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Characters with Autism Spectrum Disorder in Fiction: Where are the Women and Girls?

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Abstract

Purpose: Fiction has the potential to dispel myths and help improve public understanding and knowledge of the experiences of under-represented groups. Representing the diversity of the population allows individuals to feel included, connected with, and understood by society. Whether women and girls with autism spectrum disorder (ASD) are adequately and accurately represented in fictional media is currently unknown.

Design/ methodology/ approach: Internet and library searches were conducted to identify female characters with ASD in works of fiction. Examples of such works were selected for further discussion based on their accessibility, perceived historical and cultural significance, and additional characteristics that made the work particularly meaningful.

Findings: The search highlighted a number of female characters with ASD across a range of media, including books, television, film, theatre and video games. Many were written by authors who had a diagnosis of the condition themselves, or other personal experience. Pieces largely portrayed characters with traits that are highly recognized within the academic literature. However, some also appeared to endorse outdated myths and stereotypes. Existing works appear to preferentially portray high functioning autistic women, with limited representation of those who also have intellectual disability.

Originality/value: This is the first exploration of the depiction of ASD in females within fiction. There is a need for more works of fiction responsibly depicting females with ASD, as this can help reduce stigma, develop public awareness and recognition, and increase representation.

Article classification: Research paper

Keywords: Autism spectrum condition, Asperger syndrome, Neurodevelopmental disorder, Pervasive developmental disorder, Females, Media.

Introduction

Autism Spectrum Disorders (ASD) are lifelong neurodevelopmental conditions typified by impairments in reciprocal social interaction and communication, as well as restricted, repetitive and stereotyped behaviours (World Health Organization, 1992). Whilst originating in childhood, ASD follows a persistent lifelong course, extending into adulthood and old age (Howlin, 2000). The overall prevalence of ASD in community-based adult populations is approximately 1.1%, though the prevalence in people with intellectual disabilities is substantially higher (Brugha *et al.*, 2016).

Since the first descriptions of people with ASD, the condition has been considered to predominantly affect males (Werling and Geschwind, 2013). Additionally, many ASD prevalence studies were conducted on predominantly or solely male study populations (Tromans *et al.*, 2018), resulting in a comparatively shallow evidence base for females. There has also been a gender bias in researching people with ASD more generally, and despite there being extensive research on autism theories, diagnosis (Werling and Geschwind, 2013) and treatments (Tromans and Adams, 2018), the majority of study populations have similarly been predominantly male; indeed, some researchers have historically opted to only recruit male participants for such studies (Lai *et al.*, 2011).

However, recent work has suggested that the gender ratio for ASD is not as disparate as was once believed, with a meta-analysis by Loomes *et al.* (2017) finding that the difference in ASD prevalence between genders narrows when only high quality studies are considered in analysis. The 'autistic phenotype' may also be different in women (Van Wijngaarden-Cremers *et al.*, 2014), such as females generally having superficially better socio-communication ability than their male peers, and this may contribute to the under recognition, and diagnostic delay of ASD in females compared to males (Lai *et al.*, 2011).

For instance, girls with ASD may adopt camouflaging or compensating behaviours that make the social challenges they experience less visible to observers, such as showing more proximity to other children than boys with ASD (Dean *et al.*, 2017). Lai *et al.* (2011) summarized a range of characteristics that are more prevalent in females with ASD when compared to their male counterparts. These include factors

such as higher imagination and linguistic abilities as well as imitating social behaviours of their non-ASD peers. Additionally, females with ASD are more likely to be perceived as others as “shy” rather than as a “loner”, a trait more characteristically associated with males (Lai *et al.*, 2015). Although females with ASD may superficially exhibit more expressive behaviours, Lai *et al.* (2015) suggest that the underlying difficulties in understanding social situations are similar in both males and females with ASD.

The art of storytelling is a culturally universal phenomenon (Sugiyama, 1996), and fiction specifically serves several purposes, including building on our capacity for imagination, as well as understanding the perspectives of others (Barnes, 2012). Representation and diversity within fiction and the entertainment media is important for a number of reasons. If done well, these mediums have the potential to dispel myths and help improve understanding and knowledge of the experiences of under-represented groups, such as people with disabilities (Schwartz *et al.*, 2010). Beyond educating wider society, the importance and value of being able to identify with characters in fiction should also not be underestimated, as it allows individuals to feel included, connected with and understood by society. Conversely, being under represented in fictional works may contribute to feelings of societal ostracizing.

As forms of fiction such as film have the ability to educate viewers (Conn and Bhugra, 2012), it is important that character representations are suitably realistic, authentic and nuanced. Furthermore, works of fiction may be perceived and interpreted differently by people within the depicted group (Barnes, 2012). Fictional works can be seen as holding a mirror up to wider society, thus misleading, pathological and stereotyped characters, or absent characters, speak volumes about how society views the individuals and groups within it. The cultural significance of many works of fiction demonstrate that societal views and assumptions can be challenged (or indeed reinforced) through fiction.

ASD has long received some attention within works of fiction. In the Oscar-winning film *Rain Man* (1989), Dustin Hoffman played the autistic savant character Raymond Babbitt. He excelled in mathematics, working out complex calculations in his head and having a heightened sense of spatial awareness, which are abilities that Baron-Cohen (2002) described as typical of the extreme male brain.

However, Raymond lacked knowledge of social etiquette which caused him interpersonal problems at times such as barging into his brother's intimate moments with his girlfriend. Raymond displayed the characteristic autistic rigidity of thought and behaviour, and experiencing a meltdown at the slightest adjustment to his routine.

However, few of these portrayals have been of female characters. This is likely to alienate women and girls with ASD, contribute to the lack of awareness of autistic women in both wider society and in clinical practice, and perpetuate the marginalization of this group. As such, reviewing works of fiction could provide a snapshot into current understanding of women with ASD. Stimulating discussion in this area could provide the opportunity for increasing social awareness and understanding, as well as feelings of inclusion among this under recognized group. In this paper we investigate and discuss the representation of females with ASD in fictional works, providing several examples.

Method

Internet and library searches were conducted by the authors to identify examples of fictional depictions of females with ASD. Our search process was limited to English language only. Authors then discussed all examples identified together, to make a collective judgment about characters to select for further discussion in the manuscript, based on the accessibility of the work, its perceived historical and cultural significance, and additional characteristics that made the work particularly meaningful, such as the creator of the work having a diagnosis of ASD themselves.

Findings

The search highlighted a range of representations of female characters with ASD within fictional media, such as books, television programmes, film, theatre, and videogames. These pieces will be described and reviewed, alongside academic literature where relevant. For a complete list of all examples of fictional depictions of females with ASD accessed, see Table 1.

Books

M is for autism (Martin, 2015) was written by a group of teenage girls with ASD whom, supported by their writing tutor, wished to write a fictional book about the life of a female with ASD. Their real life insight helped to create an authentic portrayal of a young girl with ASD whilst avoiding reinforcement of common misconceptions. The book follows the story of M, a young girl receiving an ASD diagnosis. Throughout the book, M has overwhelming anxiety, often triggered by sensory overload and/or unexpected changes. M describes experiencing hyper-arousal to sensory stimuli and a need for a structured routine, two features frequently associated with ASD. She is also described as having stereotyped, repetitive behaviours, such as tapping against her cheek, which appear to serve a beneficial function, by calming her when she is distressed. Partway through, M suffers from an episode of severe distress, secondary to changes in her planned routine and sensory overload.

The book also discusses the exhaustion that females with ASD often report due to their attempts to camouflage their symptoms, in an attempt to blend in with their neurotypical peers. M says that “trying to fit in and be normal and put on my mask every day is very tiring”. Additionally, the book explores the impact that professionals and diagnostic services can have on families seeking a diagnosis. Despite M’s mother feeling certain that her daughter had an ASD, the diagnosis was nevertheless delayed, initially due to dismissive attitudes from M’s father and the parents of her classmates’, suggesting that she was just badly behaved or quiet. Later, M’s wait for a diagnosis was further increased when doctors continued to refer her to different services, suggesting many different underlying causes for her behaviour rather than ASD, including obsessive compulsive disorder and deafness. This aspect of the plot echoes the real world widespread dissatisfaction with the ASD diagnostic process among both adults (Pellicano *et al.*, 2014) and caregivers (Crane *et al.*, 2016).

On the Edge of Gone (Duyvis, 2016) features a female protagonist with an ASD, and is also authored by a female with ASD. The story follows Denise, as she navigates the subsequent uncertainty following an announcement of a comet hitting the Earth. Denise has always enjoyed structure, and so finds it particularly difficult to negotiate the profound changes to her routine and lack of normality as she tries to come to terms with the earth’s imminent destruction. She is also very stubborn, displaying

frustration when she cannot do or get what she wants. However, Denise finds comfort from both achieving her goals, as well as establishing a new routine after boarding a spaceship.

At the beginning of the novel, Denise's thoughts demonstrate a detail-oriented, local processing style, becoming heavily focused on the effects that the comet is having on her life and immediate environment, rather than looking at the bigger picture. This phenomenon is frequently observed in people with ASD, whom generally appear to favour local processing over global processing (Koldewyn *et al.*, 2013). Denise also displays self-injurious behaviours, as a self-soothing technique when her anxiety levels are high, which is also a common feature of ASD (Richards *et al.*, 2012). Throughout the book it is suggested that she is also hypersensitive to sensory stimuli, demonstrated by her difficulty in maintaining eye contact for more than half a second and the repeated descriptions of various sounds and smells that are making her uncomfortable. She experiences acute episodes of severe distress on multiple occasions, usually triggered by experiencing a sensory overload, such as when another character begins to shout.

The author Corinne Duyvis describes how Denise was not diagnosed with an ASD until she was 9 years old, and the difficulties that she faced because of this. Denise felt that as a black female, doctors appeared to avoid the diagnosis of ASD because she did not fit the description of the stereotypical autistic person, despite the severity of her symptoms. This perception is consistent with the academic literature, which indicates that there are racial and ethnic disparities in the diagnostic rates of ASD (Mandell *et al.*, 2009). Due to her delayed diagnosis, Denise felt that she had already learnt what triggered her meltdowns and how to mimic her peers, allowing her to camouflage her symptoms, at least in part. However, such camouflaging behaviours may have inadvertently played a role in delaying her diagnosis.

In contrast to the previous authors discussed, Kathyryn Erskine, the author of *Mockingbird* (2010), does not herself have an ASD, though she does have a daughter with Asperger's syndrome (AS). *Mockingbird* is told from the perspective of Caitlin Smith, a girl diagnosed with AS, whose older brother Devon was recently killed in a school shooting. Caitlin loves to read and is very good at it, explaining that "books are not like people, books are safe." She has a particular interest in learning

about language and words. This differs from some stereotypical portrayals of AS, where special interests are typically assumed to be more mathematical or technological, particularly amongst males. Caitlin describes emotions as “evil” and when asked about her feelings, she replies “oh, I don’t have any of those.” The novel follows Caitlin as she works towards making friends and becoming more empathetic with the help of her school counsellor. She frequently interprets language literally, finds idioms challenging and considers a lack of directness of others “confusing.” The range of strengths and challenges attributed to Caitlin are particularly consistent with the diagnostic criteria for AS (American Psychiatric Association, 1994). Although this creates an almost stereotyped construction of a character with AS, it also constructs a story with great educable and relatable value for children and young people.

The use of a first person narrative allows Caitlin’s understanding and experience of the world around her to be further understood by the reader. Throughout the book, certain expressions are capitalized, indicating Caitlin’s behaviour is being “corrected” and that Caitlin is recalling, repeating and attempting to work on these phrases heard, such as “I Look At The Person”, “Personal Space”, “Get It”, and “I Deal With It”. This narrative approach may be reflective of the experiences of the author as a parent and carer, rather than as a person with an ASD themselves. In the book there is another boy Caitlin’s age with an ASD, called William. Caitlin distinguishes herself from William vehemently: “William eats DIRT and SCREAMS when he gets mad! I AM NOT AUTISTIC!” By Caitlin herself feeling some stigma and desire to distance herself from the label of having an ASD, both Caitlin and the reader receive a teachable moment from Caitlin’s school counsellor “We all have different talents...and just because we’re better at some things than William doesn’t mean we’re any better than he is.”

Television

One of the more recent well-known examples of a female with an ASD in television is Julia from *Sesame Street* (1969–present¹). Given the show’s international audience (Carvajal, 2005), her portrayal of a female with an ASD has the potential to have a positive impact on the way both young children

¹ Though Julia’s appearances are from 2017 to the present day.

and their parents view the condition. She is described as someone who “sometimes does things differently, in a Julia sort of way” (Sesame Street, 2018) , highlighting the differences in the way a child with an ASD might behave compared to other children, whilst also promoting acceptance and tolerance. The official Sesame Street website (2018) goes on to explain that “even if Julia doesn’t look you in the eye, it doesn’t mean she doesn’t want to be your friend”. Patterns of abnormal eye contact are a frequently observed feature of ASD, and statements like this have the potential to challenge preconceptions.

In one episode, the character Big Bird says hello to Julia, who, instead of greeting him back in return, carries on working and does not respond. Other characters later explain to Big Bird that Julia has an ASD, so it can sometimes take her longer to do things (Gabbatt, 2017). This is an example of a common type of social difficulty people with ASD can experience. Indeed, children with ASD can often be seen as not wanting to socialize, as opposed to desiring to do so, but struggling in this regard; this can lead to them becoming very isolated as they grow up (Ochs *et al.*, 2001). Later on in the episode, Julia becomes distressed by a siren sounding. Another character calmly explains she just needs to take a break, allowing her to calm down and carry on playing. This scenario demonstrates how some people with ASD can be hypersensitive to noise, and loud, unexpected sounds can be particularly distressing for them.

Within the United States in particular, Julia seems to have been integral in raising awareness of ASD, with a national survey showing over half of adults had heard of her (Sesame Workshop 2018).

Additionally, a study conducted by the Georgetown University Center for Child and Human Development (2017) found that over 50% of parents felt more accepting of children with ASD after using the “Sesame Street and Autism: See Amazing in All Children” website, an online initiative designed to promote knowledge and acceptance of ASD. In other cultures where Sesame Street airs, such as Pakistan, Julia’s positive portrayal of a child with an ASD may reduce some of the stigma in a culture where parents have historically often attempted to conceal their child having an ASD until later in life, at which point any subsequent interventions may be less effective (Pasha *et al.*, 2017).

Another representation of ASD among women in television is that of forensic anthropologist Dr Temperance Brennan in *Bones* (2005-2017). In the show, she is very task-orientated, demonstrating a level of single-minded focus consistent with the intense and restricted patterns of interest seen in many persons with ASD. She also struggles with idioms, which is a commonly observed difficulty for people with ASD, as they often demonstrate a tendency towards literal interpretation. Although her having ASD is never explicitly stated in the show, *Bones*' creator Hart Hanson has said that Dr Brennan was based on a friend of his with AS (Sepinwall, 2010).

Sonya Cross in United States adaptation of *The Bridge* (2013-2014) is another character who appears to have many features of ASD. One example of her behaviour is when she refuses to allow a woman through at a crime scene, when her husband is dying. Often those with ASD are seen as having a lack of empathy and a rigid adherence to rules. This could potentially perpetuate negative views about those with the condition. As with Dr Brennan in *Bones*, it is never explicitly stated that Sonya has an ASD. When the show's executive producer Meredith Stiehm was asked about this, she said "we feel that's how you meet them [people with autism] in the world, is not like, 'hello, I'm Sonya, I have Asperger's', it's just, 'hey, she's an unusual personality. I have to figure her out', and I like the idea of challenging the audience" (Goldman, 2013). This lack of direct recognition could possibly mean that the audience are unaware that the character has ASD.

Film

An early example of a female with ASD being depicted in cinema is the young girl Amanda in *Change of Habit* (1969). In the film, Amanda's mother brings her to a clinic, believing that her non-responsiveness is a sign of her being deaf; children with ASD can sometimes initially present to healthcare professionals in this way, leading to some patients being misdiagnosed with deafness (Knors and Vervloed, 2003). She also demonstrates repetitive mannerisms, such as rocking back and forth on screen, which are also commonly seen in ASD. However, aspects of the film's depiction of autism now appear outdated, such as ASD being described as "when a child is rejected very early in life, they curl inside themselves and shut out the whole world, as if they are trying to punish the rest of us along with themselves." This is a description of the refrigerator mother theory (Bettelheim, 1967),

the notion that ASD are caused by absence of maternal warmth, which was a leading theory at the time of the film's production and release, but has since been discredited (Hill and Frith, 2003). Additionally, a treatment known as Holding Therapy (Welch and Chaput, 1988) is used on Amanda, involving hugging her tightly and telling her 'I love you', causing her to become distressed for a lengthy period of time until eventually tiring out. This treatment is also similarly archaic, with no high quality research evidence to support its use in modern day clinical practice (Simpson, 2005).

The Bollywood film *Barfi!* (2012) has gained great critical acclaim (Bhushan, 2012) and is the only non-English language work discussed in this paper, being written in Hindi. It features autistic character Jhilmil Chatterjee, played by Priyanka Chopra, who won multiple awards for her portrayal. She appears to live in a home for the disabled and speaks very little, much like the main character, mirroring the impairments of communication many persons with autism display. In the film Jhilmil is kidnapped for money by her friend Barfi, whom she trusts. She does not seem to be fully aware of this and she runs away with Barfi at one point. This illustrates how many people with ASD can be vulnerable to exploitation, due to their impaired ability to navigate social situations (Fisher *et al.*, 2013).

In *Snow Cake* (2006), the lead female character Linda, played by Sigourney Weaver, has an ASD. She is a high functioning woman who lives alone and copes in an unusual way after her daughter has died, appearing to not exhibit the typical signs of grief, showing a distinct lack of emotion and a struggle to accept support from other people. This is an example of the difficulties some people with ASD can have expressing and communicating their feelings or needs. Later in the film she does show her sensitivity, when she attends her daughter's funeral and dances at the wake, imagining her daughter dancing with her, and demonstrating that despite her apparent lack of emotion on a superficial level, she holds strongly positive feelings towards her daughter.

Another important film to note is *Dustbin Baby* (2008), where the teenage character Poppy has AS, and is portrayed by the actress Lizzy Clark, whom herself has the condition. This was her first experience of professional acting, and indeed one of the very few examples of a female character with an ASD being portrayed by an actress who had the condition themselves. When Poppy is befriended by the

neurotypical character April, she demonstrates her difficulties coping with change as she goes through school. Clark spoke in interviews about her difficulties on the film set, like the sudden noise of the sound board (Hill, 2009). Persons with ASD can often struggle to gain employment due to difficulties such as these, with everyday changes in the environment having the potential to cause distress and interfere with their ability to do particular jobs (Hendricks, 2010).

Theatre

Few plays have been written that feature an autistic protagonist, even fewer including a female character. However, the dramatic monologue *Spoonface Steinberg* (1997) provides an insight into the world of a seven-year-old girl with terminal cancer and an ASD. The protagonist of the play, ‘Spoonface’ is suggested to also have intellectual disability, with her discussing how she has poor speech, reading and writing abilities as well as attending special educational needs schooling. This is unusual for depictions of females with ASD in fiction, as most portrayals are of high functioning individuals, despite the much higher prevalence of ASD among persons with intellectual disabilities.

Throughout the play, Spoonface appears to mimic other characters by repeating opinions/phrases and passing them off as her own within conversation, as substitutes for her own thoughts or feelings. This is a sign of the ‘camouflage hypothesis’, which is thought to contribute to the lower rates of ASD diagnosis amongst women (Dean *et al.*, 2017). Spoonface rarely displays emotions of her own and appears to have difficulty interpreting situations successfully, although she was able to detect that she was scared during MRI scans, as well as at the possibility of dying. Spoonface does not demonstrate any of the characteristic rigidity in thought or behaviour often associated with ASD, and appears to have good insight into her condition.

It is suggested in this play that Spoonface may have savant syndrome, defined as an individual with a neurodevelopmental disorder who has an exceptional skill in a limited field (Treffert, 2009). She appears to have remarkable mathematical ability, particularly regarding calculations and dates. This bears similarities to the film *Rain Man* (1988), and reinforces the misconception that savant abilities are common within the autistic population.

Video Games

Though not a playable character, the popular video game series *BioShock* (2007) features a female genetic scientist with ASD, Dr Brigid Tenenbaum. Much of her background is rooted in controversy, as she is Jewish and was sent to Auschwitz as a teenager, surviving the Holocaust due to her fascination in participating in experiments on other prisoners. Her love of science was contrasted by an apparent indifference to the horrific experiments going on around her. This extreme character perpetuates the view of people with ASD lacking empathy (Baron-Cohen and Wheelwright, 2004). However, recent research suggests that the apparent lack of empathy observed in people with ASD may be more attributable to a theory of mind deficit (so called “cognitive empathy”), and reduced emotional responses, as opposed to lacking “emotional empathy” or affective resonance (Lockwood *et al.*, 2013; Jones *et al.*, 2010). Though Dr Tenenbaum was both autistic and Jewish, *BioShock* character Ken Levine stated he did not intend for her to be principally defined by these aspects of her personality, and that her central characteristic is her “absolute love of science” (Sirani, 2015).

Symmetra, from the hugely popular 2016 first-person shooter game *Overwatch* (2016), is the first playable female video game character with an ASD. Though not originally explicitly defined as having an ASD, she demonstrated a need for order, frequently misunderstood jokes, and exhibits a desire to avoid excessive stimulation, including turning away in the middle of intense battles and, in a scene in an issue of the *Overwatch* comic books that accompany the game, experiencing distress and disorientation from being trapped in a crowd of people. The comic book provides further clues, such as when she says “Sanjay has always said I was...different...everyone has, asking where I fit on the spectrum, it used to bother me because I knew it was true, it doesn’t bother me anymore, because I can do things nobody else can do.” This quote shows a positive view of her ASD, consistent with that held by the neurodiversity movement, with a greater emphasis on strengths, rather than difficulties, associated with the condition (Kapp *et al.*, 2013). Though heavily implied, it was never explicitly stated that Symmetra had an ASD within either the video game or comic book.

Discussion

This paper has investigated the representation of women and girls with ASD within fiction. Based on the lack of recognition of females with ASD, it was anticipated that results may be limited. However, a number of female characters were found, represented in books, television programmes, films, plays and in video games, indicating an increasing representation of this group within the media. Such increased representation may be a contributory factor to the apparent growth in public interest of ASD in women, as well as rising rates of diagnosis (Oyebode, 2009).

The majority of the works discussed portrayed characters with traits that are highly recognized to be part of the autistic spectrum, according to the academic literature. Writers discussed the experience of camouflaging, masking, a preference for structure, sensory difficulties / overload, stereotyped / repetitive behaviours, a lack of eye contact, and provided insight into idiosyncratic thought processes. Important issues, such as difficulties obtaining a diagnosis, controversial “therapies”, school experiences, comorbid mental health issues, and victimisation were depicted, alongside strong female characters, succeeding in their chosen career, having families, with positive reflections on their diagnosis. This range, and sense of authenticity could be due to many of the pieces being written by authors who themselves have a diagnosis, or other personal experience of ASD, such as having a relative with the condition. This could suggest that writers desire to actively promote representation of characters with their condition within fiction, or simply authors’ adhering to the old creative writing adage “write from experience”.

The wide range of mediums and genres used by writers depicting female characters with ASD target, and appeal to a wide range of audiences, with diverse demographics. Having female characters with ASD in television programmes such as Sesame Street is likely to target children as well as their parents. The emergence of likeable, resilient autistic characters in video games can raise the profile of people with ASD among this audience, who are largely male, and typically adolescents or young adults (Earnest, 2018). As theatre goers in England are typically between the ages of 65 and 74 years, with the average age of an audience member being 52 (Snow, 2016) , plays are likely to have an impact on the awareness among this group.

Numerous examples were identified where viewers and readers have speculated about whether characters have ASD, but this has not been clarified directly by writers. This issue is not unique to the writing of female characters with ASD. For example, the creators of *The Big Bang Theory* (2007-present) have directly denied that the character Sheldon Cooper has AS, despite his behaviour being heavily implied to be autistic (Crippled Scholar, 2015). Similarly, while the novel *The Curious Incident of the Dog in the Night Time* (Haddon, 2003) was described as bringing “Asperger Syndrome to the mainstream” (Van Bergeijk, 2011), with over ten million copies sold (and an equally successful stage adaptation), the author pointed out ASD was never explicitly referred to within the book (although it featured on some marketing material). This phenomenon is not limited to modern day examples either; in his book *Mindreadings: Literature and Psychiatry* (2009), Oyeboode discusses the fictional detective Sherlock Holmes, and that he appears to have autistic traits, despite author Arthur Conan Doyle’s writings predating the first clinical descriptions of ASD by around 50 years.

A number of reasons for this reluctance to explicitly label characters with ASD have been proposed. It has been suggested that being vague means that writers have less of a duty towards accurate portrayal, with writers of *The Big Bang Theory* writers quoted as saying "calling it Asperger's creates too much of a burden to get the details right" (Rozsa, 2014). Jim Parsons, who plays Sheldon, admitted that avoiding the label takes away a certain “social responsibility” to play the character true to that diagnosis (Netzer, 2016). This point was echoed by *The Big Bang Theory* actress Mayim Bialik, “...we don’t pathologise our characters. We don’t talk about medicating them or even really changing them” (Crippled Scholar, 2015). These words present a negative view towards diagnosis and a treatment myth, as medication is not a recommended treatment for ASD, unless the individual also experiences comorbid mental health disorders.

Some speculate that the lack of diagnosis allows other characters to poke fun, and create comedy, whilst minimizing offence of those who have the condition (Sepinwall, 2009). Haddon describes his perspective on the reluctance to label: “I’m very careful in the book not to actually use the word ‘Asperger’s’ or ‘autism.’ ... Because I don’t want him to be labelled and because, as with most people who have a disability, I don’t think it’s necessarily the most important thing about him... And as a good friend of mine said after reading the book, a friend who is himself a mathematician, it’s not a novel

about a boy who has Asperger's syndrome; it's a novel about a young mathematician who has some strange behavioural problems. And I think that's right" (Hansen, 2003). *Bones'* creator Hart Hanson has said that the decision to not state Dr Brennan had ASD was based on a need for the show to garner as large an audience as possible on Fox (a broadcast network), saying "if we were on cable, we would have said from the beginning that Brennan has Asperger's" (Sepinwall, 2010). The idea that having an openly autistic character on network television would lose ratings is concerning, and supports the notion that whilst much work has been done to increase awareness and understanding of ASD, widespread stigmatization continues to exist, or at least is perceived to do so by television executives.

If these are the views of writers / directors, they appear to be at odds with some members of the autistic community, for whom representation within the media appears is important. For example, in regards to the video game character Symmetra (in *Overwatch*) Samuel Hookham, a young fan whom had an ASD himself, wrote to the games director and lead designer Jeff Kaplan, to express his love for the character and request clarification on whether Symmetra was indeed autistic. Kaplan wrote back to confirm this, saying "I'm glad you asked about Symmetra. Symmetra is autistic. She is one of our most beloved heroes and we think she does a great job of representing just how awesome someone with autism can be" (McMillen, 2017). Furthermore, and again in relation to Sheldon Cooper, "failure to call a duck a duck doesn't change the fact that it swims and quacks" (Netzer, 2016). As such, it is suggested that the topic of representation is examined in future research.

There are a number of further drawbacks of current portrayals. Firstly, while the search highlighted a number of female characters, the majority had high functioning ASD or AS, with a notable lack of characters with a comorbid intellectual disability, despite this group forming a significant proportion of the ASD population (La Malfa *et al.*, 2004). Secondly, authors have suggested that presentations can be somewhat stereotyped, while noting that this finding is not unique to autism, with a widespread tendency to stereotype in films (Conn and Bhugra, 2012). It has also been perceived that autism can be exploited by film makers, who may depict stereotypical behaviours such as rocking to create an interesting scene (Conn and Bhugra, 2012). Concerns have been raised regarding storylines involving people with ASD and crime (Picoult, 2010; Haddon, 2003); "the suggestion that a person with AS committing a crime such as murder is titillating and sells books, but it does not reflect the reality of

people on the spectrum” (Van Bergeijk, 2011).

Conversely, other criticisms have been that characters have depicted a sanitised presentation of autism, “Sheldon Cooper is in fact not an autistic person. He suffers from a different condition, one that appears mostly on TV and movie screens: the cute autism” (Netzer, 2016). Netzer (2016) goes on to say “Julia, on Sesame Street...is the epitome of adorable, and she teaches children to tolerate kids who don’t want to be touched, or don’t give eye contact, or make flappy hands. Julia will never push a joke too far or unwittingly say something unforgivably racist. Julia will never do something disgusting, or scary, or inexplicable, because Julia’s job is to teach kids that autism is safe and fine. But autism is not safe and fine. Autism is beautiful, and magical, and brilliant, but autism is also screaming, and hurting people, and agony, and clashing with the world”.

The majority of examples identified were in English language works, in part due to the searches being conducted in English language only, and indeed there is a possibility that several non-English language examples were not identified owing to this methodological limitation. Nevertheless, some non-English language examples were identified, such as Rama Krishna in the Hindi film *Barfi!* and Karen Nieto in the book “Me, Who Dove into the Heart of the World” (Berman, 2012), which was originally written in Spanish prior to being translated into English. However, as most of our sources were English-language based, the characters discussed may represent a more westernized view of a female with ASD; further work could explore non-Western depictions in a similar level of detail, to compare and contrast with our examples discussed in this paper. Additionally, despite the author’s best efforts, their own cultural experiences may have exerted some influence on the examples selected for further discussion, as the criteria for this were somewhat subjective in nature.

It is understandable that not all fictional autistic characters will be portrayed true to academic conceptualisations. Indeed, some of the works perpetuate outdated views (such as that people with ASD lack empathy) and perspectives (such as that ASD is caused by cold parenting). Some of these portrayals are understandable in relation to the time in which they were created, suggesting authors had undertaken research and were reflecting the then accepted scientific paradigm. However, some accounts have strayed so far that it has the potential to be harmful, such as in the film *Molly* (1999), which suggests that ASD is reversible, following experimental brain surgery. This raises questions

about the level of duty writers and directors have towards responsible portrayals of their subject matter. Again, this situation is not unique to the representation of women with ASD, but women in general, ethnic minority groups, as well as factors such as historical accuracy, counterbalanced against competing demands, such as the need to create drama, entertainment, and attain box office sales.

For writers wishing to depict ASD responsibly, consultation with autistic individuals, their families or carers, and professionals is recommended when developing new characters. This could help ensure that these characters are a more truthful representation, to avoid precipitating common myths about ASD (Young, 2012). Furthermore, there have been calls for autistic characters in television, films and plays to be played by actors who themselves have the condition. The mother of the actress Lizzy Clark, who played the character Poppy in *Dustbin Baby*, has been quoted as saying actors should stop "playing disabled" when "there are so many good, disabled actors who are both ready, eager and able to take on these parts" (Hill, 2009). Evidently, the portrayal of autistic characters of both sexes in fiction is complex, and in some cases, controversial. However, the increasing inclusion of ASD within works of fiction has a number of benefits, potentially even in the presence of controversy. For example, while extensive debates have focused on whether writers choose to specify if a character has ASD, it is positive that traits are being recognized by those with the condition, as well as the wider public.

There could be significant benefits to improving how people with ASD are portrayed in the media, particularly for women and girls, who are at risk of being unrecognised as having the condition, and thus being unable to access specialist support services that they may stand to benefit from. This could include increasing awareness and the providing of higher quality information to the public (which may lead to more female patients presenting to clinicians for diagnostic assessment), as well as reducing stigma around ASD. Indeed, there is some limited evidence to suggest that portrayals of females with ASD in fiction, such as Julia in *Sesame Street*, are having a positive impact on public perception of autism and combating stigma (Georgetown University Center for Child and Human Development, 2017). However, more research needs to be done in this area to improve knowledge of the impact of such characters on public understanding and behaviour.

Reflecting on the power of fiction, Van Bergeijk (2011) in regards to Jodi Picoult's *House Rules* (2010), which features Jacob, a young man with AS and a special interest of crime, who finds himself

suspected of murder, “More people will read her book, learn about Asperger Syndrome, and talk to their friends about it. She will reach readers that are unaffected by Asperger Syndrome...this book will reach more people and raise more awareness about Asperger Syndrome than all of the academic papers written on the subject this year combined.” Furthermore, good writing can challenge assumptions, myths and stereotypes, and reduce stigma. Most importantly, the perceived accuracy of depictions is likely to be a key factor as to whether such works are related to by others with the condition, which can in turn further promote discussions, and possibly support seeking, around ASD.

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Table 1: Full list of fictional female characters with ASD identified by the search process²

Year	Character(s)	Title (Author)
Books		
2004	Natalie Flanagan	Al Capone Does My Shirts (Gennifer Choldenko)
2005	Morgan Wiberg	The Stone Cutter (Camilla Läckberg)
2008	Jessica Fontaine	The Language of Others (Clare Morrall)
2008	Gillian Grayson	Mass Effect: Ascension (Drew Karpysyn)
2009	Natalie Flanagan	Al Capone Shines My Shoes (Gennifer Choldenko)
2010	Caitlin Smith	Mockingbird (Kathryn Erskine)
2012	Karen Nieto	Me, Who Dove into the Heart of the World (Sabina Berman)
2014	Rose Howard	Rain Reign (Ann M. Martin)
2015	M	M is for Autism (Vicky Martin)
2016	Denise Lichtveld	On the Edge of Gone (Corinne Duyvis)
Television		
2006-2015	Karla Bentham	Waterloo Road
2014-2015	Rebecca Blithely	Strange Empire
2013-2014	Sonya Cross	The Bridge
2005-2017	Virginia Dixon	Grey's Anatomy
2008	Astrid Farnsworth	Fringe
2012-Present	Fiona 'Mittens' Helbron	Elementary
1992-Present	Gabrielle Jacobs	Shortland Street
1969-Present	Julia	Sesame Street
1970-2011	Lily Montgomery	All My Children
2011-2018	Saga Norén	The Bridge
2014-2017	Isadora Smackle	Girl Meets World
2002	Annie Wheaton	Rose Red
2005-2017	Dr Temperance Brennan	Bones
Film		
1969	Amanda	Change of Habit
1993	Sally Matthews	House of Cards
1995	Rosetta Basilio	Under the Piano
1998	Simon Lynch	Mercury Rising
1998	Meaghan Robinson	Nightworld: Lost Souls
1998	Tracy Sinclair	Down in the Delta
1999	Molly McKay	Molly
2002	Chloé	Les Diabes
2003	Dewa	Biola Tak Berdawai
2004	Jovana	Midwinter Night's Dream
2005	Isabelle 'Izzy' Sorenson	Mozart and the Whale
2005	Cho-won	Marathon
2005	Rama Krishna	Raam
2005	Isabelle Sorenson	Mozart and the Whale
2006	Bea	Breaking and Entering
2006	Linda Freeman	Snow Cake
2007	Anna Woodruff	Imagination
2008	Poppy	Dustbin Baby
2008	Sarah	Dark Floors
2008	Zen	Chocolate
2010	Dafu	Ocean Heaven
2010	Mandy	Fly Away
2011	Dana Minor	Exodus Fall
2012	Jhilmil Chatterjee	Barfi!
2013	Haridas	Haridas
2013	Rafer	Season of Miracles

² Many of these characters were initially identified from the Wikipedia (2018) list of fictional autistic characters.

2017	Mária	On Body and Soul
2018	Wendy	Please Stand By
Videogames		
2002	Cassandra	Rage of the Dragons
2005	Jade (The Indigo Child)	Fahrenheit
2007	Dr. Brigid Tenenbaum	BioShock
2007	Simone Cole	Clive Barker's Jericho
2011	River Wyles	To The Moon
2012	Amy	Amy
2012	Patricia Tannis	Borderlands 2
2016	Symmetra	Overwatch