



Portrayal of autism in mainstream media – a scoping review about representation, stigmatisation and effects on consumers in non-fiction and fiction media

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Abstract

Mainstream media is a common source of information on mental health, and its portrayal of mental disorders can influence public perceptions and stigmatisation. Recently, autism has received increased attention in mainstream media. This scoping review aims to contribute to the existing literature on the portrayal of autism and its stigmatising effect by mapping the characteristics and range of records that describe the representation of autism in mainstream media with a focus on non-fiction media (newspapers and social media) and fiction media (movies & TV, and literature). We extracted 31 articles from PubMed and PsychInfo, as well as conducting secondary searches, covering articles published between 2010 and 2022, with a time frame of media from 1988 to 2022. Most of the articles focused on newspapers and movies & TV. Our findings suggest that while the portrayal of autism in media varies, stigmatisation is most prominent in newspapers and movies & TV, often with a negative tone and stereotypical portrayal such as savantism. One possible reason for this could be the lack of representation of experts by experience in these media outlets. In contrast, our review found that literature often has a more diverse and positive representation, and social media tends to have a more supportive tone. Our recommendation is that autistic individuals should be included in the content creation process. Furthermore, future research should focus on newer forms of media, particularly social media, where self-representation is more common, and investigate how this affects the portrayal and stigmatisation of autism.

Keywords ASD · Social media · TV · Movies · Newspaper · Literature

Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder. According to the new international classification of diseases (ICD-11) by the World Health Organization (WHO), which came into effect in 2022, ASD has two defined characteristics for a diagnosis: 1. difficulties in interaction and social communication; and 2. restricted interests and repetitive behaviours. A recent systematic review revealed that one out of 100 children is diagnosed with ASD globally. Furthermore, the review found that the prevalence of diagnoses

has increased since 2012. The authors explain this increase with improved detection and identification, and higher awareness amongst clinicians and the public (Zeidan et al., 2022). While the focus is often on children, there has also been some research activity around prevalence, assessment and diagnosis of autism in adults. A recent systematic review (Huang et al., 2020) summarised that the prevalence of adult autism is around 11 in 1000 people. Again, this review found that the prevalence has increased in recent years.

Autism and the mainstream media

Many reviews and papers suggest that the increase in the prevalence of autism may be due to higher awareness. Yet, sources of this awareness have not been definitively established. Among others, higher awareness could stem from a more frequent and more detailed representation of autistic people in mainstream media. Media in general often acts as a platform for health discourses, for example in news coverage (Jones & Harwood,

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2009), and mass media is an impactful source when it comes to shaping opinions on mental disorders (Nairn et al., 2001). In recent years, autism has been featured more prominently in mainstream media, with television shows, movies and books exploring the experiences of people with autism and their families. This has led to the media being one of the main sources of information about autism for the general public (Nordahl-Hansen, Øien, et al., 2018), and has shaped attitudes towards autism (Draaisma, 2009; John et al., 2018).

Mainstream media like movies and TV have great potential of increasing awareness about autism that goes beyond academic interest, and the ability to reach people who have no personal experience with autism, including people who are neither autistic themselves nor have had contact with autistic people (Nordahl-Hansen & Øien, 2021). Likewise, reading about characters can also increase awareness and understanding (Mar et al., 2008). Yet, there is an ongoing discussion if such representation benefits or harms people with a diagnosis of autism. While raising awareness, representations might also lead to stereotyping and stigmatisation (Nordahl-Hansen, Øien, et al., 2018). For disability in general, literature suggests that mainstream media has led to more stereotyping (Berger, 2016), which might also be true for autism. For example, savantism seems to be overrepresented in the media (Nordahl-Hansen, Øien, et al., 2018), leading to the belief that most people with autism have extraordinary skills. This is not accurate, as less than 30% of people with autism actually have savant skills (Howlin et al., 2009). Additionally, most portrayals seem to represent young white males (Dean & Nordahl-Hansen, 2022; Prochnow, 2014). While it is true that autism is more common in males (with a ratio of 4.3:1; Fombonne, 2003) this stereotypical representation still fails to cover the diverse distribution of all genders and races (Pham et al., 2022).

A growing body of literature, including reviews, is starting to examine this topic, leading to mixed results. For example, Dean and Nordahl-Hansen (2022) found in their review about film and TV representation that autistic characters are moving towards a more diverse portrayal with less stigmatisation around disability, but Fontes and Pino-Juste (2022) found in their review about autism portrayal and social awareness that characters are often portrayed with exaggeration that can lead to stigma.

The current study

Considering the relevant implications of media portrayals of autistic characters for forming attitudes and beliefs in the general populations, findings from research are especially important to address potential shortcomings of such representation and inform practical guidelines to improve portrayals. Therefore, this scoping review aims to summarise the scope of existing research around this topic. We add to a recent and growing body of literature on the media portrayal of mental

disorders by including all types of media, such as fiction, non-fiction and social media. This might allow us to compare different forms of media and their differing ways of portrayal of autism. We strive to answer the following questions: “In the current literature, what are the characteristics and range of records that describe the representation of autism in the mainstream media?”. More specifically we aim to explore: Who is being portrayed? In which media are they being portrayed? By whom are they being portrayed? How are autistic characters portrayed? What are the effects on consumers?

Methods

Scoping reviews

Scoping reviews have emerged as a novel method for synthesising evidence. Unlike systematic reviews that focus on a specific research question and its outcomes, scoping reviews are more appropriate when the extent of available evidence is not fully understood. They serve the purpose of identifying and mapping the existing evidence landscape (Arksey & O'Malley, 2005; Munn et al., 2018). In the context of this manuscript, we decided to use a scoping review instead of a systematic review to account for the fact that we did not know the extent to which evidence existed regarding the different forms of media. We followed guidelines from Peters et al. (2015) for conducting scoping reviews.

Data sources and search strategy

An initial limited search on Google Scholar as well as the two included databases PubMed and PsychInfo led to the refinement of search strings and eligibility criteria. For our primary search, we included the two databases PubMed and PsychInfo. We decided for these two databases as leading databases from the fields of medicine and psychology respectively, as this covers both the medical and the psychological / social science aspects of autism research.

This review was part of a broader systematic literature search on media portrayal and mental disorders. The initial search, title and abstract screening were done as part of the broader search. Our search string for both databases was “(representation OR portrayal) AND media AND (disorder OR autism OR depression OR anxiety)” with an applied filter for publication date from 2010 – 2023. Eligibility criteria were defined specifically for this review, and full text screening and secondary search were conducted separate from the broader review. Reference lists of all included studies were scanned for additional records. All records were imported in EndNote 20. Duplicates were removed with the program’s included option, and publication types that were not “journal article” were removed manually.

Eligibility criteria and data characterisation

Eligibility criteria can be found in Table 1. For all included articles, the following characteristics were retrieved: General publication characteristics (authors, title, year, country of origin, sector, paper length); mental disorder type; media type; study information if any (population, setting, design, methods, analysis, results, effect sizes); effects on consumers. The data was summarised in an Excel spreadsheet.

Results

Search and selection of articles

The search was conducted on 01.02.2023. Two raters (GM, VS) screened all records for both abstract and full-text level. Disagreements were discussed between the two raters until consensus was reached. The full selection process can be found in the flow chart (Fig. 1). Thirty-one records met the inclusion criteria.

Characteristics of included records

Out of the 31 papers that were included in the analysis, 15 focused on non-fiction media while 17 focused on fiction media (some records cover more than one category). The majority of records explored either newspaper articles ($n = 12$) or movies & television (TV) productions ($n = 10$). It is worth noting that one paper which examined magazines was categorised under the newspaper category, while another paper that investigated video games was sorted into the movies & TV category. The sample of papers included in the analysis exhibited a bias towards media in the United States, with 55% of the studies focusing on US media. There is an upward trend for research around this topic, with the most records stemming from 2022 (see Fig. 2).

In fictional media, authors often included both canon (e.g. Shaun Murphy; *The Good Doctor*) and non-canon autistic characters (e.g. Sheldon Cooper; *The Big Bang Theory*), meaning that the characters are either explicitly labelled as being autistic or just exhibit behaviour relating to the autism spectrum (Tharian et al., 2019).

Portrayal of autism in non-fiction media

Newspapers

Eleven of the included studies covered autistic representation in newspapers (Table 2). Two main points were made in terms of prevalence of news articles covering autism. First, there is a visible upward trend of number of published articles even though most of the stories still only include incidental references to autism, and autistic people had a leading role in less than 20% of articles (Bie & Tang, 2015). Second, most accounts seem to be about autistic children, not adults (Akhtar et al., 2022; Tang & Bie, 2016). Newspapers in general still seem to endorse stigmatising portrayal, such as the use of negative language (Huws & Jones, 2011), a focus on negative aspects (Clarke, 2012; Holton et al., 2014; Mann, 2019) or the medical model of disability (Baroutsis et al., 2021; Clarke, 2012; Tang & Bie, 2016). Baroutsis et al. (2021) found that only 26% of articles had a positive valence. In a study spanning 16 years, Yu and Farrell (2020) found that stigma cues decreased, but are still present in one third of all articles. Lewin and Akhtar (2021) found an increase of positive valence in US newspapers, with more focus on strengths. Despite one record finding that more individual personal stories are being covered (Wendorf Muhamad & Yang, 2017), in more than half of the included records, a missing representation of autistic individuals in the news stories was mentioned, making this the most important finding (Baroutsis et al., 2021; Bie & Tang, 2015; Clarke, 2012;

Table 1 Eligibility Criteria

	Inclusion criterium	Exclusion criterium
Study design / outcome	Original research: Any information regarding the representation of autism in mainstream or social media, examined with a clearly stated methodology	Literature reviews, letters to the editor, opinion pieces
Variable of interest	Portrayal of autism	Treatment, detection of illness
Mental disorder type	Autism	All other disorders, general behavioural problems, general “disability”
Media type	Social media, mainstream media (TV, streaming, newspapers, books)	Material designed for an experimental study
Publication type	Journal article	Any other format (e.g. thesis, book)
Publication date	Article: 2010 -2023 Media that is being examined: primarily 2000—2023	Any other time frame
Publication language	English, German	Any other language

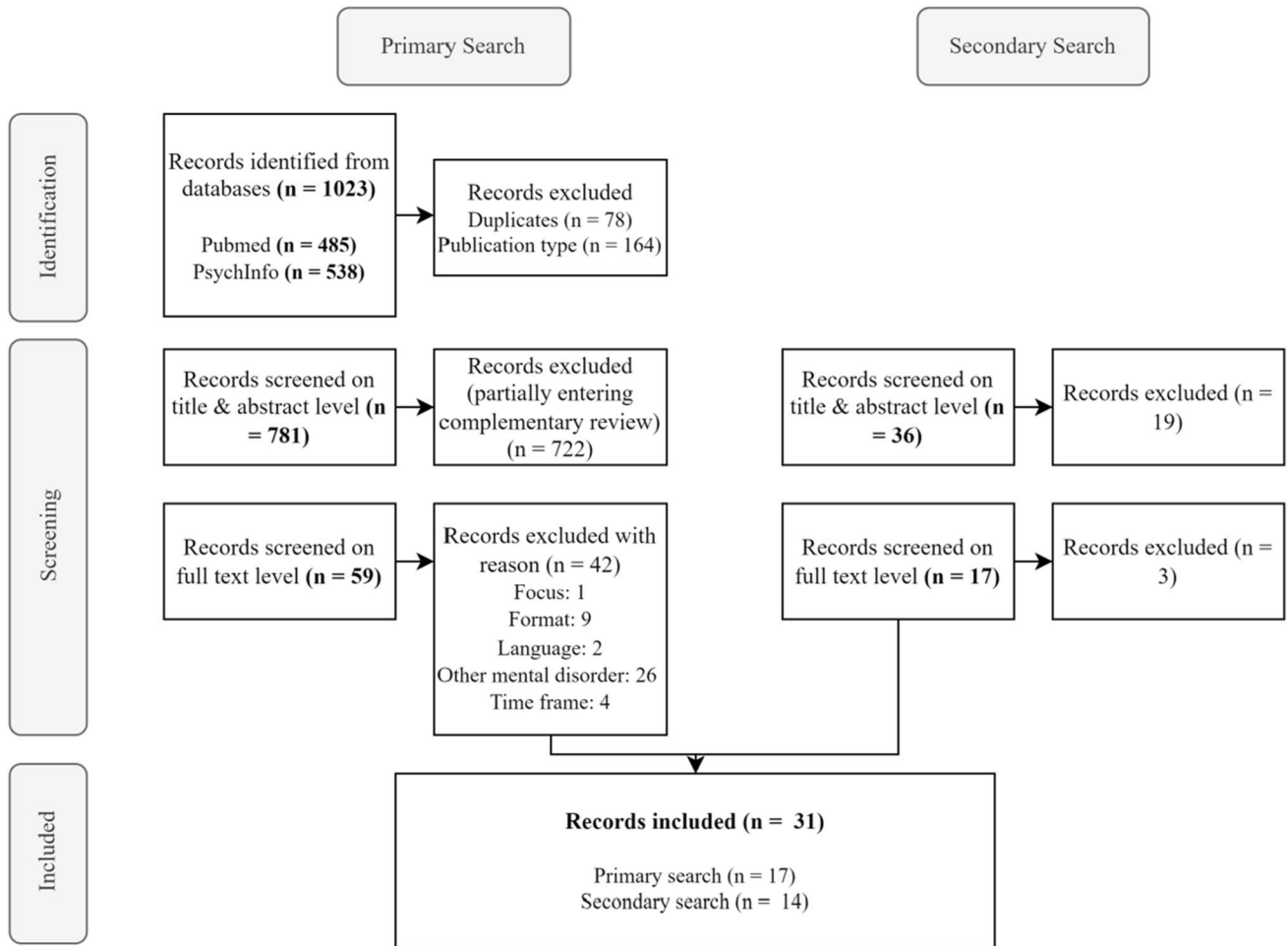


Fig. 1 Flow Chart of The Selection Process

Fig. 2 Publication Date of Included Records

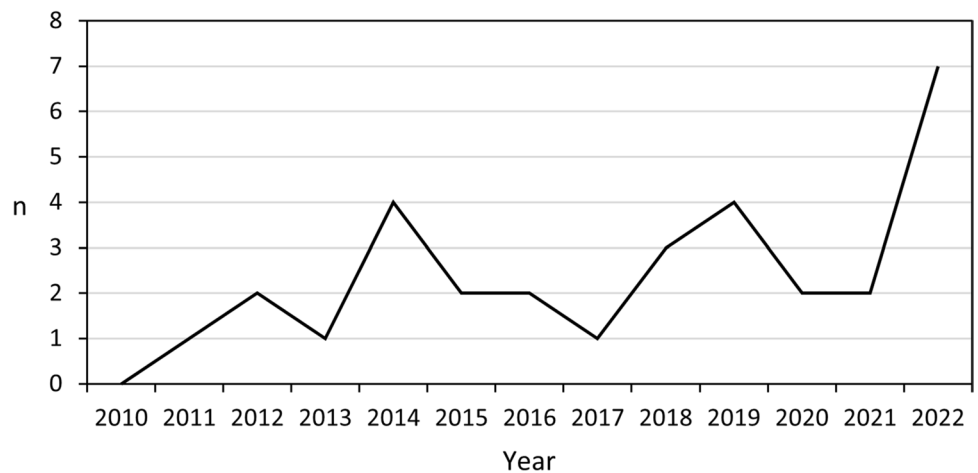


Table 2 Characteristics of Records Analysing Portrayals of Autism in Newspapers

Reference	Country	Time frame of data	Results
Holton et al. (2014)	USA & UK	1998–2012	Focus on risks and disadvantages, missing self perspective
Yu and Farrell (2020)	USA	1998–2013	Decrease of internal causes, preventability scarce, conditions can be improved
Huws and Jones (2011)	UK	1999–2008	Misuse, negative terminology (e.g. suffer, victim), no diversity, missing self perspective, but voices of parents
Clarke (2012)	USA	2000 – 2009: 13 magazines (women oriented and oriented towards all genders) + 2 newspapers	Stereotypical discourses, medical model, autism as a “tragedy”, missing self-perspective
Bie and Tang (2015)	China	2003–2012	Charity, infrastructure, science, misuse of “autism”, solution (not causes), missing self perspective
Tang and Bie (2016)	China	2003–2012	Infantilisation, portrayal as patients, savants or victims
Lewin and Akhtar (2021)	USA	2007–2016	Positive valence increased, increase in strengths and accommodation, decrease in causes / risks, missing self perspective
(Wendorf Muhamad & Yang, 2017)	USA	2014, January	Individuals’ personal stories, differences between local and national newspapers
(Mann, 2019)	USA	2015–2017	Form of loss for children and families, societal problem, preventive strategies
Baroutsis et al. (2021)	Australia	2016–2018	Finding a cure, single individuals, no details provided, 26% positive tone, missing self perspective
Akhtar et al. (2022)	USA	2020, April to May	59% about children

Holton et al., 2014; Huws & Jones, 2011; Lewin & Akhtar, 2021). For example, this means that instead of interviews with autistic individuals themselves, only parents or clinical experts were included.

Online / social media

Four records explored how autism is portrayed on social media and the internet (Table 3). One study examined representation of both children and adults on websites and found that while children still dominate, there has been an increase in adult representation (Akhtar et al., 2022). Another study analysed forum posts and found that autistic individuals tend to positively represent themselves as normal and autonomous (Parsloe, 2015). On Twitter, posts were found to be

informative and supportive towards people with autism (Gauld et al., 2022). However, one study that focused on self-representation in YouTube videos found a negative tone with emphasis on the medical aspects and that challenges of autism prevail in these videos (Angulo-Jiménez & DeThorne, 2019).

Portrayal of autism in fiction media

Movies & TV

Nine records were found for the fictional media in the movies & TV category (Table 4). Most records describe stigmatising portrayal, such as a focus on negative aspects of autism and a lack of diversity. Characters represented in movies & TV

Table 3 Characteristics of Records Analysing Portrayals of Autism in Social Media

Reference	Country	Media	Time frame of data	Results
Angulo-Jiménez and DeThorne (2019)	English language	YouTube	2007–2015	Medical model of disability (esp. challenges related to autism) & neurodiversity paradigm, negative language
Akhtar et al. (2022)	USA	Websites	2008–2009; 2019, June	Representation of adults increased, but still less than children
Parsloe (2015)	English language	Forum	2012, July – October	Reclaim of normalcy, symptoms and agency
Gauld et al. (2022)	English language	Twitter	2021, January	Education, evolution and support for people with ASD

Table 4 Characteristics of Records Analysing Portrayals of Autism in Movies & TV

Reference	Country	Media	Time frame of data	Results
Nordahl-Hansen et al. (2018)	From 4 continents	22 movies, 4 TV series	n.a	High match to diagnostic characteristics, savantism
Ejaz (2020)	USA & India	4 movies	1988, 2001, 2005, 2008	Indian remakes have more romantic scenes, more interaction with children, more occupational abilities and more religious scenes
Belcher and Maich (2014)		4 movies, 5 TV shows	2006–2010	Savantism
Holton (2014)	USA	1 TV show	2010	Disembodied portrayal, focus on isolation and fear
Poe and Moseley (2016)	USA	3 TV shows		Stereotypical representation, savantism, supporting roles for advancement of main characters
Ressa (2021)	USA	3 TV shows		Savantism, lack of diversity
Tharian et al. (2019)	n.a	27 movies, 13 TV shows	Between 1969 & 2018	Females represented
Garner et al. (2015)	n.a	15 movies	Between 1988 & 2010	Exaggerated portrayals, savantism
Hannam (2014)	USA, UK, Australia	10 movies	Between 1989 & 2010	Supporting role for advancement of main character, defined by others; autism is a hindrance; “sweet innocent” sexuality; savantism; isolation; no character development
Tharian et al. (2019)	n.a	8 video games	Between 2002 & 2016	Increased representation; resiliency

display very high to extreme levels of autism measured with clinical tools (Garner et al., 2015; Nordahl-Hansen et al., 2018), and more than half ($n = 6$) of the records mention the prevalence of savantism in this category (Belcher & Maich, 2014; Garner et al., 2015; Hannam, 2014; Nordahl-Hansen et al., 2018; Poe & Moseley, 2016; Ressa, 2021). One study (Tharian et al., 2019) also examined video games. Unlike movies & TV, they found that not only the representation has increased, but the valence for autistic characters in video games is positive with a focus on resiliency.

Literature

Five studies were identified that investigated the representation of autism in literature and books (Table 5). Examining 474 books, Akhtar et al. (2022) found that 81% of characters

were children. One of the studies revealed that most books tend to centre on repetitive behaviour rather than social difficulties (Kelley et al., 2018). Another study, which only examined one book (*The Boy on the Bridge*), reported that it portrayed autism in a negative light, potentially contributing to stigmatisation (Maich et al., 2022). However, other studies show that many books are capable of portraying autistic characters in a positive, authentic and nuanced manner, emphasising autistic individuals’ resilience (Belcher & Maich, 2014; Tharian et al., 2019).

Effects of portrayal on consumers

In total, we found four records that examined the effects of autistic portrayal on consumers. Bury et al. (2022)’s questionnaire study investigated where autistic adults learn

Table 5 Characteristics of Records Analysing Portrayals of Autism in Fiction

Reference	Media	Results
Akhtar et al. (2022)	474 books	81% children
Maich et al. (2022)	1 book	Savantism; non-human othering, negative valence
Belcher and Maich (2014)	Picture books, popular novels	Novels tend to present ASD in a complex, authentic context of family and community, rife with everyday problems, picture books tend to “explain” ASD with a clinical perspective
Kelley et al. (2018)	9 books	72% (205) represented repetitive or restrictive behaviours, 28% (80) social communication difficulties
Tharian et al. (2019)	10 books	Portrayed characters with traits that are highly recognised to be part of the autistic spectrum, positive reflections on their diagnosis, resiliency

about autism and if this is related to accuracy of knowledge, internalised stigma and how they endorse their own identity. They found that participants learned most from books, journals and online research and less from TV / movies. Stigma was most related to TV and movies, whereas social media and online research was positively correlated with knowledge and autism identity.

Three studies tested effects of media portrayal in a pre-post test design. In two, participants watched one episode of a series depicting a character with autism. In the first study, Chow and Hayakawa (2022) investigated how young children's understanding and perception of autism would change after watching an episode of the show *Hero Elementary*. They found that while prior knowledge of children about autism was scarce and erroneous, perception was more empathetic and positive after watching the show. In the second study, Stern and Barnes (2019) employed an experimental design, with participants being randomly assigned to watching part of an episode of *The Good Doctor* or watching a lecture about ASD. Results showed no differences for the two groups concerning understanding and identifying autism. Yet, participants in the experimental group chose more positive and fewer negative traits to describe autism and showed more interest in learning more about autism. The third study tested pre-service teachers' perceptions about students with ASD after reading young-adult literature books with characters with autism (Barrio et al., 2019). They found that differences in teachers' prior perceptions declined after reading the books. Their qualitative data further reinforced an increase in knowledge and understanding of children with ASD.

Discussion

This scoping review aimed to map the literature on how autism is portrayed in different types of media, including non-fiction and fiction. The study included 31 records from PubMed and PsychInfo databases, and secondary searches. The research found that most studies between 2010 and 2023 focused on newspapers and movies & TV, and the least on social media. The media types differ in terms of stigmatisation, with movies & TV and newspapers being more stigmatising than literature and social media. Stigmatisation often involves negative portrayals of autism and exaggeration of symptoms, such as savantism. The review highlights the need for autistic individuals to be included in media representation discussions. Overall, our scoping review underscores the importance of examining the portrayal of autism in the media and provides valuable insights into how different types of media can influence public attitudes and beliefs about autism.

The media type associated with the highest level of stigmatisation, negative connotation or misinformation seems to be movies & TV. All included records of this media type criticise the examined media for one or more of these. One study compared U.S. movies and their Indian remakes (Ejaz, 2020). They found that the Indian remakes are less stigmatising. Furthermore, savantism seems to be exaggerated in this media type, while it is less common in other media types. On a similar note, another point that was frequently made by the included records was that autism symptoms were often exaggerated or stuck too much to the diagnostic criteria. Including representatives from the autistic community in the creation of media would most likely also add diversity and nuances to the symptoms and characteristics. Negative portrayals in movies & TV could be particularly damaging because a large proportion of people watch movies and series frequently, often on a daily basis, more so than they read literature. Additionally, some of the reviewed movies and series are highly popular on platforms like Netflix (e.g. *The Good Doctor*), while the reviewed literature may not have such a large consumer base. Our review suggests that the media type that may have the greatest influence on consumers due to its large reach is actually the one with the most stigmatising effects.

One of the primary limitations of the media coverage of autism is the lack of inclusion of perspectives from autistic individuals themselves. This has been prominently criticised by articles that cover the topic. However, it appears that the quality of coverage varies depending on the media outlet. For instance, in non-fiction media, newspapers tend to have stigmatising content, and our included research papers highlight the limitations of newspaper portrayals of autism. In contrast, social media tends to portray autistic individuals more positively. This pattern may be explained by the fact that social media platforms are more likely to feature content created by autistic individuals themselves, whereas newspapers often fail to include voices from the autistic community. In fiction media, the distinction is not as clear, though there seems to be a trend for more accurate, diverse and positive portrayal in books than in movies & TV. In line with our findings, a recent study by Orm et al. (2023) found that the four main changes that autistic individuals would encourage to improve media representation are autistic actors, autistic writers, greater diversity in autistic characters and making autism incidental instead of the main story.

Our included studies testing the effects on consumers clearly demonstrate an influence of media portrayal on how people view autistic people, showing the importance of a correct, positive and diverse representation. Bury et al. (2022) found that movies & TV were more related to learning stigma than other types of media, which coincides with the results of our review. Yet, other studies found that

movies and TV can influence both children and adults positively. While the portrayal of savantism (e.g. in *The Good Doctor*) might not represent a statistical correctness, results still show that having a main character with autism leads to a more positive perception of autism (Stern & Barnes, 2019).

Practical implications and future research

Considering the results of this scoping review, we identify three main implications both for future media portrayal and for research about this topic: First, media portrayal of autistic individuals is still often stigmatising, negative and either represents autistic individuals without diversity or overrepresents characteristics like savantism. Considering that adults are the main audience and that especially fiction media often portrays autistic adults, this has major implications. Many adults with autism go undiagnosed or self-diagnosed (Huang et al., 2020; McDonald, 2020) and may relate to the characters they see on screen. This can be beneficial if it helps them recognise issues with their own behaviour and encourages them to seek help. However, if the representation in the media perpetuates stigma and negativity, they may be discouraged from seeking help and even begin to view their own characteristics in a negative light. As a consequence, media representation of autistic people should include the voices of autistic people themselves, as there is often very little self-representation, except on social media. The second implication is that autistic adults seem to be underrepresented especially in newspaper coverage. Finally, the third implication is that more research focus should be put on newer media. This includes video games, but especially social media, as social media seems to be a medium where autism can and already is being portrayed by autistic people themselves, leading to a more diverse, more realistic and more positive representation. Yet, it is also important to examine the reach of specific media outlets. While self-portrayal in social media by autistic people themselves is highly important and shows a new and diverse picture of the community, they might not have as much reach as popular series portraying autistic characters. Note for example that forum posts might only reach autistic individuals. Such representation might shape views of the autistic community, which is of great value, but might not reach the general population.

Limitations of the current review

Secondary search strategies yielded almost as many relevant articles as our primary search strategies. This shows that the topic is highly interdisciplinary, and a lot of research comes from outside psychology and medicine. Furthermore, the broad heterogeneity of the included

papers makes it difficult to draw comparative conclusions. For example, while some papers included several hundreds of news articles, other papers only investigated one specific book. Our results are therefore not generalisable to all existing media, but map and highlight the current literature existing on the topic of media portrayal.

Additionally, the results of this scoping review may be biased by different methodological aspects. Firstly, we used only the databases Pubmed and Psychinfo, which cover a great amount of relevant literature, but exclude all articles covered only by other databases. Also, we excluded all articles written in other languages than German and English. This may limit the representation of certain cultural contexts or regions. Articles published after the cut-off date (Feb. 1st 2023) as well as grey literature and conference abstracts are also excluded. Like all reviews, this scoping review is likely affected by publication bias, the tendency to publish studies with significant findings or positive outcomes, which may result in an overrepresentation of certain perspectives or themes related to the portrayal of autism in media.

Conclusion

This scoping review provides an overview of the literature on how autism is portrayed in the media. Although there has been an increase in the portrayal of autism in various types of media, including fiction and non-fiction, the content still tends to be stigmatising and negative, often failing to show the perspective of autistic individuals. While future research should put more focus on newer forms of media, such as social media, content creators should strive to incorporate the perspectives of autistic individuals themselves in media portrayal. By actively involving autistic individuals in the content creation process, media can become more authentic and accurate, promoting a better understanding and acceptance of autism.

Author contributions All authors contributed to the study conception and design. GM and VS performed the literature search and data analysis, GM drafted the original manuscript, and all authors critically reviewed the manuscript. All authors read and approved the final manuscript.

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Data availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest We have no conflict of interest to declare.

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References

- Akhtar, N., Dinishak, J., & Frymiare, J. L. (2022). Still Infantilizing Autism? An Update and Extension of Stevenson et al. (2011). *Autism Adulthood*, 4(3), 224–232.
- Angulo-Jiménez, H., & DeThorne, L. (2019). Narratives About Autism: An Analysis of YouTube Videos by Individuals Who Self-Identify as Autistic. *American Journal of Speech-Language Pathology*, 28(2), 569–590.
- Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Baroutsis, A., Eckert, C., Newman, S., & Adams, D. (2021). How is autism portrayed in news media? A content analysis of Australian newspapers articles from 2016–2018. *Disability & Society*, 38(6), 963–986. <https://doi.org/10.1080/09687599.2021.1971067>
- Barrio, B. L., Kelley, J. E., & Cardon, T. (2019). Pre-service educators' understanding and perceptions of ASD before and after reading ASD narrative fiction. *Northwest Journal of Teacher Education*, 14(1), 5.
- Belcher, E., & Maich, K. (2014). ASD in popular media: Storied reflections of societal views. *Brock Education*, 23, 97–115.
- Berger, R. J. (2016). Disability and humor in film and television: A content analysis. In *Disability and Qualitative Inquiry* (177–188). Routledge.
- Bie, B., & Tang, L. (2015). Representation of autism in leading newspapers in china: A content analysis. *Health Communication*, 30(9), 884–893.
- Bury, S. M., Haschek, A., Wenzel, M., Spoor, J. R., & Hedley, D. (2022). Brief Report: Learning About Autism: Is the Source of Autism Knowledge Associated with Differences in Autism Knowledge, Autism Identity, and Experiences of Stigma. *Journal of Autism and Developmental Disorders*. <https://doi.org/10.1007/s10803-022-05823-5>
- Chow, E., & Hayakawa, M. (2022). Transforming children's perception of autism through the “superpower” of media representation in the U.S. *Journal of Children and Media*, 16(4), 543–553.
- Clarke, J. N. (2012). Representations of Autism in US magazines for women in comparison to the general audience: 2000–2009 US English language publications. *Journal of Children and Media*, 6(2), 182–197.
- Dean, M., & Nordahl-Hansen, A. (2022). A Review of Research Studying Film and Television Representations of ASD. *Review Journal of Autism and Developmental Disorders*, 9(4), 470–479.
- Draaisma, D. (2009). Stereotypes of autism. *Philosophical Transactions of the Royal Society b: Biological Sciences*, 364(1522), 1475–1480.
- Ejaz, Khadija. (2020). By any other name: portrayals of autism across international film remakes. *Disability & Society*, 35(5), 783–810. <https://doi.org/10.1080/09687599.2019.1647146>
- Fombonne, E. (2003). Epidemiological Surveys of Autism and Other Pervasive Developmental Disorders: An Update. *Journal of Autism and Developmental Disorders*, 33(4), 365–382.
- Fontes, R., & Pino-Juste, M. (2022). Portrayals of autism and social awareness: A scoping review. *Advances in Autism*, 8(3), 196–206.
- Garner, A., Jones, S., & Harwood, V. (2015). Authentic representations or stereotyped ‘outliers’: Using the CARS2 to assess film portrayals of Autism Spectrum Disorders. *International Journal of Culture and Mental Health*, 8(4), 414–425.
- Gauld, C., Maquet, J., Micoulaud-Franchi, J. A., & Dumas, G. (2022). Popular and Scientific Discourse on Autism: Representational Cross-Cultural Analysis of Epistemic Communities to Inform Policy and Practice. *Journal of Medical Internet Research*, 24(6), e32912.
- Hannam, K. (2014). The portrayal of autism in film, post Rainman. *Good Autism Practice (GAP)*, 15(1), 91–99.
- Holton, A. E., Farrell, L. C., & Fudge, J. L. (2014). A Threatening Space?: Stigmatization and the Framing of Autism in the News. *Communication Studies*, 65(2), 189–207.
- Howlin, P., Goode, S., Hutton, J., & Rutter, M. (2009). Savant skills in autism: Psychometric approaches and parental reports. *Philosophical Transactions of the Royal Society b: Biological Sciences*, 364(1522), 1359–1367.
- Huang, Y., Arnold, S. R., Foley, K.-R., & Trollor, J. N. (2020). Diagnosis of autism in adulthood: A scoping review. *Autism*, 24(6), 1311–1327.
- Huws, J. C., & Jones, R. S. P. (2011). Missing voices: Representations of autism in British newspapers, 1999–2008. *British Journal of Learning Disabilities*, 39(2), 98–104.
- John, R. P. S., Knott, F. J., & Harvey, K. N. (2018). Myths about autism: An exploratory study using focus groups. *Autism*, 22, 845–854.
- Jones, S. C., & Harwood, V. (2009). Representations of autism in Australian print media. *Disability & Society*, 24(1), 5–18.
- Kelley, J. E., Barrio, B. L., Cardon, T. A., Brando-Subis, C., Lee, S., & Smith, K. (2018). DSM-5 Autism Spectrum Disorder Symptomology in Award-Winning Narrative Fiction. *Education and Training in Autism and Developmental Disabilities*, 53(2), 115–127.
- Lewin, N., & Akhtar, N. (2021). Neurodiversity and deficit perspectives in The Washington Post's coverage of autism. *Disability & Society*, 36(5), 812–833.
- Maich, K., Belcher, C., Davies, A. W. J., Rose, J., & van Rhijn, T. (2022). Pathology persists and stigma stays: Representations of (autistic) Stephen Greaves in the post-apocalyptic world. *Disability & Society*, 37(6), 955–971.
- Mann, B. W. (2019). Autism Narratives in Media Coverage of the MMR Vaccine-Autism Controversy under a Crip Futurism Framework. *Health Communication*, 34(9), 984–990.
- Mar, R., Djikic, M., & Oatley, K. (2008). Effects of reading on knowledge, social abilities, and selfhood: Theory and empirical studies. In *Directions in Empirical Literary Studies*. John Benjamins.
- McDonald, T. A. M. (2020). Autism Identity and the “Lost Generation”: Structural Validation of the Autism Spectrum Identity Scale (ASIS) and Comparison of Diagnosed and Self-Diagnosed Adults on the Autism Spectrum. *Autism Adulthood*, 2(1), 13–23.
- Munn, Z., Peters, M.D.J., Stern, C. et al. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Med Res Methodol* 18:143. <https://doi.org/10.1186/s12874-018-0611-x>

- Nairn, R., Coverdale, J., & Claasen, D. (2001). From source material to news story in New Zealand print media: A prospective study of the stigmatizing processes in depicting mental illness. *The Australian and New Zealand Journal of Psychiatry*, 35(5), 654–659.
- Nordahl-Hansen, A., & Øien, R. A. (2021). Movie and TV Depictions of Autism Spectrum Disorder. In F. R. Volkmar (Ed.), *Encyclopedia of Autism Spectrum Disorders* (pp. 3018–3023). Springer International Publishing.
- Nordahl-Hansen, A., Øien, R. A., & Fletcher-Watson, S. (2018). Pros and Cons of Character Portrayals of Autism on TV and Film. *Journal of Autism and Developmental Disorders*, 48(2), 635–636.
- Nordahl-Hansen, A., Tøndevold, M., & Fletcher-Watson, S. (2018). Mental health on screen: A DSM-5 dissection of portrayals of autism spectrum disorders in film and TV. *Psychiatry Research*, 262, 351–353.
- Orm, S., Dean, M., Fletcher-Watson, S., & Nordahl-Hansen, A. (2023). Short report: Autistic adults' recommendations on how to improve autistic portrayals in TV-series and movies. *Research in Developmental Disabilities*, 136, 104484.
- Parsloe, S. M. (2015). Discourses of Disability, Narratives of Community: Reclaiming an Autistic Identity Online. *Journal of Applied Communication Research*, 43(3), 336–356.
- Peters, M. D., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D., Soares, C. B., et al. (2015). Guidance for conducting systematic scoping reviews. *International Journal of Evidence-Based Healthcare*, 13(3), 141–146. <https://doi.org/10.1097/XEB.0000000000000050>
- Pham, H. H., Sandberg, N., Trinkl, J., & Thayer, J. (2022). Racial and Ethnic Differences in Rates and Age of Diagnosis of Autism Spectrum Disorder. *JAMA Network Open*, 5(10), e2239604–e2239604.
- Poe, P. S., & Moseley, M. C. (2016). She's a little different": autism-spectrum disorders in primetime tv dramas. *ETC: A Review of General Semantics*, 73(4), 291–313.
- Prochnow, A. (2014). An analysis of autism through media representation. *ETC: A Review of General Semantics*, 71(2), 133–149.
- Ressa, T. (2021). Histrionics of Autism in the Media and the Dangers of False Balance and False Identity on Neurotypical Viewers. *Journal of Disability Studies in Education*, 2(1), 1–26.
- Stern, S. C., & Barnes, J. L. (2019). Brief Report: Does Watching The Good Doctor Affect Knowledge of and Attitudes Toward Autism? *Journal of Autism and Developmental Disorders*, 49(6), 2581–2588.
- Tang, L., & Bie, B. (2016). The stigma of autism in china: An analysis of newspaper portrayals of autism between 2003 and 2012. *Health Communication*, 31(4), 445–452.
- Tharian, P. R., Henderson, S., Wathanasin, N., Hayden, N., Chester, V., & Tromans, S. (2019). Characters with autism spectrum disorder in fiction: Where are the women and girls? *Advances in Autism*, 5(1), 50–63.
- Wendorf Muhamad, J., & Yang, F. (2017). Framing Autism: A Content Analysis of Five Major News Frames in U.S.-Based Newspapers. *Journal of Health Communication*, 22(3), 190–197.
- Yu, N., & Farrell, L. (2020). Autism in the media: A longitudinal study of stigma cues and framing of attribution. *Newspaper Research Journal*, 41(4), 489–505.
- Zeidan, J., Fombonne, E., Scorah, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., Shih, A., & Elsabbagh, M. (2022). Global prevalence of autism: A systematic review update. *Autism Research*, 15(5), 778–790.

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