

Research Article

Autism in Saudi Arabia: Media and the Medical Model of Disability

Mona F. Sulaimani ¹ and Wid H. Daghurstani ²

¹Department of Special Education, Faculty of Educational Graduate Studies, King Abdulaziz University, Jeddah, Saudi Arabia

²Department of Learning and Developmental Disabilities, College of Graduate Studies, Arabian Gulf University, Manama, Bahrain

Correspondence should be addressed to Mona F. Sulaimani; mfsulaimani@kau.edu.sa

Received 11 February 2022; Revised 5 June 2022; Accepted 21 June 2022; Published 19 July 2022

Academic Editor: Zohaib Khurshid

Copyright © 2022 Mona F. Sulaimani and Wid H. Daghurstani. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Saudi Arabia as a traditional society is mostly based on the medical model of disability to interpret autism that increases the stigma and the negative social attitude towards the condition. Additionally, the media plays a big role in portraying the condition as a “disorder” that contributes to the cultural judgment within the country. In this paper, the authors reviewed 57 articles between 2011 and 2021 using the databases of Google, Swisscows, and StartPage. Document analysis was used to analyse the data from both journals and newspapers. Results have shown that the studies exploring autism in media are quite limited with almost nonexistent papers on the roles of media and the medical model of disability in the stigmatisation of autism in Saudi Arabia.

1. Introduction

The media may be considered one of the most reliable sources of information available, especially in the absence of an adequate education [1, 2]. People tend to depend on media to understand even the most sensitive subjects affecting society, which can lead to a lack of informed judgment [3]. Autism spectrum disorder (ASD) as described by the medical model, also known as autism, is considered among these sensitive subjects. Media contributes to autism stigma by relying on the medical model of disability and incorrect information. Yet there is a lack of enough information about the impact of media on the behaviours and emotions of the general population and the public stigmatisation of autistic people [3, 4]. Stigmatisation can be defined as an adverse reaction to a dissimilarity perceived as different [5]. Stigmatisation content associated with disabilities, mental conditions, ethnicity, race, and religion is manifested through media leading to stereotypes and the community’s stigma attitudes towards anything different [6].

Such negative coverage in the media can be referred to as structural stigmatisation [7]. Structural stigmatisation

entails inequalities that are shown through rules, procedures, and policies within society. In the Kingdom of Saudi Arabia, the topic of autism—as with other types of disabilities—has mostly been addressed from a medical model’s point of view. Most studies in Saudi Arabia view individuals with disabilities through a medical model lens [8] in which stigma and negative social attitudes towards disabilities are common among Arab societies and mostly lead to the isolation of the family [9].

This culture is clearly consistent with the medical model of disability that uses deficit terms to refer to autism as a disorder, and which constructs autistic individuals as having a biological dysfunction. When autism is not well understood, people usually rely on the media to get guidance on understanding this subject. Yet the media disappointingly provides insight into the condition from a largely negative and biased angle, in which autistic individuals cannot function as “normal” people as perceived by the medical model [10]. Autism is heavily medicalised; with the diagnosis of autism being subjective, certain traits are considered abnormal in the eyes of society [4]. In contrast with the social model that suggests “autism is a neurological diversity which is simply a part of being human, not necessarily a problem” [4].

Information about autism is not conveyed neutrally but rather leans toward a culturally expected method that is biased and stereotyped. In this paper, we will explore the roles of the media and the medical model of disability in the stigmatisation of autistic individuals.

2. Literature Review

2.1. Overview of the Medical Model of Disability. As outlined by Retief and Letšosa [11], the medical model perceives disability as a malfunction of a physical system. It further regards people living with impairments as incapable of functioning like “normal” people, effectively implying that they are problems that need to be solved. Additionally, it perceives disability as a deficit resulting from an illness, an injury, or another well-being ailment that should be treated and/or cured [12]. The medical model refers to disability as a “personal tragedy” [11], given its negative and pitiable view of disability. In this regard, the focus is on the limitations associated with the disability, rather than on the environmental factors that might have negative impacts on both the individuals themselves and their families [11].

By contrast, the social model regards disability as a situation created by society [13]. The social model, according to Retief and Letšosa [11], was developed to create a social change and as a reaction to the medical model that focuses on the limitation associated with the individuals’ disability [11]. The social model on the other hand view disability as a “socially constructed disadvantage” [11], and as outlined by Purtell [14], “disabled people are people who are “disabled” by the society they live in and by the impact of society’s structures and attitudes” [14]. Therefore, disability is not to be viewed as an aspect of an individual living with an impairment but rather as imposed by society and the disabling environment in which the impaired person lives. Exclusion, discrimination, and stigmatisation are caused by society. Noticeably, the medical model—unlike the social model—uses terms and portrayals that can cause or strengthen the stigmatisation of people living with autism. Some disorders, diseases, and risks are prevalent in research conducted under the medical model. Thus, it is usually criticised for regarding disability as an individual shortfall in physical operation [15]. As such, this damaging perception of disability has largely promoted the stigmatisation of autistic individuals in Saudi Arabia, which confirms social and cultural perceptions of disability [16].

Culture plays a significant role in which characteristics are considered socially unacceptable, stigmatisation of certain groups, and the expectation associated with autism [17]. Autistic individuals are among the most stigmatised group [18], which can result in autism being seen as a source of shame and disappointment [13]. Tang and Bie [17] further acknowledged that autistic people have experienced and continue to experience culture-specific stigmas such as discrimination, labelling, and rejection.

The disability scholar Liz Crow (in [19]) noted that the model attributes all of the individual disadvantages experienced by impaired people to their impairments, and nowhere does the model propose a social and environmental

change to accommodate them. This stigma results in a worsened mental condition from the mental stress it causes, especially among autistic people. Although born of culture, stigmas are enhanced and popularised through various means, one is media. The media, as a major communication channel, plays a significant role in developing and maintaining stigmas by misrepresenting autistic people [20]. However, it is important to note that media, specifically social media, can be a positive tool in helping autists in Saudi Arabia, especially in an environment where they face additional cultural challenges to those in the west such as poor services, social stigma, and technologies developed to fit western communities. Social media can help autists overcome social difficulties [21].

2.2. Media Advertisement of the Medical Model regarding Autism in Saudi Arabia. Few reports have been published on the present topic, and most of them were published in Arabic, limiting their international viewership. In Saudi Arabia, autistic individuals experience many cultural stigmas, which are unfortunately enhanced by the media and by its over-reliance on research conducted and explained using the medical model. According to Fahad et al. [22], most Saudi parents look up autism information online. They attribute this tendency to the shortage of government-sponsored education on autism and the shortage of research in the field within the country. However, research discredits the most visited websites as unreliable. Most Saudi media outlets contain a stereotypical representation of autism that is usually based on the medical model.

Noticeably, the newspaper also misrepresented autism as a condition in children because most of its posts contained children as the main subjects, which isolates and increases the stigmatisation of autistic adults as a result [20]. Those who venture online for information on autism are exposed to worse stigmatisation. Some online sites have images that portrayed autistic children in chains and behind bars and glass walls. Images of seemingly violent children are also common [23].

Stigma is one of the most difficult aspects that surrounds autism and has much more far-reaching consequences for the autists and their families. They often encounter a hostile and negative reaction from the public population, especially when their daughters/sons behave inappropriately [24]. Such stigmatisation mostly happens because of the stereotypical and negative image of autism and its attributes, which is usually mistaken for bad parenting [26]. Furthermore, in order to overcome the prevalent stigmatisation surrounding autism in Saudi Arabia, there is a need for increased public awareness in addition to psychological interventions to help the families cope with such stigmatisation [24].

2.3. Saudi Culture’s Connection to the Medical Model of Disability. As defined by Hussain et al. [25], culture is the outer articulation of individuals’ psychological life, in the form of many factors such as beliefs and customs. In Saudi Arabia, as in most traditional societies, stigma is often associated with any type of disability, about which

discrimination and intolerance prevail [24]. Furthermore, being part of a culture and fitting into a particular society usually portray considerable effects on individuals with a disability and their caregivers because norms and traditions may determine how such individuals are looked at and therefore treated. According to Alqahtani [27], many parents in Saudi Arabia believe autism is a result of an evil eye or black magic; thus, cultural and informal interventions are used such as taking children to a religious clerk for a cure. Additionally, autism is associated with a high level of shame and embarrassment that tarnish a family's reputation and lineage [16]. Families with autistic individuals are usually avoided by society, and their members are not marriageable given the stigma and the lack of understanding of autism [28]. Terms such as "vulnerability, continuing reliance, being homebound, substandard lives, and inability to produce" [8] are often associated with disabled individuals in Saudi society.

Most media sources publish unverified information such as newspapers and social media, which develop a lack of social awareness, the stigma of the condition, and the marginalisation of autistic individuals and their families by quoting research papers established on the medical model of disability. In a blog discussing autism representation in media, Feder [1] explains that media mostly focuses on the struggle of autism, and "it conveys to non-autistic people that the autism experience is nothing but a suffering that encourages people to view autistic people as objects worthy of patronizing pity instead of people worthy of respect."

Due to the medical prototype understanding of autism, in addition to the traditional culture of Saudi Arabia, autistic individuals are often excluded, pressured to follow what is considered "normal," and looked at as incapable and inadequate members of society [29–31]. Preconceptions and misconceptions about the condition by society place greater limitations on the autists than the characteristics of the condition itself. Following what is common, the media—just like the social attitudes—also tries to portray autism based on information from a culturally biased, stigmatising angle [32]. Therefore, television and radio programmes addressing disabled individuals often have an adverse effect on humanity and inevitably worsen the community's attitudes toward the individuals themselves and their families.

3. Study Method

3.1. Selection of Sources. The data for this study are sourced and documented during 2011–2021. This is a critical step in the selection of data. The timeframe includes sources that speak to the topic being researched. The search was conducted on the databases of Google, Swisscows, and StartPage. A Boolean approach was used to widen the scope of selecting articles for the study. This is where we utilise (AND, OR, NOT) when running searches in the databases. Here, the keywords to use are autism AND media, OR medical model of disability, AND effects on children, NOT general medical implication [33]. The inclusion and exclusion criteria were defined. In the hindsight, the articles must be published within 2011–2021. Then, the reliability of the sources was checked by looking at the authors

and publishers and their writings on the researched topic. Recent and up-to-date information was also considered in addition to the citation of these resources in other articles. This ensured that only credible sources were included. We also examined several perspectives on the researched topic to explore more than one point of view. The research methodologies applied by the authors helped in identifying reliable data. Titles, summaries, and abstracts provided enough information for screening these sources. The initial search resulted in the identification of 167 articles. Through screening, other sources were removed leaving us with 57 credible documents for analysis; see Figure 1 [33].

This research was conducted using a documentary analysis approach. Although documents are generally created for particular purposes other than research, researchers can use documents such as books, journals, magazine articles, and newspapers for their own research purposes [34]. Documentary analyses can help generate new understandings of a particular topic and yield a wide variety of data, including social, historical, economic, political, and even personal information [35]. According to Bowen [36], researchers use document analysis to give voice and meaning to the researched topic which consists of three different types: public records, personal documents, and physical evidence. In this study, we used personal documents that included articles in both journals and newspapers. We started with initial research using Google, Swisscows and StartPage as research engines to explore autism representation in media, medical model's interpretation of autism, and local newspaper websites in both Arabic and English languages. Thus, based on the findings, narrow research was conducted to focus on more relevant and more recent documents, which enabled us to locate sources related to the media, specifically on autistic individuals in Saudi Arabia. The search was carried out by applying keywords related to the main study topic, including autism, media, and the medical model of disability. Synonyms of these keywords were also used such as autistic, pervasive developmental disorder and news. Although different databases were used as mentioned earlier, the Google search engine was the major source because it covered a wide range of relevant sources. Journals on different research topics were used to help identify relevant documents such as media and communication, autism and stigmatisation, models of disabilities, and cultural norms. Some documents illustrate the efforts to overcome social difficulties or build helpful connections by autistic individuals through social media platform, which according to Mashat [37] cause more harm than good. Additionally, it is a description of how the Arab culture affects the people living with autism in the Arabian countries (Alallawi et al., 2020) and a review of the current status and challenges of autism in Saudi Arabia with a prediction of the future state (Sulaimani & Gut, 2019). [16]. Other articles include [39] that gives a clear picture of how the Saudi Arabian media publishes information related to Autism [40], which indicates the prevalence of autism in the Kingdom of Saudi Arabia. In Alzahrani and Brigham's [41] paper, they evaluate how the Saudi Arabian media offer programmes to educate on autism preparedness.

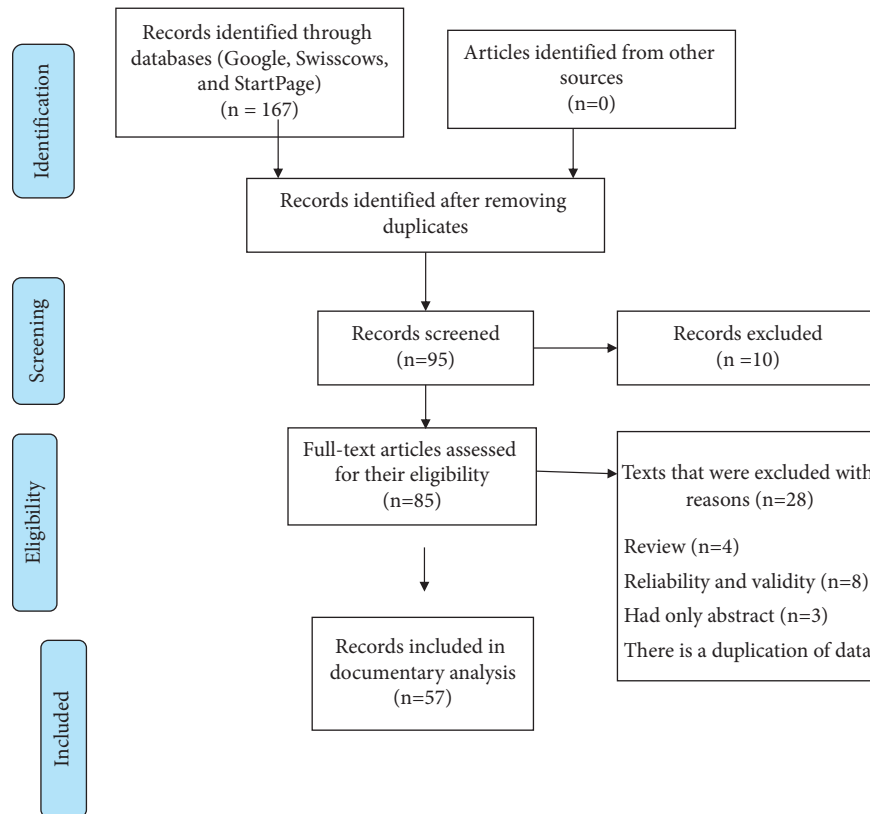


FIGURE 1: PRISMA flowchart for the selection of sources.

An overall search of the documents showed a wide range of sources related to autistic individuals and their families' quality of life, which has been published by a number of researchers, including Parsons et al. [42], Coales et al. [43], Vasilopoulou and Nisbet [44], and Alotaibi [45]. Nevertheless, studies investigating autism in media are remarkably limited. Furthermore, research on the roles of the media and the medical model of disability in the stigmatisation of autism in Saudi Arabia is practically nonexistent. Therefore, more focus was given to documents that are directly relevant to autistic individuals and the media, in order to effectively support the study's aims. Only findings from relevant documents were considered throughout the search, to avoid any duplication with similar, previously published research.

3.2. Supportive Arguments. Most studies and reports tend to lean on the medical model of disability that portrays autism in a socially adverse manner [4]. The model uses terms and explanations that deepen the negative social perception of autism as a disabling condition, causing impairment, developmental delays, and communication and social difficulties. Terms such as atypical behaviours, symptoms, and stereotyped patterns are used for diagnoses and encourage continuous research for a cure. This model defines human beings by the state with which they are living, effectively limiting multitudes of people with different characteristics to a stereotype of being disabled and limited by their condition. Therefore, it depicts human beings living with disabilities as

limited and lesser. A paper by Woods [46] explores how medicalising autism increases day-to-day problems for autists and the medical model of disability is the dominant model when addressing the condition. Winter [47], an autistic self-advocate, says, "Our autism is called tragedy, or even by some parent groups the enemy to be fought at all costs" (in [48]). In his paper, Kapp [49] also explains that the medical model's dehumanisation contributes to autists' marginalisation.

Media has an important influence on society, and the perception of the general population is not always positive, especially towards disabled individuals. Research conducted on the medical model dominates media outlets [50], in which media focuses on presenting disabilities through the medical model, where individuals are judged according to their inability to interact "normally." Regardless of the fact that there is an ongoing demand for human rights and the vast adoption of the social model, media seems to fall behind in following the changes [51]. The terminology used in media reinforces negative and discriminative language that still revolves around the medical model of disability. As Wood [51] stated, "media focus is on the impairment more than the individual and still tends to use the medical model of disability." Prochnow [52] discussed the media's limitation in representing autism in which it neglects its responsibilities to show accurate portrayals of the condition. In his paper, Mckeever [53] explores both the *New York Times* and *Washington Post* coverage of autism, the common findings focused on the medical aspect of the condition in

addition to looking for solutions and/or cures. In another coverage of the Australian print media by Jones and Harwood [54], the findings support the stereotype of labelling autists as dangerous and uncontrollable.

The media also tends to spread information that does not reflect the reality of autism, often using fear and public interest to generate sales and viewership. As Draaisma [55] emphasised, “The general perception of autism, perhaps best thought of as a set of stereotypes, is graphically brought out by what movies need or need not show to explain the autistic condition.” With the enormous disparities within the autism spectrum, the media mostly echoes misunderstandings and misconceptions of the condition by the larger society, instead of being a voice of awareness. According to Gambacurta [56], media tends to spread unrealistic stereotypes about autism, such as the savant syndrome, which means that the autist has exceptional skill. Although it is true, it only applies to about 10% of the autism community that media seems to ignore and does not represent all ends of the condition. Therefore, it proliferates the myth that all autists often have a gift, and it has been attributed to portrayals in films, books, and TV shows [57]. A study by Maich [58] shows that media plays an influential role in the social understanding of autism and how it reflects on those who are dealing with autists. A similar point is discussed in another paper where the public views are influenced by the media coverage of autism, in which the media dehumanise and devalue autistic individuals that increases the stigmatisation of the condition [32]. Another study explores the framing of autism in Finland’s newspaper and how it portrays autism through a clinical lens that had a big impact on how the public perceives the condition [59].

Furthermore, media touches on other topics related to autism, perhaps the most popular are treatment and cure [52]. When autism is perceived from a medical model point of view, the search for a magic cure increases, with the media producing sensational topics to attract public attention. According to Mruzek [60], a simple Google research on autism treatment would result in 17,100 suggestions representing information from newspapers, magazines, blogs, and television. Thus, because most of what is learned about autism come from films, television shows, and the Internet, it becomes vital to address how such media represents the condition as well as its role in the proliferation of a biased stereotype [55].

Exaggerations and intentional misrepresentations are also common. Stigmas in the media mainly take the form of portrayal through labels, social deficits, psychiatric symptoms, and stereotypical physical appearances of autistic individuals. Despite the high prevalence of autism, the media frequently does not address the condition adequately, which may possess a significant effect on the autism population and the people around them. Living with autism, working alongside autistic individuals, and trying to create a supportive enabling environment are not easy tasks. Being judged as “odd” or “not normal” and being perpetually misunderstood are all daily battles that individuals with autism and their caregivers experience in schools, in the communal sphere, and with relatives. Autism is many things, both challenging and inspiring, and when autists are

faced with the unfair judgment of being troubled, impaired, and incomplete—as the medical model describes them—this increases their limitations and constrains their opportunities to live their lives with dignity and respect.

From this review, we can say that the media, both local and international, that can be accessed by Saudis seeking insight on autism advances the stigmatisation of autism. Although the information the media covers is mostly scientific, it is still established on the medical template, which uses stigmatising expressions and explanations for autism. Yet the media is the most available source of this highly sought information, and it also conveys some essential facts about the condition.

3.3. Key Results. The medical model perceives disability as a deficit ensuing from an illness or an injury that should be treated or cured. The stigmatisation of autistic persons results in the condition being perceived as a source of shame and disappointment. This stigma leads to a worsened mental condition resulting from the psychological stress it causes, especially among autists. Most media coverage relies on the medical model of disability to address autism and portray the condition as a struggle. Additionally, with the media’s effect on society and the condition portrayed inaccurately or negatively, autists are judged according to such portraits. Analysing documents through this paper, most articles represent autists as odd, mute, aggressive, and bizarre or gifted with extraordinary abilities. According to Draaisma [55], “it is of a vital importance to scrutinize media’s representations and to check whether or not they are misrepresenting autism.” Such stereotypes lead to unjust and discriminative society. In Saudi Arabian society, the majority of the people believe that autism is an illness that emanates from an evil eye or black magic, urging them to use cultural and informal interventions such as taking children to religious clerks searching for a cure to end their struggle. Between a society that is heavily dependent on the medical model of disability and a media in which autism is portrayed negatively and or inaccurately, autists profoundly struggle with stigmatisation and discrimination.

3.4. Strengths of the Study. There are limited studies that explore the medical model of disabilities and autism within media in the Kingdom of Saudi Arabia. Additionally, due to cultural stigmatisation associated with autism, the study established a specific and collective context within Saudi Arabia that could also expound on the condition. Autism perceived as a disorder reflects heavily on the Saudi culture and control how caregivers behave towards their children. Culture and religion are two very important aspects of the condition within the Saudi communities that are not often addressed or explored.

3.5. Limitations of the Study. There is a lack of empirical evidence to demonstrate the practices driven by the culture and religion within the Saudi society to deal with autism. It is not easy to establish a link between the medical model of

disability and media and how it affects the perception of the condition in Saudi Arabia. Other sources of information were hard to access.

4. Conclusion

The consequences of what the media publishes can have serious repercussions on autism communities and those around them. How information accessed by the public depicts autism and confirms the medical model's perceptions can advance the condition's stigmatisation. The accuracy and fairness of the published material should be given sufficient importance when addressing autism, to avoid labelling and the spreading of misconceptions about the condition.

Additionally, adapting only one model of disability, the medical model—which labels autistic individuals as a problem—will pave the way to many pitfalls. In addition, cultural attitudes within the traditional society of Saudi Arabia which seen when the manifestations of autism are discussed and explained. Between the media's adaptation of the medical model of disability in how it portrays autism and the cultural norms in Saudi society, the general public may easily tend to generalise what they see and hear to the entire population of autistic individuals. To increase awareness, focus on just practices, and ensuring sufficient accuracy and avoiding stigmatisation will influence how others think about autism and will lead to better chances of changing the community's attitudes and values. Developing a more just and dignified approach will lead to acceptance and ensure that all members of society will have the same opportunities for social participation to the best of their abilities.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

The authors (Dr. Mona Sulaimani and Dr. Wid Daghostani). This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. will pay the fee of the journal.

References

- [1] J. Feder, "Autism representation in the media-and how it impacts real life," 2021, <https://www.accessibility.com/blog/autism-representation-in-the-media-and-how-it-impacts-real-life>.
- [2] D. Westerman, P. R. Spence, and B. Van Der Heide, "Social media as information source: recency of updates and credibility of information," *Journal of Computer-Mediated Communication*, vol. 19, no. 2, pp. 171–183, 2013.
- [3] K. Srivastava, S. Chaudhury, P. S. Bhat, and S. Mujawar, "Media and mental health," *Industrial Psychiatry Journal*, vol. 27, no. 1, 2018.
- [4] M. Waltz, *Autism: A Social and Medical History*, Palgrave Macmillan, London, UK, 2013.
- [5] F. Saeed, R. Mihan, S. Z. Mousavi et al., "A narrative review of stigma related to infectious disease outbreaks: what can be learned in the face of the Covid-19 pandemic?" 2020, <https://www.frontiersin.org/articles/10.3389/fpsy.2020.565919/full>.
- [6] M. A. Subu, D. F. Wati, N. Netrida et al., "Types of stigma experienced by patients with mental illness and mental health nurses in Indonesia: a qualitative content analysis," *International Journal of Mental Health Systems*, vol. 15, no. 1, 2021.
- [7] D. Baeyens, A. M. Moniquet, M. Danckaerts, and S. van der Oord, "A comparative study of the structural stigmatisation of ADHD and autism spectrum disorder in Flemish newspapers," *Tijdschrift voor Psychiatrie*, vol. 59, no. 5, pp. 269–277, 2017.
- [8] S. I. Al-Gain and S. S. Al-Abdulwahab, "Issues and obstacles in disability research in Saudi Arabia," *Asia Pacific Disability Rehabilitation Journal*, vol. 13, no. 1, pp. 45–49, 2005.
- [9] H. Alsayyari, "Perceptions of Arab American mothers of children with autism spectrum disorder: an exploratory," 2017, <https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=8318&context=etd>.
- [10] N. Chown and L. Beardon, "Theoretical models and autism," *Encyclopedia of Autism Spectrum Disorders*, Springer, Berlin, Germany, 2017.
- [11] M. Retief and R. Letšosa, "Models of disability: a brief overview," *HTS Teologiese Studies/Theological Studies*, vol. 74, no. 1, pp. 1–8, 2018.
- [12] H. McCain, "Medical model of disability versus social model of disability," 2017, <https://canbc.org/blog/medical-model-of-disability-versus-social-model-of-disability/>.
- [13] M. Sarris, "The stigma of autism: when all eyes are upon you," 2015, <https://iancommunity.org/ssc/autism-stigma>.
- [14] R. Purtell, "Music and the social model of disability," *Music and the Social Model: An Occupational Therapist's Approach to Music with People Labelled as Having Learning Disabilities*, Jessica Kingsley, London, USA, 2013.
- [15] K. Barry, "Gray matters: autism, impairment, and the end of binaries," *San Diego Law Review*, vol. 49, no. 1, 2012.
- [16] M. F. Sulaimani and D. M. Gut, "Autism in Saudi Arabia: present realities and future challenges," *Review of Disability Studies: International Journal*, vol. 15, no. 2, pp. 1–11, 2019.
- [17] L. Tang and B. Bie, "The stigma of autism in China: an analysis of newspaper portrayals of autism between 2003 and 2012," *Health Communication*, vol. 31, no. 4, pp. 445–452, 2016.
- [18] S. Y. Kim, J. E. Cheon, K. Gillespie-Lynch, and Y. H. Kim, "Is autism stigma higher in South Korea than the United States? Examining cultural tightness, intergroup bias, and concerns about heredity as contributors to heightened autism stigma," *Autism*, vol. 26, no. 2, pp. 460–472, 2021.
- [19] S. Goering, "Rethinking disability: the social model of disability and chronic disease," *Current Reviews in Musculoskeletal Medicine*, vol. 8, no. 2, pp. 134–138, 2015.
- [20] N. Yu and L. Farrell, "Autism in the media: a longitudinal study of stigma cues and framing of attribution," *Newspaper Research Journal*, vol. 41, no. 4, pp. 489–505, 2020.
- [21] A. Mashat, M. Wald, and S. Parsons, "Investigating the use of social media technologies by adults with autism spectrum disorder in Saudi Arabia," in *Proceedings of the International Conference on Universal Access in Human-Computer Interaction*, Springer, Cham, Switzerland, 2016.

- [22] F. M. Alnemary, F. M. Alnemary, A. S. Alamri, and Y. A. Alamri, "Characteristics of Arabic websites with information on autism," *Neurosciences*, vol. 22, no. 2, pp. 143–145, 2017.
- [23] E. Vergara, "Chile, dogs help kids with autism on their dentist visits," 2017, <https://www.arabnews.com/node/1096471/food-health>.
- [24] K. Alshaigi, R. Albraheem, K. Alsalem, M. Zakaria, A. Jobeir, and H. Aldhalaan, "Stigmatization among parents of autism spectrum disorder children in Riyadh, Saudi Arabia," *International Journal of Pediatrics and Adolescent Medicine*, vol. 7, no. 3, pp. 140–146, 2020.
- [25] A. Hussain, S. Naz, H. Nazir, and Z. K. Shinwari, "Tissue culture of black pepper (*Piper nigrum* L.) in Pakistan," *Pakistan Journal of Botany*, vol. 43, no. 2, pp. 1069–1078, 2011.
- [26] R. Grinker, "Autism, "stigma," disability: a shifting historical terrain," *The University of Chicago Press Journals*, vol. 61, 2020.
- [27] M. Alqahtani, "Understanding autism in Saudi Arabia: a qualitative analysis of the community and cultural context Understanding autism in Saudi Arabia: a qualitative analysis of the community and cultural context," *Journal of paediatric neurology*, vol. 10, no. 1, pp. 15–22, 2012.
- [28] W. H. Daghustani, *Journeys of Mothers of Adolescents with Autism in Bahrain and Saudi Arabia: Issues of Justice?* University of Glasgow, Scotland, UK, 2017.
- [29] M. A. Al-zaalah, A. H. Al-asmari, H. H. Al-malki, N. M. A-shehri, and N. Al-moalwi, "Characteristics of Autism Spectrum Disorder among Saudi children and its impact on their families," *The Neurologist*, vol. 31, pp. 13–16, 2015.
- [30] Y. Almana, A. Alghamdi, and A. A. Laila, "Autism knowledge among the public in Saudi Arabia," *International Journal of Academic Scientific Research*, vol. 5, no. 1, pp. 198–206, 2017.
- [31] A. Bashir, U. Bashir, A. Lone, and Z. Ahmad, "Challenges faced by families of autistic children," *International Journal of Interdisciplinary Research and Innovations*, vol. 2, no. 1, pp. 64–68, 2014.
- [32] A. E. Holton, L. C. Farrell, and J. L. Fudge, "A threatening space? Stigmatisation and the framing of autism in the news," *Communication Studies*, vol. 65, no. 2, pp. 189–207, 2014.
- [33] A. C. Tricco, E. Lillie, W. Zarin et al., "PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation," *Annals of Internal Medicine*, vol. 169, no. 7, pp. 467–473, 2018.
- [34] P. Corbetta, *Social Research: Theory, Methods and Techniques*, Sage, Thousand Oaks, CA, USA, 2003.
- [35] M. Olson, "Document analysis," in *Encyclopaedia of Case Study Research*, SAGE Publications, Thousand Oaks, CA, USA, 2010.
- [36] G. A. Bowen, "Document analysis as a qualitative research method," *Qualitative Research Journal*, vol. 9, no. 2, pp. 27–40, 2009.
- [37] A. A. Mashat, "Cultural factors and usability of online social networks by adults with autism spectrum disorder (asd) in Saudi Arabia," 2016, https://eprints.soton.ac.uk/417381/1/Final_thesis.pdf.
- [38] B. Alallawi, R. P. Hastings, and G. Gray, "A Systematic scoping review of social, educational, and psychological research on individuals with autism spectrum disorder and their family members in Arab countries and cultures," *Review Journal of Autism and Developmental Disorders*, vol. 7, no. 4, pp. 364–382, 2020.
- [39] F. M. Alnemary, H. M. Aldhalaan, G. Simon-Cereijido, and F. M. Alnemary, "Services for children with autism in the kingdom of Saudi Arabia," *Autism*, vol. 21, no. 5, pp. 592–602, 2017.
- [40] R. A. Eisa and M. S. Babiker, "Prevalence of VSD, PDA, and ASD in Saudi Arabia by echocardiography: a prospective study," *Journal of Diagnostic Medical Sonography*, vol. 35, no. 4, pp. 282–288, 2019.
- [41] A. N. Alzahrani and F. J. Brigham, "Evaluation of special education preparation programs in the field of autism spectrum in Saudi Arabia," *International Journal of Special Education*, vol. 32, no. 4, pp. 746–766, 2017.
- [42] D. Parsons, R. Cordier, H. Lee, T. Falkmer, and S. Vaz, "Stress, coping, and quality of life in families with a child with ASD living regionally," *Journal of Child and Family Studies*, vol. 29, no. 2, pp. 546–558, 2020.
- [43] C. Coales, N. Heaney, J. Ricketts et al., "Health-related quality of life in children with autism spectrum disorders and children with developmental language disorders," *Autism & Developmental Language Impairments*, vol. 4, Article ID 239694151985122, 2019.
- [44] E. Vasilopoulou and J. Nisbet, "The quality of life of parents of children with autism spectrum disorder: a systematic review," *Research in Autism Spectrum Disorders*, vol. 23, pp. 36–49, 2016.
- [45] B. M. Alotaibi, *Understanding The Experiences of Saudi Arabian Mothers of Children with Autism in the United States*, Wayne State University, Detroit, MI, USA, 2019.
- [46] R. Woods, "Exploring how the social model of disability can be re-invigorated for autism: in response to Jonathan Levitt," *Disability and Society*, vol. 32, no. 7, pp. 1090–1095, 2017.
- [47] C. Fountain, A. S. Winter, P. S. Bearman, and Z. K. Shinwari, "Six developmental trajectories characterize children with autism," *Pediatrics*, vol. 129, no. 5, pp. 1069–1078, 2012.
- [48] B. Howe, S. Moulton, N. Learner, and J. Straus, *The Oxford Handbook of Music and Disability*, Oxford University Press, Oxford, UK, 2016.
- [49] S. K. Kapp, "How social deficit models exacerbate the medical model: autism as case in point," *Autism Policy and Practice*, vol. 2, no. 1, pp. 3–28, 2019.
- [50] S. Bunbury, "Unconscious bias and the medical model: how the social model may hold the key to transformative thinking about disability discrimination," *International Journal of Discrimination and the Law*, vol. 19, no. 1, 2019.
- [51] L. Wood, "A critical analysis: media representation of disabled people," 2012, <http://www.disabilityplanet.co.uk/critical-analysis.html>.
- [52] A. Prochnow, "An analysis of autism through media representation," 2014, <https://addpc.az.gov/sites/default/files/media/AnanalysisofAutismstudy.pdf>.
- [53] B. W. McKeever, "News framing of autism: understanding media advocacy and the combating autism act," *Science Communication*, vol. 35, no. 2, pp. 213–240, 2012.
- [54] S. C. Jones and V. Harwood, "Representations of autism in Australian print media," *Disability & Society*, vol. 24, no. 1, pp. 5–18, 2009.
- [55] D. Draaisma, "Stereotypes of autism," *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 364, no. 1522, pp. 1475–1480, 2009.

- [56] C. Gambacurta, "Autism representation in the media," 2020, <https://researchautism.org/autism-representation-in-the-media/>.
- [57] R. P. S. John, F. J. Knott, and K. N. Harvey, "Myths about autism: an exploratory study using focus groups," *Autism*, vol. 22, no. 7, pp. 845–854, 2018.
- [58] K. Maich, "Autism spectrum disorders in popular media: storied reflections of societal views," *Brock Education Journal*, vol. 23, no. 2, 2014.
- [59] H. Pesonen, T. Itkonen, M. Saha, and A. Nordahl- Hansen, "Framing autism in newspaper media: an example from Finland," *Advances in Autism*, vol. 7, no. 2, pp. 167–177, 2020.
- [60] D. Mruzek, "Focus on science: autism treatment in the media," *Science in Autism*, vol. 11, 2014.