

Rethinking Asperger's: Understanding the DSM-5 Diagnosis by Introducing Sheldon Cooper

Anthony Tobia* and Annmarie Toma

Rutgers Robert Wood Johnson Medical School, USA

*Corresponding author: Anthony Tobia, MD, Associate Professor of Psychiatry, Rutgers Robert Wood Johnson Medical School, 671 Hoes Lane, Piscataway, NJ 08854, USA, Tel: 732-235-4403; E-mail: tobiaat@rwjms.rutgers.edu

Rec date: Sep 28, 2015, Acc date: Dec 26, 2015, Pub date: Dec 31, 2015

Copyright: © 2015 Tobia A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

The DSM-5 has revised criteria for the diagnosis of the developmental disorders. The DSM-5 has eliminated Asperger's Disorder and created the umbrella title, Autism Spectrum Disorder (ASD). At Rutgers Robert Wood Johnson Medical School, residents in training learn about the latest revisions of the DSM through media. The character, Sheldon Cooper, from The Big Bang Theory meets criteria in the DSM-IV for Asperger's Disorder. By assessing Sheldon's behavior across several episodes, the viewer can reevaluate Sheldon considering the new criteria. When Sheldon Cooper is used as a model, a patient with a DSM-IV diagnosis of Asperger's would now be diagnosed in the DSM-5 with ASD, level 1 severity, without accompanying intellectual impairment, without accompanying language impairment.

Keywords: Asperger's; Autism; Neurodevelopmental disorder; Communication; The Big Bang Theory; Sheldon Cooper; DSM

Introduction

The DSM-5 has revised criteria for the disorders usually first diagnosed in infancy, childhood, or adolescence. Media can be used to introduce and teach the revised criteria, transforming ambiguous concepts into concrete examples.

Quirky but lovable characters in the media such as Sheldon Cooper from The Big Bang Theory have helped redefine the way the public

views mental disorders. At first, Sheldon presents as peculiar, but amusing; he is an arrogant genius, but at the same time alluring and comical. On further inspection, however, one can see that underlying Sheldon's intellectual genius are autistic traits [1]. In the DSM-IV, a clinician could provisionally diagnose Sheldon with Asperger's Disorder. The newer DSM-5, however, has done away with this diagnostic label (Table 1). Since a single condition is thought to manifest with different levels of severity, Autistic Disorder, Asperger's Disorder, Childhood Disintegrative Disorder, and Pervasive Developmental Disorder Not Otherwise Specified have now been grouped under a single title: Autism Spectrum Disorder (ASD).

Asperger's Disorder, DSM-IV	Autism Spectrum Disorder, DSM-5
A. Qualitative impairment in social interaction.	A. Persistent deficits in social communication and social interaction across multiple contexts.
B. Restricted repetitive and stereotyped patterns of behavior, interests and activities.	B. Restricted, repetitive patterns of behavior, interests, or activities.
C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.	C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life).
D. There is no clinically significant general delay in language.	D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.
E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior (other than in social interaction), and curiosity about the environment in childhood.	E. These disturbances are not better explained by intellectual disability (Intellectual Developmental Disorder) or global developmental delay.
F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.	Specify if: With or without accompanying intellectual impairment With or without accompanying language impairment Associated with a known medical or genetic condition or environmental factor

Table 1: Comparing Asperger's disorder and Autism spectrum disorder.

The Task Force rationale for this change was to improve the consistency and reliability of diagnosis across physicians. Previous research has shown a lack of consistency in diagnosis of these mental disorders. In one study, patients with AD were also found to meet criteria for autism [2]. The complete elimination of AD has also grabbed the attention of the public who voiced concerns regarding research, social resources, and public perception [3]. In particular, individuals with AD report a general positive social acceptance to the Asperger's label, with concerns that the DSM change may alter this self-identity [4].

How does one then diagnose a patient with a previous DSM-IV diagnosis of AD in compliance with the DSM-5? This paper conceptualizes the character of Sheldon Cooper portrayed by Jim Parsons (*The Big Bang Theory*) as a case study that reviews the task force's changes reflected in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders.

Discussion

Diagnoses for Asperger's Disorder (DSM-IV) and Autism Spectrum Disorder (DSM-5) require social deficits, communication deficits, fixed interests and repetitive behaviors. To improve accuracy in diagnosis, the DSM-5 combines the above requirements into two domains: 1) social/communication deficits (Criterion A) and 2) fixed interests and repetitive behaviors (Criterion B).

A. Persistent deficits in social communication and social interaction across multiple contexts

A regular viewer of *The Big Bang Theory* would readily agree that Sheldon has difficulty with social-emotional reciprocity (Criterion A.1). In the episode, *The Thespian Catalyst* (Season 4, episode 14), Sheldon is dismayed by the subpar online tweets he receives after giving his first lecture to university students. One student writes, "Dr. Cooper has taken a relatively boring subject and managed to make it completely insufferable." With the encouragement of his girlfriend, Amy Farrah Fowler (Mayim Bialik), Sheldon enlists the help of Penny (Kaley Cuoco) for acting lessons so he could improve communication with his students. The "acting lessons" parallel social competence interventions for patients with Asperger's [5]. Just as patients require interventional therapy, Sheldon needs specific guidance in both verbal and non-verbal communication.

Sheldon also struggles to develop peer relationships (Criterion A.3) that are appropriate for his age. Sheldon creates "Roommate Agreements" and "Friendship Contracts" with his peers. In the episode, *The Friendship Contraction* (Season 4, episode 15), Sheldon awakens his roommate, Leonard (John Galecki), early in the morning for an "Emergency Preparedness Drill" and simulates an earthquake by pushing a groggy Leonard into a wall [6].

Further evidence of Sheldon's deficit in understanding relationships is the absence of interest in his peers. In *The Cooper-Hofstadter Polarization* (Season 1, episode 9), Sheldon and Leonard receive a scientific prize. Sheldon becomes infuriated that this prize must be shared with his "inferior friend." Similarly, in *The Shiny Trinket Maneuver* (Season 5, episode 12), Sheldon is on a date with Amy when she excitedly discusses her new scientific accomplishment, a paper publication. Sheldon is unimpressed and quickly shifts the conversation back to himself, replying that he has reached one hundred followers on twitter. While Sheldon has a superior understanding of theoretical physics, he has a deficiency in social and emotional reciprocity. Finally, in all of the above examples, Sheldon demonstrates deficits in nonverbal communication with a total lack of facial expression (Criterion A.2). As Sheldon Cooper vacuously says, "Don't you think if I were wrong I'd know it?"

Teaching point for Criterion A: Since Sheldon meets criteria A1-A3, he satisfies the diagnostic criterion of persistent deficits in social communication and interaction across multiple contexts.

B. Restricted, repetitive patterns of behavior, interests, or activities

The DSM-IV and DSM-5 criteria for Asperger's similarly require the patient to have restricted and stereotypical patterns of behavior, interests, and activities. For example, Sheldon demonstrates repetitive movements (Criterion B.1) as evidenced by his knocking on the door three times before the person on the other side can open the door, "[knock knock knock] Penny!, [knock knock knock], Penny!, [knock knock knock], Penny!"

Sheldon is also rigid and inflexible in his routines (Criterion B.2). He has a designated "spot" on the couch that no one else can take. Similarly, in *The Agreement Dissection* (Season 4, episode 21), Sheldon is enraged when his friends decide not to have pizza on "pizza night," a clear violation of the roommate agreement. Sheldon even panics in *The Werewolf Transformation* (Season 5, episode 18) when he learns that his usual barber is in the hospital and refuses to have another barber cut his hair. In the words of Sheldon Cooper, "Change is never fine. They say it is but...it's not."

Teaching point for Criterion B: The DSM-5 requires that the individual demonstrate a restricted, repetitive pattern of behavior as evidenced by two sub-criteria. Since Sheldon meets criteria B1-B2, he rules-in for Criterion B. In contrast to the DSM-IV, the DSM-5 provides a level of severity for the domains of social communication and repetitive patterns of behavior (Table 2). In this case, Sheldon would be "level 1."

Severity Level for ASD	Social communication	Restricted interests and repetitive behaviors
Level 3 'Requiring very substantial support'	Severe deficits in verbal and nonverbal social communication skills cause severe impairment in functioning; very limited initiation of social interactions and minimal response to social overtures from others.	Preoccupations, fixated rituals and/or repetitive behaviors markedly interfere with functioning in all spheres. Marked distress when rituals or routines are interrupted; very difficult to redirect from fixated interest or returns to it quickly.
Level 2 'Requiring substantial support'	Marked deficits in verbal and nonverbal social communication; social impairments apparent even with supports in place; limited initiation of social interactions	Rituals and repetitive behaviors (RRBs) and/or preoccupations or fixated interests appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress

	and reduced or abnormal response to social overtures from others.	or frustration is apparent when RRBs are interrupted; difficult to redirect from fixated interest.
Level 1 'Requiring support'	Without supports in place, deficits in social communication cause noticeable impairments. Has difficulty initiating social interactions and demonstrates clear examples of atypical or unsuccessful responses to social overtures of others. May appear to have decreased interest in social interactions.	RRBs cause significant interference with functioning in one or more contexts. Resists attempts by others to interrupt RRBs or to be redirected from fixated interest.

Table 2: Levels of severity for Autism spectrum disorder.

C. Symptoms must be present in the early developmental period

The episode, The Porkchop Indeterminacy (Season 1, episode 15) illustrates that Sheldon Cooper's genius and social awkwardness were evident at an early age. Missy Cooper (Courtney Henggeler), Sheldon's fraternal twin sister, tells the story of how when they were just eight years old, Sheldon turned her easy-bake-oven into a high-powered furnace to keep her out of his room [7].

D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning

We recognize the effect of Sheldon's disorder when we see that he relies on his roommate and friends to commute to work, go to the dentist, and run errands. Sheldon believes he is "too evolved for driving" and the burden falls on those around him (Euclid Alternative, Season 2, episode 5).

E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay

While Sheldon Cooper may lack social skills, his intellectual abilities are clearly above average. In The Codpiece Topology (Season 2,

episode 2), Sheldon tells Leonard, "I am a published theoretical physicist with two doctorates and an IQ which can't be accurately measured by normal tests, how much scarcer could I be?"

Conclusions

As illustrated by Sheldon Cooper, a patient with a previous DSM-IV diagnosis of Asperger's Disorder could be "re-labeled" in the DSM-5 as Autism Spectrum Disorder. Additional specifiers include a) with or without accompanying intellectual impairment, b) with or without accompanying language impairment, c) associated with a known medical or genetic condition or environmental factor, d) associated with another neurodevelopmental, mental, or behavioral disorder, and e) with catatonia. Moreover, by assigning specific episodes to view (Table 3), residents at Rutgers Robert Wood Johnson Medical School review the new criteria to reach a diagnosis that includes level 1 severity, without accompanying intellectual impairment, without accompanying language impairment.

While the differences in criteria between Asperger's and Autism Spectrum Disorder appear to be subtle, this may reflect the previous inaccuracy found across diagnoses that prompted the new DSM designation. The most significant change in diagnosis may in fact be the elimination of the Asperger's name itself.

Criteria	Explanation	Episode Name	Season, Episode Number
A.Persistent deficits in social communication and social interaction across multiple contexts			
A.1	Deficits in social-emotional reciprocity including failure of normal back-and-forth conversation	The Thespian Catalyst	Season 4, episode 14
A.3	Struggles to develop peer relationships that are appropriate for his age Lacks an ability to share enjoyment in the achievement of others	The Friendship Contraction	Season 4, episode 15
		The Cooper-Hofstadter Polarization	Season 1, episode 9
		The Shiny Trinket Maneuver	Season 5, episode 12
B.Restricted, repetitive patterns of behavior, interests, or activities			
B.2	Insistence on sameness, inflexible adherence to routines	The Agreement Dissection	Season 4, episode 21
		The Werewolf Transformation	Season 5, episode 18
C.Symptoms must be present in the early developmental period			
		The Porkchop Indeterminacy	Season 1, episode 15
D.Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning			

		Euclid Alternative	Season 2, episode 5
E. The disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay			
		The Codpiece Topology	Season 2, episode 2

Table 3: Recommended viewings for Autism spectrum disorder.

Media have long been utilized to highlight varied areas in the field of psychiatry including the role of the psychiatrist, issues in medical ethics, and the stigma toward people with mental illness. At Rutgers Robert Wood Johnson Medical School, The Big Bang Theory is referenced to review the neurodevelopmental disorders. While the goals and objectives of the didactic are reached independent of viewing the situational comedy, learners who watch the referenced episodes report an enhanced understanding of the course material.

References

- American Psychiatric Association. (2000) Diagnostic and statistical manual of mental disorders (4th edn).
- American Psychiatric Association. (2013) Diagnostic and statistical manual of mental disorders (5th edn).
- Linton K, Krcek T, Sensui L, Spillers J (2014) Opinions of People Who Self-Identify with Autism and Asperger's on DSM-5 Criteria. *Research on Social Work Practice* 24: 67-77.
- Mayes S, Calhoun S, Crites D (2001) Does DSM-IV Asperger's disorder exist? *Journal of Abnormal Child Psychology* 29: 263-271.
- Ohan J, Ellefson S, Corrigan P (2015) Brief Report: The Impact of Changing from DSM-IV 'Asperger's' to DSM-5 'Autistic Spectrum Disorder' Diagnostic Labels on Stigma and Treatment Attitudes. *Journal of Autism and Developmental Disorders*: 6.
- Singh J (2011) The vanishing diagnosis of Asperger's disorder. *Advances In Medical Sociology* 13: 235.
- Stichter J, O'Connor K, Herzog M, Lierheimer K, McGhee S (2012) Social Competence Intervention for Elementary Students with Aspergers Syndrome and High Functioning Autism. *Journal of Autism & Developmental Disorders* 42: 354-366.