Biases Contributing to ADHD Overdiagnosis

> Normality and exceptionally (or deviance) are not absolutes; both are culturally defined by particular societies at particular times for particular purposes.
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> Ruth Benedict

Diagnostic labeling of young people who manifest learning, behavior, and emotional problems continues to be on the rise. Correct diagnoses, of course, can be helpful, but they come at a cost. And when a false positive diagnoses is made, the cost is incalculable.

Attention-deficit/hyperactivity disorder (ADHD) is one of the most commonly diagnosed disorders in youngsters. According to the National Survey of Children's Health (NSCH), it is estimated that almost 10% of children ages 3-17 are so diagnosed (Bitsko et al., 2022). In their review, however, Kazda and colleagues (2021) report significant evidence of ADHD overdiagnosis and overtreatment in children and adolescents.

As the number of youngsters diagnosed with ADHD and LD has increased exponentially, misdiagnoses have become a major concern. With respect to students, special attention has been directed at false positive diagnoses because the percentage of individuals diagnosed as ADHD and LD far exceeds reasonable estimates. Our focus here is on highlighting a variety of biases that contribute to a false diagnosis of ADHD.

Biases Leading to False Positive Diagnoses

There are many factors that can bias the diagnostic process and result in errors. Some are related to the assessor, some are related to the individual being assessed. In either case, biases may result from personal and interpersonal factors (e.g., interests, needs, likes, dislikes, psychological processing). For assessors, additional biases are associated with adherence to preferred models of cause and correction. Biases may be explicit or implicit.

With respect to most learning, behavior, and emotional problems, the prevailing tendency is to label problems in terms of personal rather than social causation. This tendency is bolstered by factors such as (1) attributional bias – a tendency for observers (assessors) to perceive others' problems as rooted in stable personal dispositions and (2) economic and political influences – whereby a professional's current priorities and other institutional and societal forces shape professional practice.

Biases play a greater role in diagnosis when the knowledge base related to a problem is not robust and assessment processes have significant technical weaknesses. The literature is robust, however, in identifying biases related to race, gender, socioeconomic status, age, education, developmental lags, and more.

At schools, the problem is exacerbated because reimbursement for special education interventions is only available for youngsters assigned labels that convey significant pathology. Diagnosticians also are susceptible to economic considerations.

The reality is that the learning, behavior, and emotional problems manifested by most youngsters are not initially caused by internal pathology. For instance, the behaviors leading to a diagnosis of ADHD may stem from an education system that does a poor job in accommodating students' differences and needs or any of a variety of other factors that constitute situational barriers to learning and teaching.

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A Few Examples of Recent Research Findings Discussions

From Fadus and colleagues (2020):

> Bias is a personal judgment or prejudice in favor of or against a certain thing, person, or group that is considered to be unfair [25]. Biases toward individuals or groups of people can occur on an individual level or systemically in society. Seminal work suggests that much of bias is unintentional and occurs outside of an individual's awareness, also known as unconscious bias [26]. Findings have demonstrated that biased thoughts, feelings, and behaviors toward African Americans and other ethnic and racial minorities can emanate from pejorative stereotypes that are activated unconsciously, even among clinicians whose values strongly oppose bias. Thus, unconscious biases are shaped by past experiences and repeated exposures and are not introspectively noticed by the individual who may be inflicting them [27]. ... Even those who appear to consciously reject racism, prejudice, and stereotypes may still demonstrate behaviors or cognitions that are not congruent with their perceived beliefs. ... studies have indicated that healthcare professionals exhibit the same levels of unconscious bias as the wider population [33]. ...
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> Biases can occur as a result of either implicit (unconscious) or explicit (conscious) cognitions, and clinicians are just as susceptible to bias as others [33]. For example, clinicians often over-pathologize behaviors of ethnic and racial minorities as more dangerous and disobedient, and can hold personal and inadvertent biases of criminal behavior, aggression, violence, and hostility toward certain minority groups [9, 37, 38]. ...
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> Individual biases, whether they are implicit or explicit, can lead to systemic biases and structural racism as a whole. Structural racism is defined as the ways in which a society fosters racial discrimination through mutually reinforcing systems such as housing, education, employment, benefits, media, health care, and criminal justice [39]. For example, studies have indicated that young African American boys are viewed by others as older and less innocent compared to non-Hispanic white peers of the same age [40].

See article for cited references

From Schultz and Evans (2021):

> The diagnosis of ADHD is based entirely on observable behaviors and impairments, as research has failed to identify medical tests that reliably help in diagnosis (Pelham, Fabiano, & Massetti, 2005). Psychological tests also appear insufficient to diagnose ADHD because outcomes for individuals with and without the disorder largely overlap (i.e., poor instrument sensitivity and specificity), even though significant group differences are apparent between large samples (Frazier, Demaree, & Youngstrom, 2004). Similarly, group differences between ADHD and undiagnosed groups have been found on some neuropsychological measures, but these instruments are not sensitive or specific enough to diagnose individual cases (e.g., Homack & Riccio, 2004; Preston, Fennell, & Bussing, 2005). As a result, clinicians must rely primarily on behavioral observations – directly or indirectly....
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> In studying teacher rating biases, Schultz and Evans report "that women and younger teachers provided more severe ratings of hyperactivity-impulsivity than men and older teachers." They also found that teachers with high workloads tended to rate students higher with respect to problem behaviors.

From Garb (2021)

> Garb's review reports that "For patients who did not meet the criteria for ADHD, males were twice as likely as females to be diagnosed as having it".

Concluding Comments

Bias in diagnosing ADHD begins when, rather than first asking: *Is there a disorder?,* most differential diagnoses of student's behavior problems are made by focusing on identifying one (or more) disorders. It is evident that strong images are associated with diagnostic labels connoting a "mental disorder," and people act upon these images. In all cases, diagnostic labels can profoundly shape a person's future. Often people see only the diagnosis, not the person.

Overemphasis on classifying problems in terms of personal pathology skews theory, research, practice, and public policy. For example:

- A diagnostic label may come to negatively define the individual by focusing on problems and downplaying many positive personal characteristics. The many negative stereotypes about people diagnosed with ADHD can lead to stigmatization and low expectations. Stigmatization refers to negative and unfair beliefs about the student's characteristics, attributes, and behaviors (e.g., studies report that teachers and peers have negative attitudes toward youngsters diagnosed as ADHD). And teachers may expect less from a student labeled as ADHD and thus limit his or her opportunities to learn and perform.
- Medications with aversive side effects may be prescribed. Indeed, medications are often the first-line of treatment for ADHD. All medications are recognized to have side effects (some of which can quite debilitating). For instance, stimulants commonly used to treat ADHD may cause insomnia, suppressed appetite and growth, and other side effects affecting child and adolescent development.
- Implications for policy and practice drawn from research are compromised when misdiagnosed individuals are included in studies.

To counter biases in thinking about students' learning, behavior, and emotional problems, it helps to approach all diagnostic procedures guided by a broad transactional perspective about what determines human behavior. At schools, the irony is that school practitioners understand that most problems in human functioning result from the interplay of person and environment. And many understand that available evidence underscores that internal disorders are not the cause of the problems manifested by many students diagnosed as ADHD.

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For more on ADHD, see the Center's Quick Find on the topic at
https://smhp.psych.ucla.edu/qf/p3013_01.htm