligence test and a "Flynn effect" correction is not applied to the resulting IQ score, far fewer persons in the population would obtain IQ scores of approximately 70 or below than should receive such scores. Recently, Flynn and Widaman (9; cf. Widaman [10]) discussed the importance of this issue in the context of death penalty cases, describing the pernicious effects of failure to correct for the Flynn effect on IQ scores and demonstrating how to apply the recommended "Flynn effect" correction to IQ scores. Furthermore, the new "user's guide" to the 2002 AAMR manual (11) explicitly instructs practitioners to employ "Flynn effect" corrections when diagnosing mental retardation (pp. 20-21).

Differences related to measurement occur in the second prong: concurrent deficits in adaptive behavior. AAIDD states that an individual must display a score two SDs below the population mean on one of three dimensions of adaptive functioning (Conceptual, Practical, or Social) or on an overall score for general adaptive functioning (4). APA holds that the person must meet the -2SD cutoff on one of four dimensions of adaptive functioning (Cognitive [like Conceptual], Daily Living [like Practical], Social, or Motor) or on an overall dimension of general adaptive functioning (3). The American Psychiatric Association follows the "old" (1992) AAMR guidelines that a person must meet a -2SD cutoff on at least 2 of 10 domains of adaptive functioning or on an overall dimension of general adaptive functioning (5). Thus, the diagnostic schemes for the three organizations differ on both the number of adaptive behavior dimensions considered to exist and the number

of dimensions on which an individual must exhibit significant deficits. Furthermore, none of the three manuals mentions the need to consider the SEM in relation to adaptive behavior scores, even though the SEMs for adaptive behavior scores are likely to be larger than the SEMs for IQ scores. Indeed, the new "user's guide" to the AAMR manual (11) states clearly that the SEM for adaptive behavior scores must be considered, suggesting that the 71-75 range would be reasonable for diagnostic decisions if a person also shows significant limitations in intellectual functioning. Minor differences across professional organizations also occur with regard to the third prong: age of onset. For AAMR (4) and DSM IV-TR (5), age of onset is defined as deficits beginning before the age of 18 years, and for APA it is before 22 years (3).

Decisions in *Atkins* cases regarding a mental retardation claim often hinge on the adaptive behavior prong of the definition of mental retardation, partly due to differences among professional organizations in their diagnostic criteria, and partly due to differences in statutes or court decisions regarding adaptive behavior. In fact, this is often the area of most debate in *Atkins*-type cases. Denkowski and Denkowski (1) presented a prolonged argument for various adjustments in the administration and scoring of adaptive behavior measures for criminal defendants in *Atkins*-type cases. The position of Denkowski and Denkowski (1) in such cases appears to us to be extreme, as their suggested adjustments would tend to ensure that few, if any, individuals who commit capital offenses would be diagnosed as having mental retardation. We argue that the "proper adjustments" suggested by Denkowski and Denkowski are improper and not sanctioned by professional standards, judgment, or consensus. Moreover, their adjustments to standardized administration and scoring procedures all have a positive bias. That is, their adjustments would invariably raise the adaptive behavior scores of a defendant, making a diagnosis of mental retardation for any criminal defendant less likely and, probably, virtually impossible.

Denkowski and Denkowski (1) opened their article by providing an accurate, although condensed, description of the use of adaptive behavior assessments in the diagnosis of mental retardation. They evoked testimony from expert witnesses to support their claim that "most criminal defendants do not display some commonly assessed adaptive skills merely due to sociocultural influences" (1, p. 45). But even the testimony they cited cannot be inter-

preted in unambiguous fashion. For example, consider the statement by Trowbridge:

“(The) vast majority of persons convicted of serious crimes have not graduated from high school, and have spotty work histories; many have usually lived with their parents, and thus have never really lived independently. An argument can easily be made that they have had a pattern of living that has been retarded” (cited by Denkowski and Denkowski, 1, p. 45).

Denkowski and Denkowski (1) interpreted the preceding quote, together with other quotes, as implying that criminal defendants have adaptive behavior scores that are suppressed, or artificially lowered, due to their rearing environments. In short, these defendants have low levels of assessed adaptive behavior, because they were never taught or properly motivated to learn the kinds of behaviors measured by adaptive behavior instruments. In such cases, their standardized adaptive behavior scores understate their true, actual or potential levels of adaptive functioning. However, we argue that the Trowbridge quote is consistent with a different interpretation: persons convicted of serious crimes may have failed to graduate from high school, may have no appreciable work history, may have lived with their parents and not lived independently because they have impaired intellectual functioning. Indeed, academic failure, inability to obtain and hold a job for a reasonable length of time, and an inability to live independently are three of the most common behavioral characteristics of persons who have mild mental retardation (12). Thus, the Trowbridge quote may support, rather than dispute, a mental retardation claim, by documenting the “retarded pattern of living” of a person with mental retardation.

Denkowski and Denkowski (1) next claimed that, because “the adaptive behavior scores of criminal defendants are lowered artificially by background and lifestyle influences,” a need exists for “...a comprehensive model” to “...account for socioculturally-based score suppression...” (p. 46). These assertions, and the evidence put forth to support them, are based on personal experience and opinion by Denkowski and Denkowski and by others in the criminal system, not on scientific evidence. Although perhaps compelling at first glance, no research evidence supports these statements. In

lieu of scientific evidence, Denkowski and Denkowski relied upon their own opinions and experience.

In this article, we review and critique the rationale offered by Denkowski and Denkowski under the rubric of a "comprehensive model" for assessing the adaptive behavior of criminal defendants. In particular, we will point out how Denkowski and Denkowski, under the guise of objective and scientific reasoning, developed methods that are inconsistent with current professional practice and standardized procedures. In short, the Denkowski and Denkowski approach may appear logical, but is based on assumptions and assertions that have little or no basis in fact and little or no support from professional standards.

THE DENKOWSKI AND DENKOWSKI "COMPREHENSIVE MODEL" FOR ASSESSMENT OF ADAPTIVE BEHAVIOR: A CRITIQUE

Assumptions Underlying the Model

Respondents or informants. The "comprehensive model" for the accurate assessment of adaptive behavior offered by Denkowski and Denkowski (1) is driven by several assumptions. First, to measure adaptive behavior, Denkowski and Denkowski argued that one cannot rely solely or uncritically on friends' and family members' ratings, as such respondents often provide descriptions of the defendant's adaptive behavior that are negatively biased and, therefore, underestimate considerably the defendant's true levels of adaptive behavior. We agree that friends and family members may be biased in their reports, so the examiner administering an adaptive behavior scale should be particularly attentive to the possibility of bias in reporting by such respondents (6, 13). However, other sources of information, such as archival data, can validate reports by friends and family members, so one should not disregard out of hand the use of such respondents as potential informants. In fact, family members are often biased in the other direction; they do not want anyone in the family to look bad, so they are reluctant to admit problems. Also, mild mental retardation (formerly called cultural familial mental retardation) is highly heritable. In other words, the family members may also have lower than average intelligence (12). They may have a family history of covering up their limitations to save face, and they may not be sophisticated

enough to realize that claiming higher skills for the defendant could lead to the death penalty.

Second, Denkowski and Denkowski (1) stated that examiners will typically find no respondent or informant beyond the family who knows the defendant sufficiently well to ensure that the respondent's ratings or accounts of the defendant's adaptive function are an accurate record of the defendant's levels of adaptive behavior. In contrast, we have found that a whole cadre of third-party sources can be tapped, including teachers in academic classes, coaches for athletic teams, neighbors, social workers, employers, and extended family members. Certain of these informants may be unable to supply information on all sections of an adaptive behavior scale, but may provide valuable information on some domains. For example, a coach may be unable to comment on functional academic or conceptual adaptive skills, but may be very well informed on a defendant's levels of social adaptive skills. Extending the circle of informants broadly will enable a more extensive evaluation of the adaptive behavior of a defendant, and consistency in reports across informants can lend great assurance that the conclusions regarding the defendant's adaptive behavior are unbiased.

Third, Denkowski and Denkowski argued that, because of the foregoing, the examiner must often rely solely on a self-rating of adaptive behavior by the criminal defendant as the most accurate record of the defendant's levels of adaptive behavior. We believe that this presumption is not justified. We discuss the issue of self-report of adaptive behavior by persons with mental retardation in more depth in a later section. Here, we contend that self-reports of adaptive behavior are subject to many forms of bias and misrepresentation and should never be a central component of the diagnosis of mental retardation, a position cogently argued by Olley and Cox (13).

Effects of rearing environments. The Denkowski and Denkowski (1) comprehensive model is also based on the assumption that *Atkins* defendants typically come from socially and culturally dysfunctional families and environments and that these socio-cultural factors suppress the adaptive behavior of these defendants. Based admittedly on their experience with *Atkins* defendants, Denkowski and Denkowski argued that families of these defendants often do not teach many skills that are assessed on adaptive behavior instruments and may not motivate individuals to exhibit the behaviors if they have

been taught them. In making this argument, Denkowski and Denkowski then quoted the AAMR (4) manual, which states that an individual's sociocultural context must be taken into account in the diagnosis of mental retardation, because expectations regarding behavior may vary across cultural groups. Thus, one must evaluate how the sociocultural environment in which a person is raised might affect the likelihood that a person would exhibit a range of adaptive behaviors. Denkowski and Denkowski concluded that some form of score adjustment or correction must be made to the adaptive behavior scores of *Atkins* defendants to counteract the artificial or artifactual sociocultural suppression of their scores. They admitted that diagnostic manuals from the various professional organizations provide essentially no guidance with regard to methods for dealing with or correcting for sociocultural suppression of scores, but argued that they had developed methods for making such adjustments in an accurate fashion.

We disagree with the preceding account for several reasons. First, the Denkowski and Denkowski (1) position represents an overgeneralization that all *Atkins* defendants come from dysfunctional family environments (14-16). Second, the presumption that rearing environments provide similar opportunities for learning and/or similar motivations against performing certain adaptive behaviors reflects an assumption that sociocultural factors operate in identical fashion in all such families and for all defendants. But, the most basic finding when using any instrument to assess any construct is that individual differences are endemic in all psychological or behavioral measures (e.g., 17). All of our psychometric methods are based on the presumption that individual differences reflect true variation around the population mean on a dimension. The influence of sociocultural influences on any single type of behavior is usually of trivial magnitude, swamped by individual differences in the presence of or in opposition to sociocultural factors. Third, no research currently exists that demonstrates the suppressive effects of sociocultural factors, or the magnitude of such effects, on adaptive behavior scores. In fact, the norming samples for all reputable adaptive behavior scales include persons of different ethnicity (e.g., European Americans, African Americans, Hispanic Americans) as well as persons from different socioeconomic strata (6).

Research that investigated the influence of ethnicity (or race) and socioeconomic status (SES) on adaptive behavior scores has found differences, but the effect sizes are quite small (18). The differences that have been found have occurred largely for teacher and parent ratings (19), but appear to have been driven more by influences other than identifiable, specific sociocultural factors.

Incarceration and adaptive behavior. Finally, in developing a rationale for a new, comprehensive model of assessment, Denkowski and Denkowski (1, 20) pointed out that formal, standardized adaptive behavior scales are not adequate for assessing current levels of adaptive behavior of individuals who are incarcerated. This is not a point of argument for the field, but rather is generally accepted, as experts agree that existing measurement scales are problematic, particularly with regard to assessing an individual who has been incarcerated for several years (11, 13, 21). Even recent revisions of the most often used adaptive behavior scales—including the Vineland Adaptive Behavior Scales, Second Edition (Vineland-II), and the Adaptive Behavior Assessment System, Second Edition (ABAS-II)—do not include inmates or incarcerated offenders in their norming samples. Furthermore, the items on these standardized scales, particularly the adult versions, have little or no relevance to the assessment of adaptive behaviors of persons living in the highly structured environment of a prison (13). That is, an incarcerated inmate will have no opportunity to exhibit many adaptive skills assessed on adaptive behavior instruments, so current levels of enacted adaptive behavior in an unstructured environment cannot be measured.

Overall. The above assumptions offered by Denkowski and Denkowski (1)—particularly those with regard to respondents and rearing environments—are merely that, assumptions, not facts. The presentation by Denkowski and Denkowski, however, leads readers to assume that these assumptions are based on research. Indeed, although having been points of debate in the field of mental retardation, many of these “facts” have not been verified through scientific inquiry. Thus, we are left to rely entirely on the beliefs and opinions of Denkowski and Denkowski (1) for much of the justification for their model.

The Comprehensive Model

The model for the assessment of adaptive behavior of criminal defendants offered by Denkowski and Denkowski (1) has several steps. In this section, we briefly outline each of the steps of this model, describing recommendations made by Denkowski and Denkowski and providing a critique of these recommendations. Although Denkowski and Denkowski did not develop their model as a four-step approach, we have found it useful to organize it into four steps, which we identify as: 1) Review of records; 2) Initial semi-structured interview; 3) Administration of standardized adaptive behavior instrument; and 4) Scoring and interpretation of responses to the adaptive behavior instrument.

Step 1: Review of records. The first step of the Denkowski and Denkowski approach involves a thorough review of all documents that are available for a defendant. These documents often consist of school records, achievement test scores, special types of educational placement, individualized education programs (IEPs), and prior involvement with the criminal justice system. Records of these types are invaluable for providing a context for diagnosis of an individual (e.g., 4), and we agree that all records that can be found related to prior school and criminal justice contacts should be studied. Among all other documents, school records are critical for supporting a diagnosis of mental retardation before the age of 18 (5).

We contend, however, that school records may require considerable interpretation to arrive at an accurate evaluation of the defendant's school experiences. That is, the examiner must interpret any school records with regard to the time and context in which the defendant was in school. In some states, children of certain ethnicities were retained or held back in grades multiple times, rather than being placed in special classes. Or, in California, the *Larry P.* case (22) ruled that it was unconstitutional to use intelligence tests with African American students to make special education placements due to bias against these students in the tests. Similarly, the *Diana M.* case (23) focused on the same issue involving students of Mexican American or Hispanic descent. As a result, an examiner must know the history of judicial rulings and/or school directives to interpret correctly many aspects of a defendant's school records. Failure to find evidence of special school placements cannot be used to justify a conclusion that the school system never

recognized problems related to school failure during the defendant's developmental period.

School records, for example, may reveal, with proper interpretation, that a defendant was undiagnosed or misdiagnosed with regard to reasons for school failure. That is, a defendant may have received services in a special education setting without an official diagnosis of mental retardation or with a diagnosis other than mental retardation (e.g., learning disability), even though a diagnosis of mental retardation would have been appropriate (24). Moreover, services that a defendant received in these other settings may have been appropriate for a person with mental retardation. In certain instances, euphemisms such as mental delay are used instead of the more pejorative label of mental retardation, despite the fact that these terms mean the same thing (12). Scores on standardized assessments of achievement can be extremely valuable, if these can be found in school records, because such information may be much less subject to bias than are placement decisions by school district personnel.

Denkowski and Denkowski (1), however, went beyond routine practice to suggest that school records must be carefully studied to determine if academic achievement problems are the result of problems in other behavioral domains, such as conduct disorder or substance abuse, than mental retardation. We agree that careful study is needed. However, many students with mental retardation have academic achievement problems very early in the elementary grades at a time when certain other problems, particularly substance abuse, are not an issue (25). In addition, for many children with mental retardation, their academic difficulties lead to behavioral problems, not vice versa (26). Finally, persons with mental retardation often meet criteria for diagnoses with other clinical syndromes, an issue discussed under the rubric of dual diagnosis (27, 28). Further, a co-morbid condition, such as behavior problems or drug use, should not be used to exclude a diagnosis of mental retardation, because these multiple diagnoses can be accurate and concurrent.

In addition to formal and informal school records, Denkowski and Denkowski recommended making an inventory of all materials and personal possessions the inmate has in his/her cell to provide additional information regarding levels of adaptive behavior. We find many reasons for disputing

the utility and appropriateness of such information. First, possessions in an inmate's cell may be heavily driven by prison rules and would, therefore, be highly contextual. That is, certain prisons may allow inmates to have many kinds of possessions, whereas other prisons in the same state allow only more restricted sets of materials. More importantly, one cannot know how any materials in a defendant's cell are used by the defendant. Edgerton (29) found that many persons with mental retardation had an array of relatively sophisticated materials in their possession, such as books and newspapers. However, persons with mental retardation may have these materials—regardless of whether they are able to use them to any meaningful degree—merely because they want to appear to have higher levels of adaptive functioning than they actually have. Edgerton termed this motive by persons with mental retardation the “cloak of competence” to signify that persons with mental retardation want to appear not to be retarded and thereby avoid the pejorative label of mental retardation.

Step 2: Initial semi-structured interview. The second step of the comprehensive model proposed by Denkowski and Denkowski (1) consists of an initial, in-depth interview the day before the formal adaptive behavior assessment. Denkowski and Denkowski described having a set of 300 to 400 questions to be asked in a semi-structured interview to find out what the defendant learned in school, what kinds of adaptive skills the defendant was taught at home, etc., before he or she was incarcerated. The purpose of this interview, they argued, is to provide information for the examiner to determine whether ratings on a subsequent standardized instrument for assessing adaptive behavior should be challenged.

A semi-structured interview of the preceding sort is not a standard or recommended part of typical assessments of adaptive behavior (6, 30). Of course, an examiner performing an interview of a person who may have mental retardation to obtain information on adaptive behavior is encouraged to get to know the person well (3, 4), and the semi-structured interview may be seen as an attempt to meet this goal. However, the nature or form of the semi-structured interview is crucial, and the examiner must beware of creating different forms of bias. For example, an examiner may use the interview to “teach” the defendant the “correct response” to give to various questions. Persons with mild mental retardation have a clear tendency to want to appear

not to have mental retardation, so they may be prone to acquiesce to a powerful other in describing their own behavior (31). As a result, a person with mental retardation may be convinced to characterize his or her own behavior in a positively biased fashion because this would lead to greater acceptance by the examiner (31). In addition, persons with mild mental retardation are highly suggestible. If an examiner asked repeatedly if the person was or was not taught a particular adaptive skill, a person with mental retardation may be led to provide an answer in error if it appears that the answer satisfies the examiner or reduces the examiner's persistence in pursuing harsh questioning regarding the behavior. Finally, persons with mental retardation are often characterized as gullible (32).

In addition to suggestibility, acquiescence, and gullibility, persons with mental retardation have various kinds of memory difficulty. For example, persons with mental retardation often have problems with temporal ordering of events, having difficulty recalling when their own problems began or precisely when in time certain important events happened (33). As a result, a person with mental retardation may be unable to supply the information that Denkowski and Denkowski desire, specifically information about what the person with mental retardation learned in school and when they learned this, and the kinds of adaptive behaviors they were taught at home. In relying on information gathered in the semi-structured interview, Denkowski and Denkowski naively assume that they are dealing with a respondent—the *Atkins* defendant—who has full and complete recall of what his or her former life outside the penal institution was like in all of its particulars. But, if the defendant has mental retardation, any information supplied by the defendant may be highly variable and suspect, biased by the defendant's suggestibility and acquiescence in the face of a long and protracted barrage of questioning and by his or her own memory problems. Denkowski and Denkowski, however, treat the information from this interview, combined with information drawn from records, as data that can be used to determine which adaptive behavioral skills are impaired due to sociocultural suppression, rather than low intelligence. The broad array of biases that may arise from the semi-structured interview belies the utility of this information for its intended purposes.

Most importantly, the claim by Denkowski and Denkowski (1) that the semi-structured interview provides information to challenge ratings from a standardized adaptive behavior measure is itself extremely problematic. The implicit assumption on their part is that information gleaned from a semi-structured interview is accurate or valid; if this information conflicts with information obtained using a standardized adaptive behavior instrument, the latter information must be disputed. However, information gleaned from a semi-structured interview may be inaccurate or invalid and thus would be expected to conflict with information garnered through administration of a standardized instrument of adaptive behavior if this latter information were correct and accurate. That is, the former information from the semi-structured interview may be the information that should be disputed, and Denkowski and Denkowski provided no guidelines regarding which information—from the semi-structured interview or from the standardized instrument—should be trusted and which should be suspect. In short, that an examiner can determine with any assurance whether information from a semi-structured interview or from a standardized assessment of adaptive behavior is to be trusted—when conflicting information from these approaches is obtained from the same respondent (i.e., the criminal defendant)—is clearly open to dispute.

Indeed, Finlay and Lyons (31) pointed out that an interview of a defendant may lead an examiner to draw incorrect conclusions about the defendant's adaptive behavior. Olley and Cox, drawing on the seminal review of methodological issues in interviewing persons with mental retardation by Finlay and Lyons (34), concluded that information gained from an interview of a defendant "should not be the centerpiece of evidence about adaptive behavior" (p. 392). Denkowski and Denkowski went in the opposite direction, emphasizing information from interviews with defendants that most experts in mental retardation regard as seriously biased.

Step 3: Administration of standardized adaptive behavior instrument. As noted above, Denkowski and Denkowski (1) argued that an examiner will often find that the only reliable informant with regard to a defendant's adaptive behavior is the defendant him/herself. Because the ABAS-II is the only adaptive behavior instrument that contains norms for self ratings of adaptive skills, Denkowski and Denkowski considered only the ABAS-II and its par-

ticular format in their article. In the ABAS-II, each item is scored on a 0-3 scale, with 0 signifying that a skill cannot be performed, 1 that the skill is never or almost never displayed, 2 that a skill is displayed sometimes, and 3 that the skill is performed always or almost always. The ABAS-II is a highly regarded instrument with several forms and impressive normative data, so it is one of the most highly recommended instruments for assessing adaptive behavior.

However, experts in mental retardation have argued that self-reports by persons suspected of having mental retardation should not be an important or central piece of information used in the diagnosis of mental retardation (13). A primary basis for this position is the wide range of factors that render self-reports by persons with mental retardation highly inaccurate or unreliable, factors including suggestibility, acquiescence, gullibility, and so forth, discussed previously. Thus, the comprehensive model proposed by Denkowski and Denkowski, which relies exclusively on self-report, should be rejected at the outset as a set of procedures based on insufficient data.

But, additional problems arise with other aspects of the Denkowski and Denkowski model. In discussing administration procedures, they correctly stated that items on the ABAS should be read to a defendant to circumvent any issues with reading skill (6). However, they took the self-report process into uncharted territory by arguing that, if a defendant's response to an item (i.e., the rating the respondent gave him/herself on a particular skill) seems unrealistic, the defendant "should be questioned until its proper rating is clear" (p. 52). Manuals for instruments of adaptive behavior may encourage examiners to ensure that an item is correctly understood by a respondent because of possible limitations in receptive language (6, 34). But a respondent should not be challenged if the item rating is perceived by the examiner to be incorrect. Directly questioning the veracity of a defendant's response nullifies the procedural guidelines for administering the test (6). In so doing, this nullifies the ability to translate the defendant's raw score into a standardized score, if the raw score was obtained under non-standard forms of administration.

Denkowski and Denkowski (1) also stated that, "whenever it is concluded that the defendant did not exhibit a skill, he *must* be questioned to establish if that void was due to lack of ability or non-disability factors..."

(p. 53, authors' emphasis). An individual with mental retardation might often be unable to distinguish why she or he failed to exhibit a behavior. Additionally, heavy pressure on the part of the examiner (i.e., the examiner "must" question the respondent) is not part of the standardized administration of any adaptive behavior scale, once again invalidating any use of norming tables for translating the resulting raw scores, which may be seriously biased, into standardized scores.

A final problematic issue in the administration procedures recommended by Denkowski and Denkowski (1) is the time frame for which the adaptive behaviors are reported. They stated that the defendant should be encouraged to report on his or her adaptive behavior around the time of the capital crime. Denkowski and Denkowski then inexplicably argued that *Atkins* defendants should also be asked to "identify adaptive behavior that they first display only after the onset of the current incarceration.... Failure to incorporate post-incarceration skills into the assessment will lower adaptive behavior scores artificially..." (p. 53). This statement by Denkowski and Denkowski rests solely on their stipulation, not on any rationale for assessing the defendant's functioning at the time of the crime. At what time are the adaptive skills of the defendant of importance? Whether culpability for a crime should be based on the characteristics of the defendant at the time of the crime (cf. 13) or at an earlier point in time (e.g., prior to age 18 years), incorporating adaptive behavioral skills that first appeared in an individual's repertoire only after incarceration distorts the basis for deciding whether the defendant has mental retardation. Given the third diagnostic prong, establishing a diagnosis of mental retardation requires determining that the person had deficits in adaptive behavior prior to the age of 18 years. Adaptive skills that appear only after incarceration are not relevant to the diagnostic decision, because they are created in an artificially highly structured environment that provides supports that do not exist in the community. Adaptive behavior instruments, such as the ABAS-II, assess typical levels of adaptive behavior in the complex, unstructured community outside prison in the absence of supports (35), and the AAMR manual (4) defines adaptive behavior as functioning in one's natural community. Factoring information on adaptive behavior that appeared only after incarceration into the assessment converts the resulting assessment into a set of measurements that have no reference to adaptive skills outside the prison setting, and the

haviors outside the prison setting are the behaviors of relevance when deciding on culpability for a crime.

Step 4: Scoring and interpretation of the standardized instrument. The recommendations by Denkowski and Denkowski (1) for scoring the adaptive behavior responses and interpreting scores are perhaps the most problematic. First, Denkowski and Denkowski made recommendations for when to adjust item ratings for purported sociocultural suppression. They claimed that an examiner must decide which absent adaptive skills were not displayed by a particular defendant due solely to sociocultural factors, as opposed to lack of ability; if due to sociocultural factors, the examiner then must employ some adjustment to counteract the suppressive effects of the sociocultural environment. The adjustment process involves reconsidering each and every item that received a rating lower than 3 (where 3 = skill always or almost always displayed) to determine whether the item was so rated due to lack of ability (or presence of mental retardation) or due to lack of appropriate teaching or motivation. If due to lack of ability, the score for the item should be allowed to remain unchanged; if due to lack of proper teaching or adequate motivation to perform, the item score should be adjusted upwards.

Denkowski and Denkowski also provided guidelines for how to re-score items. One basis for item rescoring was to give a defendant credit "for a non-displayed skill if a low functioning mild mentally retarded person (someone with a full scale IQ in the 55-65 range) can be taught and motivated to display it at least sometimes" (p. 55). Their second basis for item re-scoring was that an *Atkins* defendant should be given credit for many different adaptive behavior skill items based on behaviors they exhibited during the commission of the crime.

Limitations of space do not allow us to pursue a full and complete set of arguments against the score adjustments recommended by Denkowski and Denkowski (1). However, we fear that any attempt on our part to rebut specific recommendations by Denkowski and Denkowski will imply that we believe rescoring items based on the opinions of the examiner is justified, and that we differ merely on how these adjustments should be made. To be clear, we begin our response by stating unequivocally that we consider the entire exercise of rescoring items to be improper and without scientific support.

First, one basic problem that underlies the entire item rescoring attempt is the assumption that an examiner can definitively determine which absent adaptive behavior skills were not performed due to inadequate prior teaching or motivation, and which were not performed due to lack of ability (or mental retardation). In fact, we can find no recommendation in the research literature or in test manuals for rescoring item responses on an item-by-item basis because the examiner thinks that the person being assessed did not have adequate teaching or motivation to perform the task. An adaptive behavior assessment is supposed to be a record of the person's levels of adaptive functioning at some point in his or her life (e.g., concurrently, or at the time of the crime), not how the person might have behaved if he or she had been raised differently. Consider the standard approach to intelligence testing. If an item on a test asked "Who wrote Macbeth?" the examinee would either know or fail to know that the correct answer was Shakespeare. Suppose the examinee did not know the answer to this question. No expert would think it proper to adjust the score to a "pass" if the examinee would have known the correct answer if the he or she had been raised differently. The same goes for an adaptive behavior instrument; it should be used to record, to the best efforts of the informant and interviewer, the individual's actual functional performance, and should not be used to "speculate as to a person's potential...adaptive behavior...It is what a person has done, rather than what she or he may have done or could have done if raised in more ideal conditions" (13, p. 385).

Second, Denkowski and Denkowski (1) focused only on those items that were rated below 3, because these items may understate the adaptive skills of the defendant. However, items with ratings of 3 might be just as worthy of reconsideration, as they may seriously overstate the true level of adaptive behavior of the defendant. Because persons with mild mental retardation often wish to appear to be more able than they truly are (29), they exaggerate the positive aspects of their behavior. In so doing, they may rate themselves too highly on many items. By focusing only on items with scores below 3 and not even considering the possibility that a person with mental retardation might overstate their levels of adaptive skill, Denkowski and Denkowski introduced a serious positive bias in their proposed item rescoring scheme, a bias that could only drive up the adaptive behavior scores of a defendant.

Consistent bias in one direction is destined to distort in a positive direction the subsequent summary of an individual's levels of adaptive behavior.

Third, the Denkowski and Denkowski contention that the facts of a crime should enter into an assessment of a defendant's adaptive behavior is contrary to the consensus of leading experts in the field of mental retardation (21, 36). As Olley and Cox (13) pointed out, only when the defendant's behavior during the commission of the crime is representative of the defendant's behavior prior to the crime is the criminal behavior relevant (p. 386).

Fourth, Denkowski and Denkowski (1) recommended rescoring upward a defendant's rating of a given item if "a low functioning mild mentally retarded person (someone with a full scale IQ in the 55-65 range) can be taught and be motivated to display it at least sometimes" (p. 55). This is almost surely the most troubling recommendation made by Denkowski and Denkowski. Every individual whose adaptive behaviors are rated using an instrument of adaptive functioning—whether an *Atkins* defendant or not—is an individual and deservedly must be treated as an individual. This recommendation by Denkowski and Denkowski disregards this most basic credo of assessment. Individuals are considered individuals, because they display unique patterns of skills and deficiencies. Denkowski and Denkowski appear to be attempting to homogenize the description of a defendant's behavior, based on expectations for someone with mild mental retardation. Assume that experts on mental retardation could agree on which adaptive skills a person with mild mental retardation could be taught and be motivated to display at least sometimes, keeping in mind this is a major, and probably invalid, assumption. Even if this assumption were true, not every person with mild mental retardation would be able to learn any particular adaptive skill thus identified by the experts, and we would likely find no individual with mild mental retardation who could learn and perform all of the adaptive skills. Yet, this is precisely the assumption that Denkowski and Denkowski have made in their recommendation: if an unspecified, "generalized" person with mild mental retardation could, on the basis of one's opinion, learn and be motivated to exhibit a particular adaptive skill, then this individual *Atkins* defendant who is being assessed should receive credit for the item. However, giving credit for each and every item thus identified would preclude the finding of expected strengths and weakness in skill.

The preceding recommendation by Denkowski and Denkowski (1) that one use generalized expectancies for persons with mild mental retardation to rescore the ratings given to an *Atkins* defendant controverts the entire function and interpretation of the assessment process and its products. By rescoring items and thereby inserting information that describes a generalized "other person" with mild mental retardation in place of the actual ratings of the individual's behavior, the resulting scores no longer pertain to the individual who was the object of the assessment, the *Atkins* defendant. Instead, the scores provide a description of someone else, perhaps largely a description of the "generalized other person" with mild mental retardation, with a bit of information on the *Atkins* defendant also represented. But, once the scores for the *Atkins* defendant are contaminated with rescoring that reflect the skills of an average person with mild mental retardation, the scores no longer validly refer to or describe the *Atkins* defendant. In addition, the rescoring of items means that standard norming tables cannot be used to convert the rescored scale scores into standard scores, leaving the adaptive behavior assessment of no value whatsoever.

DISCUSSION

Denkowski and Denkowski (1) concluded that scores from adaptive behavior instruments would accurately correct for artificial suppression due to sociocultural factors only if an examiner implemented their proposed comprehensive model of administering and scoring such instruments. Only then would standardized scores be interpretable in terms of whether or not a defendant's scores fall two or more standard deviations below the mean of the population. In fact, Denkowski and Denkowski achieved just the opposite. Their approach is not "systematic and transparent" as they claimed; instead it adds clinical subjectivity into the process of administering and scoring the adaptive behavior instruments that is the antithesis of standardization. That is, far from transparency, their proposed methods inject subjective judgments into a standardized process, which nullifies the standardization. In their attempt to circumvent purported suppressive effects due to rearing environments, Denkowski and Denkowski (1) went too far. Their comprehensive model for administration and scoring and the use of self-reports of adaptive behaviors in the diagnostic process is inconsistent with best assessment

practices and professional recommendations in the field of mental retardation in particular and psychological assessment in general.

Additionally, the methods proposed by Denkowski and Denkowski (1) are based on an implicit, but fundamentally flawed assumption: that the examiner must know why the examinee exhibits certain patterns of adaptive functioning to arrive at proper ratings or scores on adaptive behavior items, domains, or an overall score. The important issue is not why a person exhibits a particular form of adaptive behavior (e.g., due to sociocultural factors); rather, the important issue is that the person exhibits a particular pattern of adaptive functioning. When assessing adaptive behavior, we seek the most accurate description of an individual's patterns of adaptive functioning, without regard to the reasons or causes for their functioning. If a standardized assessment of adaptive behavior is used to derive this description of adaptive behavior, the examinee's scores can be compared to those for the population; if the examinee's scores fall approximately two or more standard deviations below the mean of the general population, then he or she meets the criterion of exhibiting significant deficits in adaptive behavior. We need not, and probably cannot, document why a person exhibits deficits in adaptive functioning, but we can document that a person meets a cut-off score relative to the population and therefore exhibits significant deficits in adaptive functioning.

We laid out arguments against each and every aspect of the comprehensive model proposed by Denkowski and Denkowski (1), drawing upon the research literature to bolster our arguments. We are gratified that recent court decisions have also found fault with the Denkowski and Denkowski methodological approach to diagnostic assessment. In the recent case of *Pennsylvania v. DeJesus* (37), the court ruled that the adjusted scoring of the ABAS-II, whereby Dr. George Denkowski adjusted the GAC significantly upward, was not credible. In the court's words, Denkowski's testimony about adjusting the GAC composite score after "initial adjustments he made to 45 out of 215 questions and the leading manner in which he asked the questions to the defendant's scores...was not persuasive...rather this court found credible...[other expert's]...testimony that they believe Dr. Denkowski inflated the scores unnecessarily." In addition, in the case of *Plata v. Texas* (38), the court found that Dr. Denkowski's "methods do not comport with the princi-

ples in the field of psychology and do not comport with ethical guidelines as set out by the psychology community" (p. 45). More specifically, the methods Dr. Denkowski used to adjust ABAS-II scores "are not legitimate practices" and "are not accepted practice in the field of psychological assessment" (pp. 46-47). Thus, certain courts of law have explicitly rejected the methods proposed by Denkowski and Denkowski (1), concurring with our view.

Some level of clinical interpretation can and should occur in psychological assessment. If an examiner believes that a respondent does not understand a question, that impression can lead the examiner to help the respondent understand the item content. However, nothing in the literature supports the manipulation of a defendant's scores, as recommended by Denkowski and Denkowski (1), under any guise at all, clinical interpretation or other. No adaptive behavior manual states that any circumstances justify an examiner in arbitrarily adding points to a person's score—based on his or her subjective interpretation—and thereby overriding the response of the defendant. Clinical judgment can be used as the basis for invalidating an entire protocol if the examiner believes that responses were biased or based on too little effort by the respondent, but clinical judgment cannot be used as the grounds for altering the scores themselves. No guidelines can be found in the ABAS manual that implicitly or explicitly sanction such procedures.

If the Denkowski and Denkowski approach is rejected, how should an examiner in an *Atkins* case proceed in the assessment of adaptive behavior? We offer five guidelines:

1. *Do not use self-reports by an Atkins defendant in the process of diagnosing mental retardation.* We acknowledge that great headway has been made with regard to self-report instruments for use with individuals with mental retardation outside of prison. In fact, research evidence suggests that self-report can be a viable assessment approach with individuals with mental retardation to collect information about a person's self-concept, psychiatric symptoms, and quality of life (34). However, on adaptive behavior measures, where a person with mental retardation is asked to describe what he or she can and cannot do, risks of exaggeration, denial of limitations, and mistaken memory abound. These difficulties are only compounded when a defendant is asked to reflect on the past, to a time before incarceration. Therefore, we

recommend that self-report measures of adaptive behavior for defendants in prison not be used, particularly when these measures are relied upon to make a diagnosis of mental retardation. Courts should never use assessments of this sort as evidence in a high-stakes court proceeding that determines mental retardation.

2. *Use multiple respondents or informants as sources of information about the adaptive functioning of an Atkins defendant.* Assessing the adaptive behavior of a defendant for diagnostic purposes should rely on third-party informants who are knowledgeable about the defendant. Further, the ABAS-II manual (6) explicitly encourages examiners to identify and use multiple respondents or informants to ensure that a more accurate picture of an individual's level of adaptive functioning can be obtained. Information obtained from the multiple assessments can be compared across informants and with archival records to determine a consistent account of the adaptive functioning of the person being assessed.

3. *Consider using multiple interviewers to assess the adaptive behavior of Atkins defendants.* Just as information from multiple informants should be sought, we think that, when possible, multiple interviewers should also be used. The case for multiple informants is based on the desire to cancel out any possible bias that may arise from the use of one or two unusual respondents. The same argument could be made for interviewers. If a single examiner interviewed all respondents in a given case, one might argue that the examiner's scoring of one respondent's information might be contaminated in some fashion by prior interviews of other respondents. If multiple interviewers or examiners are used in the assessment of a single defendant and a consistent rendition of the adaptive functioning of the defendant is obtained, interviewer bias cannot be the basis for disputing the compiled set of adaptive behavior profiles.

4. *Consider using multiple adaptive behavior instruments.* We also think that a case is strengthened if examiners use multiple adaptive behavior instruments. Each standardized adaptive behavior instrument uses unique, though overlapping content to assess the domain of adaptive behavior. Thus, some of the lack of perfect agreement across instruments is based on lack of perfect parallelism of content, not simply due to measurement error. One would be hard pressed to find a recommendation in the manual for a given

adaptive behavior instrument that examiners use multiple instruments. However, if multiple instruments were used in a particular case and the resulting standard scores exhibited reasonably good agreement across instruments, confidence in judgments about the accuracy of the scores would again be enhanced.

5. *Collate information on adaptive behavior across respondents, interviewers, and instruments, documenting levels of agreement.* The final step is to collate adaptive behavior scores across respondents, interviewers, and instruments. If clear and consistent levels of agreement are found across these multiple sources of information, a convincing conclusion regarding diagnosis of mental retardation is easily drawn. If some level of inconsistency across the assessments is in evidence, then clinical judgment and interpretation should be brought to bear to decide which pieces of information—from which informants, interviewers, and instruments—should be more heavily weighted in deciding whether the defendant is in fact a person with mental retardation.

We urge courts and experts not to rely solely on any one type of evidence. Courts and experts might be tempted to center virtually all of their attention on standardized scores obtained from intelligence tests and adaptive behavior instruments. Indeed, the diagnostic criteria espoused by AAMR, APA, and the American Psychiatric Association implicitly encourage heavy reliance on test scores due to the prominence of the test scores in delineating the prongs of the diagnosis of mental retardation. However, test scores gain meaning and interpretability only in the presence of more anecdotal evidence consistent with the scores. For example, Reschly (39) argued that intelligence test scores are not the primary indicator that a person may have mental retardation. Instead, the primary indicator of mental retardation is a pattern of low levels of school achievement and failure to keep up with school work expected of a student, and these are the basis for a referral for testing. The standardized intelligence test is used to confirm or disconfirm the impression of the teacher: if the student receives an IQ score of approximately 70 or below, the teacher's judgment is confirmed and a diagnosis of mental retardation may be in order; but if the student receives an IQ score in the normal range, the basis for poor student achievement is not low intelligence.

We argue the same should hold for assessments of adaptive functioning. Experts should strive to find evidence in the case—from school records, from interviews with friends and relatives—regarding patterns of functioning in all areas covered by adaptive behavior instruments. Certain respondents will have spent more time with the defendant in certain contexts, and other respondents will relate experiences from other contexts, providing a wealth of information that can be mined for examples of poor levels of adaptive functioning. Then, standardized assessments of adaptive behavior can also be used to confirm whether the adaptive functioning of the defendant falls approximately two or more standard deviations below the population mean.

Clinical judgment can then be exercised by combining all of the resulting information—both qualitative and quantitative information on intelligence, achievement, and adaptive functioning—to arrive at a decision regarding whether an individual meets all prongs of the diagnosis and, therefore, deserves the label of mental retardation. Thus, clinical judgment is the process by which the expert puts all of the information from a case together and makes sense of it and should be restricted as such. Clinical judgment should not be used to generate the scores to be interpreted, as Denkowski and Denkowski (1) have suggested.

Using the platform of *Atkins* cases, the Denkowski and Denkowski (1) proposed procedures would take the fields of mental retardation in particular and psychological assessment in general in uncharted and dangerous directions. The ideas and assumptions that are the scaffold of their model have been tried and tested in courts of law. In recent court cases, these proposed procedures have been found wanting. Under scientific scrutiny, we contend that the model put forth by Denkowski and Denkowski has no foundation. As such, it should be rejected. In their place, examiners should follow generally recommended procedures in the field of assessment, using any and all legitimate methods they can to reduce bias and to arrive at the most accurate estimates of a defendant's levels of adaptive functioning.

AUTHOR NOTE

We would like to thank Greg Olley, Robin Parker, Lisa Greenman, and Ed Sousa for their insightful comments and other help with earlier versions of this manuscript.

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