

**ADHD: The Misdiagnosis in Black & Latino Children and the Necessary Steps in
Eliminating Implicit Biases in Referrals and Diagnoses: An Annotated
Bibliography**

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Introduction/Overview

This annotated bibliography examines the issues of limited resources and support services available for Black and Latino children diagnosed with attention-deficit/hyperactivity-impulsivity disorder, better known as ADHD, due to the implicit biases in assessments and referrals by teachers and clinicians. This is especially problematic as many children of color come from low socioeconomic backgrounds. Drawing from the bioecological model and sociocultural theories, access to these resources play a huge role as part of the child's environment that shapes their growth and overall development (Vélez-Agosto et al., 2017). ADHD is currently misdiagnosed throughout the United States; however, is also more misdiagnosed for children that come from communities of color, as Black and Latino children are more likely to receive a diagnosis for a disruptive behavior disorder (Fadus et al., 2019). This is shocking especially because ADHD is known to affect all races equally. In some situations, these children were less likely to receive any stimulants/medications to aid with symptoms of ADHD due to their misdiagnosis (Slobodin & Masalha, 2020). Due to this misdiagnosis, there's a higher chance that Black and Latino children will not be able to have access to resources like behavior therapy and stimulants in order to better regulate their symptoms (Hinshaw, 2017). Although the reason for misdiagnosis is multifactorial, one underestimated risk factor is due to the stigma and

implicit biases that surround ADHD with Black and Hispanic children. Implementing teacher and counselor training programs to learn more about ADHD and how one's implicit bias can affect referrals and screenings can be the mediator to this wicked problem (Syed & Hussein, 2009). This can be effective as a way to promote education around ADHD and addressing implicit biases in the classroom, increasing positive support systems for Black and Hispanic children (Syed & Hussein, 2009).

Fadus, M.C., Ginsburg, K.R., Sobowale, K. et al. (2019, November 11). Unconscious Bias and the Diagnosis of Disruptive Behavior Disorders and ADHD in African American and Hispanic Youth. *Academic Psychiatry* 44, 95–102.

<https://doi.org/10.1007/s40596-019-01127-6>

This study looks at how implicit biases affect diagnostic evaluation, as Black and Latino children are less likely to be diagnosed with ADHD and more likely to be diagnosed with a disruptive behavior disorder (i.e., conduct disorder, oppositional defiant disorder). It demonstrates how these biases may lead clinicians less likely to explore other potential explanations for a child's behavior. As this paper is featured on *Academic Psychiatry* known for its scholarly work, I consider this source to be credible and valid. This perspective provides an essential understanding of the importance of addressing implicit biases in ADHD diagnosis. Not only that, but it also examines the negative impacts on children's development across different domains when implicit biases prevent minority children from accessing the resources they need due to being misdiagnosed. It focuses on specifically Black and Hispanic

youth, systemic racism affecting diagnoses, and methods of reducing implicit biases, this paper is a foundational piece for my Project for Change.

Hinshaw, S. (2017, December 08). Attention Deficit Hyperactivity Disorder (ADHD): Controversy, Developmental Mechanisms, and Multiple Levels of Analysis. *Annual Reviews*, <https://doi.org/10.1146/annurev-clinpsy-050817-084917>

This article is beneficial in understanding what ADHD is and its effects especially on children today. The limitation of this article is the finite information about how exactly stigma affects ADHD diagnoses or solutions that could be implemented to combat stigma. However, Hinshaw (2017) specifically goes into detail about risk factors, treatment options, and unveils the stigma surrounding ADHD. This article is well-researched, concise, and applicable to understanding the topic of ADHD in more detail; making this source credible and valid. This important article addresses key facts about ADHD that help situate the problem and align the solution for this Project for Change.

Slobodin, O., & Masalha, R. (2020). Challenges in ADHD Care for Ethnic Minority Children: A Review of the Current Literature. *Transcultural Psychiatry*, 57(3), 468–483. <https://doi-org.libproxy.berkeley.edu/10.1177/1363461520902885>

This article allows those interested in ADHD to explore the connections between treatment, diagnosis, and accessibility to health care related to ADHD. The authors further discuss the negative impacts of stigma when it comes to mental health and receiving proper treatment if available, which typically isn't according to this

research. Furthermore, it tackles cultural diversity in three problems areas of ADHD: problem recognition, treatment, and access to mental health care; which is extremely relevant to my research. It focuses on policy rather than practice, while important, is a limitation in terms of a disconnect for my Project for Change.

Syed, E., & Hussein, S. (2009, May 27). Increase in Teachers' Knowledge about ADHD

After a Week-Long Training Program: A Pilot Study. *SAGE Journals*. Retrieved July 30, 2020, from

https://journals.sagepub.com/action/cookieAbsent?casa_token=jDspS3pKalIAAAAA:Yn7ShmX9-p6qrYb_cB80J9I5p0CRjm7TtzC85V3U7L5GMo349336AYkzPzLGLggyLcO8gLRcQbj9

This research provides an outlook on the effects of teacher training programs regarding signs and symptoms of ADHD. All teachers took an ADHD knowledge questionnaire before and after the study; finding that their knowledge of ADHD symptoms increased and persisted even 6 months after training. This training informs the outcomes of teacher training programs in regards to ADHD in which the solution framework of this Project for Change intersects. Due to the significance of its results and application to my project, this source is found to be valid and credible. A limitation is the lack of detail with the methods of this research, which is what my Project for Change will be tackling.

Vélez-Agosto, N. M., Soto-Crespo, J. G., Vizcarrondo-Oppenheimer, M., Vega-Molina, S., & García Coll, C. (2017). Bronfenbrenner's Bioecological Theory Revision: Moving

Culture From the Macro Into the Micro. *Perspectives on Psychological Science: A Journal of the Association for Psychological Science*, 12(5), 900–910.

<https://doi.org/10.1177/1745691617704397>

This paper provides an analysis and revised ecological model of Bronfenbrenner’s bioecological theory. The authors’ new model is distinguished into a “spiral” model that brings in and intersects culture into all domains of development of an individual. This understanding deepens the knowledge of how the culture surrounding ADHD, the effects of misdiagnosis due to implicit biases can influence Black and Brown children across all domains. The limitation is that it doesn’t directly address my topic for my Project for Change, but its framework is still valuable in understanding and adopting a sociocultural lens.

Key Terms

Hyperactive/impulsive is defined as, “the symptoms relating to hyperactivity or impulsiveness, including fidgeting, not being able to sit still, disruptive, etc.” (Mattox & Harder, 2007). This definition was chosen because it is the most up-to-date description of the hyperactive and impulsive symptoms that are associated with ADHD. This description allows for a deeper understanding of what constitutes as hyperactive or impulsive when looking at symptoms of ADHD.

Mattox, R., & Harder, J. (2007). Attention Deficit Hyperactivity Disorder (ADHD) and Diverse Populations. *Child & Adolescent Social Work Journal*, 24(2), 195–207.
<https://doi-org.libproxy.berkeley.edu/10.1007/s10560-007-0081-1>

This article defines hyperactivity and impulsivity based on the first observed symptoms of ADHD related to the main key term. The paper also dives deeper into the symptoms' application and association with ADHD, along with what consequences these symptoms can lead to. The discussion of choosing this phrase of words also highlights its many symptoms associated with this term; being broad enough to give a general, easy understanding of what ADHD represents while being specific enough to address the key attributes to this diagnosis.

Inattention is, “the incapacity of attending with a necessary degree of constancy to any one object” (Lange et al., 2010). This definition was chosen as it is used to describe it's a clear association of inattention specifically with what ADHD looks like while being broad enough to cover the specific symptoms of inattention ADHD encompasses.

Lange, K. W., Reichl, S., Lange, K. M., Tucha, L., & Tucha, O. (2010). The History of Attention Deficit Hyperactivity Disorder. *Springer: Attention Deficit and Hyperactivity Disorders*, 2(4), 241–255. <https://doi.org/10.1007/s12402-010-0045-8>

This article visits the historical context of how inattention symptoms were first observed and documented. It also discusses how the definition itself hasn't changed but its association with ADHD has evolved. This is important for the Project for Change as inattention is a key component defining ADHD, and understanding this can create a deeper understanding of the syndrome and understanding of what goes into the diagnosis of ADHD since there is an ADHD misdiagnosis crisis currently in the United States.

Stigma is an attribute that is deeply discrediting that reduces someone from a whole and usual person to a tainted, discounted one (Ahmedani, 2011). This definition was chosen as it gives a specific perspective to understand the depth of what stigma can do to a person, event, idea, etc. Furthermore, this definition is used today to describe its effects on mental health or mental illnesses and its extrapolated effects on resources surrounding topics like ADHD.

Ahmedani B. K. (2011). Mental Health Stigma: Society, Individuals, and the Profession. *Journal of Social Work Values and Ethics*, 8(2), 41–416. Retrieved June, 2020, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3248273/>

This article talks about how far back mental health has been stigmatized. It also talks about how it was first defined, how the word stigma has evolved, and how it continues to be applied to different areas of life today; which is very relevant to the topic of ADHD and how stigma has evolved in conjunction overtime.

Implicit Bias refers to the attitudes or stereotypes that affect our understanding, actions, and decision-making process in an unconscious manner (Fadus et al., 2011). This definition was chosen as a foundation to acknowledge other biases like systemic and structural racial biases that are overlooked in this context of ADHD. This definition is simple yet descriptive of how biases manifest unconsciously into how our society works.

Fadus, M.C., Ginsburg, K.R., Sobowale, K. *et al.* (2019, November 11). Unconscious Bias and the Diagnosis of Disruptive Behavior Disorders and ADHD in African American

and Hispanic Youth. *Academic Psychiatry* 44, 95–102.

<https://doi.org/10.1007/s40596-019-01127-6>

The article discusses what implicit/unconscious bias is and how it has evolved over time in relation to ADHD and its effects on treatment options for ADHD today. This is relevant for my PFC as my topic discusses how implicit bias affects children's referrals and diagnosis in ADHD. It also looks at the effects of implicit bias overtime and ways to combat this problem.

Background, History, and Current Status of ADHD

ADHD is one of the most common neurodevelopmental conditions starting in childhood; affecting more than 6 million children from ages 4-17 in the United States today. Although it's becoming well-known, it's not as well-supported. In order to fully understand why, it's essential to learn about the background and development of ADHD throughout history, and how it's affecting the current status today.

Abikoff, H. B., Jensen, P. S., Arnold, L. E., Hoza, B., Hechtman, et al., (2002). Observed Classroom Behavior of Children With ADHD: Relationship to Gender and Comorbidity. *Journal of Abnormal Child Psychology*, Vol. 30, No. 4, August 2002, pp. 349–359. Retrieved June, 2020, from

<https://link.springer.com/content/pdf/10.1023/A:1015713807297.pdf>

This research study was looking if there were any disruptive externalizing behaviors differences between boys and girls. In this study, girls with ADHD had relatively high rates of verbal aggression, while boys with ADHD engaged in more rule-breaking and externalizing behaviors than did girls with ADHD in the classroom.

Sex differences did not differ on more “neutral,” unobtrusive behaviors. This paper is relevant to see how gender plays a role in symptoms of ADHD and how it manifests over time in the classroom. This article is applicable to my Project for Change as it describes how specific behaviors (more externalizing, disruptive behaviors) classroom observation leads to a higher likeliness in an ADHD diagnosis. I’ll use this research in comparison to other papers and use them throughout my project.

ADHD Throughout the Years | CDC. (2020, March 31). *Centers for Disease Control and Prevention*. Retrieved July, 2020, from <https://www.cdc.gov/ncbddd/adhd/timeline.html>

This summary by the CDC gives a large volume of data and information related to the evolution of ADHD throughout history, major studies that have been conducted to influence the current knowledge of ADHD, along with addressing the increase in diagnosis over the years. With this article being published by the CDC themselves, I’d consider this source to be credible. The facts about ADHD provided can be used as the background and historical context of ADHD, along with its evolution into the current status for my PFC.

Berger-Jenkins, E., McKay, M., Newcorn, J., Bannan, W., & Laraque, D. (2012). Parent Medication Concerns Predict Underutilization of Mental Health Services for Minority Children with ADHD. *Clinical Pediatrics*, 51(1), 65–76.
<https://doi.org/10.1177/0009922811417286>

The study investigated the parent’s knowledge of ADHD of children who have been diagnosed in relation to utilization service. Parents of Black and Latino groups were

found to be less likely to take their children to get treatment due to the stigma that surrounds ADHD. Parents didn't want their child, who already struggles as a minority, to be labeled with this diagnosis and have that be weaponized against their child. This paper reveals a lot of contextual and cultural factors that affect Black and Hispanic parents' decision-making, which aligns with the problems stated in my Project for Change.

Misdiagnosis in Black and Brown Children & Treatment Options

ADHD although is becoming more overdiagnosed, Black and Brown children are more likely to receive a disruptive behavior diagnosis; limiting their likelihood of being granted access to resources to help with their ADHD. Addressing what factors go into one's ADHD diagnosis and ways to provide access to treatment options are essential in order to maintain a child's emotional and behavioral well-being.

Ana Miranda, Sonia Jarque & Raul Tarraga (2006). Interventions in School Settings for Students With ADHD, *Exceptionality Journal*, 14:1, 35-52.

https://doi.org/10.1207/s15327035ex1401_4

This article provides information about school-based treatments for ADHD that are effective in the short run for reducing disruptive behaviors and improving on-task behavior and academic performance of children with ADHD. The authors looked into treatment studies in school environments related to children diagnosed with ADHD. Some resources included multicomponent interventions that are effective in the short-term for reducing disruptive behaviors. The most effective intervention was the

multimodal intervention concurrent with medication in addition to parent training and academic-related interventions. This article is useful to help me understand what treatment options are available, which ones are the best for children with ADHD, along with other treatments that have been proven to be beneficial.

Schwandt, H., & Wuppermann, A. (2016, June 03). The Youngest Get the Pill: ADHD Misdiagnosis in Germany, its Regional Correlates and International Comparison. *Journal of Pedagogy, Culture & Society*. Retrieved June 23, 2020, from <https://doi.org/10.1016/j.labeco.2016.05.018>

Recent research for the U.S., Canada, and some European countries show that children who enter school relatively young have higher ADHD rates than their older peers, suggesting that ADHD may be misdiagnosed in the younger children due to their relative immaturity. Misdiagnosis in ADHD can result in children becoming overmedicated over time, affecting their brain development. This is relevant research for my Project for Change since misdiagnosis can lead to children becoming overmedicated with stimulants, it's important to understand when it is the best time to intervene to lower the likeliness of a misdiagnosis from occurring.

Alvarado, C., & Modesto-Lowe, V. (2017). Improving Treatment in Minority Children With Attention Deficit/Hyperactivity Disorder. *Clinical Pediatrics*, 56(2), 171–176. <https://doi.org/10.1177/0009922816645517>

This article investigates the barriers to diagnosis and treatment of ADHD in Black and Hispanic children, which include limitations due to financial status, differing

parental perspectives, and cultural norms. This article also defines different methods of treatment, such as behavioral therapy and medication like stimulants if needed. The researchers investigate what diagnosis and treatment options are available for children with ADHD; specifically for Black and Hispanic children. This peer-reviewed source had a considerable amount of times being cited too. I would consider this paper to be credible because of that. Overall, this article is useful because it examines the factors and barriers that contribute to limiting treatment options for Black and Brown children, which aligns addressing how treatment and support services are limited for children from communities of color; I would use this article sparingly while drawing in other articles as comparisons.

Implicit Biases & Stigma Surrounding the Diagnosis of ADHD in Minority Children

Stigma surrounds the disgrace that is associated with mental health. This can make it more difficult for individuals to use resources that will benefit their emotional health. Furthermore, having implicit biases can affect a child's likeliness of referring for an ADHD diagnosis or their likeliness of receiving a disruptive behavior diagnosis instead; which occurs mostly for Black and Hispanic children. It is essential to address one's implicit bias and personal stigmas in order to provide appropriate resources to aid in their symptoms with ADHD.

Okonofua, J. A., & Eberhardt, J. L. (2015). Two Strikes: Race and the Disciplining of Young Students. *Psychological Science*, 26(5), 617–624.

<https://doi.org/10.1177/0956797615570365>

This research article studies different schools across the country and interviews teachers about methods they would discipline a child based off of misbehaviors indicated via stereotypically White or Black names. This applied to a troublemaker stereotype that led to Black and Hispanic children to more likely be disciplined when compared to their White counterparts. Researchers provide data to address stereotyping that occurs in schools and how one's race can not only affect how their behaviors are viewed but enhance specific disciplinary actions taken. In relation to ADHD, this can apply to how children of minority descent are viewed and stigmatized in relation to the stereotype they are associated with; further limiting their likeness to have access to resources in my PFC.

Mueller, A.K., Fuermaier, A.B.M., Koerts, J. et al. (2012, July, 08). Stigma in Attention Deficit Hyperactivity Disorder. *ADHD Attention Deficit Hyperactivity Disorder* 4, 101–114. <https://doi.org/10.1007/s12402-012-0085-3>

This paper addresses the contribution of stigma associated with ADHD, which can be looked at as an underestimated risk factor, affecting treatment options, the effectiveness of treatment, aggravation of symptoms, one's satisfaction of life, and mental well-being of individuals diagnosed with ADHD. This paper is relevant for the Project for Change by acknowledging the role of stigma, how to destigmatize ADHD, and find ways in order to make treatment more accessible.

Ashiabi, G. S., & O'Neal, K. K. (2015). Child Social Development in Context: An Examination of Some Propositions in Bronfenbrenner's Bioecological Theory. *SAGE Journals*. <https://doi.org/10.1177/2158244015590840>

This article addressed the bioecological theory and its effects on a child's daily culture. This article demonstrates how children's environment and daily culture drastically influence their development such as physical, cognitive, social, and emotional factors. Domains of environments include family, peers, school, neighborhoods, etc. I believe this article would be helpful for the contextual reflection and see how mental illness is potentially addressed in specific cultures and how that affects their likeness of reaching out and utilizing resources that support ADHD symptoms like behavioral therapy and medication.

Kang, S., Harvey, E.A. Racial Differences Between Black Parents' and White Teachers' Perceptions of Attention-Deficit/Hyperactivity Disorder Behavior (2019, December, 02). *Journal of Abnormal Child Psychology* 48, 661–672
<https://doi.org/10.1007/s10802-019-00600-y>

This article looks to investigate the current status of perceived behaviors related to ADHD, and any discrepancies ratings between Black parents and White teachers. This article found that White teachers rated Black boys as having a higher likeliness of an ADHD diagnosis than Black parents did. I think this article is useful in my problem statement with implicit biases when referring Black and Hispanic children to get an ADHD diagnosis.

Atkins, R. (2014). Instruments Measuring Perceived Racism/Racial Discrimination: Review and Critique of Factor Analytic Techniques. *International Journal of Health Services*, 44(4), 711–734. <https://doi.org/10.2190/HS.44.4.c>

The paper's instruments being used to measure perceived racism/racial discrimination. It outlines the validity and reliability of the psychometric properties in these measures. I'd consider this article credible considering where it has been published, along with the experience of the researchers themselves. This is extremely useful in my measures regarding my PFC solution; where teachers' and clinicians' racial bias is measured pre and post implicit bias training to see if there's an actual effect of the training.

Sluiter, M. N., Wienen, A. W., Thoutenhoofd, E. D., Doornenbal, J. M., & Batstra, L. (2019). Teachers' Role and Attitudes Concerning ADHD Medication: A Qualitative Analysis. *Psychology in the Schools*, 56(8), 1259–1270. <https://doi.org/10.1002/pits.22270>

This chapter in *Psychology in the Schools* textbook looks at teachers' influence on children with ADHD. Teachers' opinions about children with ADHD/their medication use can influence their treatment and development in the classroom. This is an important resource for my paper as teacher's implicit biases can have lasting consequences on children's health and development. Due to it being part of a textbook, I find this article reliable and credible. This can be applied to my Project for Change as a reason why teacher training needs to be an essential solution for children to have unbiased support for their ADHD symptoms.