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Representation of Autism in Leading Newspapers in China: A Content Analysis

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The public’s lack of understanding and the public’s misconceptions about autism in China contribute to the underdiagnosis and undertreatment of the disorder and the stigma associated with it. Mass media are the primary channel through which people learn about autism. This article examines how leading newspapers in China covered autism in the 10-year period of 2003 through 2012 through a framing analysis. It finds that while autism has received increased media attention, it is increasingly framed as a family problem—family members are cited or quoted more than any other sources and the responsibility of dealing with autism is ultimately assigned to families. Autistic people are largely silenced unless they are autistic savants with special talents. The use of the scientific discourse and the human-interest discourse both decrease over time in percentage, while the use of other discourses such as the public relations discourse becomes more dominant.

An estimated 13.7 million people in China are living with some form of autism (Sun, Allison, Auyeung, Baron-Cohen, & Brayne, 2013). However, the Chinese public’s awareness and understanding of autism is still shockingly low. In 2005, less than 30 hospitals in the entire country could diagnose autism (de Clerck, 2006). Outside of big cities, the vast majority of people, including doctors, have never even heard of autism (McCabe, 2008). As a result, people with autism are frequently undiagnosed and untreated (McCabe, 2008; Sun et al., 2013). Furthermore, such a lack of understanding also leads to a stigma toward autism. Public health professionals have recognized an urgent need to educate the public about autism in China (Chen, Bai, & Zhang, 2011).

Mass media represent an especially important channel through which the Chinese public learns about autism (Jin, 2012). However, media coverage of autism is often inaccurate or biased, which can lead to unnecessary pain for families with autistic members (de Clerck, 2006), as well as misconceptions about autism and stereotypes about autistic people (Huws & Jones, 2011). Extensive research has examined media coverage of autism in Western countries such as the United States (Clarke, 2012; Kang, 2012; McKeever, 2013), Britain (Huws & Jones, 2011; Wilkinson & McGill, 2009), and Australia (Jones & Harwood, 2009). To our knowledge, studies on media representation of autism in China are still absent in the English-language literature. It is imperative to further explore the extent and characteristics of media coverage of autism in China where both the public and health professionals have limited knowledge about the disability. Therefore, this article sets out to examine the coverage of autism in leading newspapers in China and to explore how the reportage mirrors sociocultural values about disabilities in the Chinese society. It not only presents a comprehensive framework for studying media representation of autism, but also offers practical suggestions for improving autism-related media coverage in China.
framing of disabilities such as autism but also offers special insights into the potential benefits and pitfalls of media communication about such disabilities. The findings of this study provide a baseline for public health professionals in creating messages and campaigns to raise awareness about autism.

LITERATURE REVIEW

Autism in China: An Overview

Autism spectrum disorder (ASD) is a general term used to describe a group of developmental disorders characterized by social interaction difficulties, communication impairments, and behavioral problems (National Institutes of Health, 2009). An estimated 67 million people worldwide are living with some level of autism (Kopetz & Endowed, 2012).

Autism was first diagnosed in 1938 and reported in 1943 in the United States; however, it was not until 1982 that the first four autism cases in China were diagnosed (McCabe, 2008). Three decades later, research on autism is still lagging and the public still holds many misconceptions about the disorder (Wang, 2013). The diagnosis of autism and intervention on behalf of those diagnosed face at least five major challenges. First, autism research in China is still in its infancy. No national epidemiological study on autism in China has been published (Wang, 2013), which makes it extremely difficult to study the prevalence of subtypes of autism in such a vast nation (Chen et al., 2011). Consistent with the lack of research on autism is a severe shortage of adequately trained professionals who can diagnose autism and provide intervention (Wang, 2013). In the 1980s and 1990s, a considerable percentage of autistic children in China were diagnosed as mentally retarded and treated as such (Huang, 2001). Even today, it often takes years before a diagnosis can be made (de Clerck, 2006). Furthermore, medical and special education professionals are not trained to offer intervention on autism. Most of the organizations that provide special education and training for autistic people are created by parents of autistic children, with little professional support (de Clerck, 2006). Hua and Yang (2013) conducted a survey study of parents of autistic children \( n = 309 \) in eight cities and found that only 5.2% of parents were satisfied with the intervention services their children received, and 76% of them stated that the intervention services in China need to be improved. The relative absence of research and qualified professionals coincides with the lack of public understanding of autism in the Chinese society. Many families never hear about autism before their children are diagnosed. Some never send their children to get evaluated (Wang, 2013). Therefore, there is a growing demand for educational campaigns to inform the public (Chen et al., 2011; Hua & Yang, 2013).

Last but not least, Chinese families with autistic members have to face a series of difficulties specific to the Chinese culture, including significant pressure from society and “stigma and shame attached to having a non-typical child” (McCabe, 2007, p. 48). For example, 70% of the parents of autistic children felt ignored by society or discriminated against (Hua & Yang, 2013). Thus, many autistic children are either hidden at home or sent to rural areas to be raised by grandparents (McCabe, 2007). Moreover, autistic children are often excluded from schools. This is especially difficult for those children and their families in a society like China that puts enormous emphasis on academic achievements (McCabe, 2007). The combined effects of social stigma and school rejection cause misery for many families of autistic children (McCabe, 2007).

Media Representation of Autism

The media can educate the public about autism or perpetuate the stigma and stereotypes associated with it (Draaisma, 2009). However, studies on the reportage of autism in newspapers, magazines, and TV in a number of Western countries have shown that such coverage was plagued with a number of biases, including the framing of the issue, the sources cited, the portrayal of autistic people, and the discussion of causes and solutions. First, an analysis of American magazines found that autism was covered as either a scientific problem or a family story (Clarke, 2012). Second, in terms of the selection of information sources, journalists have relied primarily on a third-person point of view when covering individuals living with autism, citing doctors, scientists, family members, government officials, and nonprofit organizations, while frequently omitting the first-person perspective of autistic individuals (Clarke, 2012; Huws & Jones, 2011; Kang, 2012; McKeever, 2013; Wilkinson & McGill, 2009). Moreover, news stories on autism are more inclined to cover solutions rather than causes, although the cause of autism has been a long-standing controversy (McKeever, 2013). Finally, the media tend to stigmatize autism through the dissemination of stereotypes and common myths by portraying autistic people as dangerous, unloved, abused, and socially undesirable on one end of the spectrum, or as autistic savants with special talents on the other end (Draaisma, 2009; Jones & Harwood, 2009).

While a considerable number of studies have examined the media representation of autism in Western countries, to our knowledge, there is no published systematic study of the media coverage of autism in China in either English- or Chinese-language literature. Anecdotal evidence shows that mass media are the most important channel through which the Chinese public learns about autism (de Clerck, 2006). For those families with an autistic member, the misinformation in the media brings them unnecessary pain and guilt. For the general public, the media singlehandedly create and shape their understanding of autism. This article seeks to fill the
Media Framing and Health Reporting

The manner in which an issue is framed in the media largely determines how the public understands the issue and how people make decisions about it (Scheufele, 1999). Media framing of autism can be examined in terms of issues, information sources, causes, solutions, and types of discourses. Issue framing refers to the topics under which coverage of a specific health condition is presented (Kang, 2012). Clarke (2012) found that general audience magazines in the United States tended to frame autism as a scientific issue, while women’s magazines were more likely to frame their stories as the struggles of heroic mothers of autistic children. In studying the representation of autism in Australian print media between 1996 and 2005, Jones and Harwood (2009) found that autism was most often covered in association with the following topics: infrastructure, education of autistic people, charity and fund-raising, research on autism, MMR (mumps–measles–rubella vaccination) controversy, the impact of autism on families, criminal cases, and community support. Jones and Harwood (2009) further stressed that examining issue framing in autism coverage could provide insights into whether media offered “helpful information” (p. 15), such as what resources were available for autistic individuals and their families, which aspect of autistic people’s life experience was presented to the public, and in what perspective the audience should understand this disability. If the news media consistently frame autism as a problem, negative stereotypes of autistic people are very likely to be strengthened. This leads to research question 1 (RQ1):

RQ1: What are the main issues covered in relation to autism in Chinese newspapers?

The media can frame a topic by giving voices to certain sources and silencing others. An examination of source framing allows insight into who are considered to be credible sources or spokespersons regarding a specific condition. Existing research on health reporting indicates that doctors and other health professionals were the most prominent sources, while patients were given much less voice (Logan, 1991). Such practice might create one-sided coverage and further bias the audience members in their understanding (Cho, 2006). Consistent with the findings of studies on general health reporting, Huws and Jones (2011) found that autistic people were largely “silenced” in their examination of autism coverage in British newspapers between 1999 and 2008 (p. 101). Similarly, Clarke (2012) found that the perspectives of people with autism were inadequately presented in American magazines. A number of quantitative content analysis studies provided further empirical support for this trend. For instance, Kang (2012) examined the coverage of autism on TV in the United States between 1990 and 2010 and found that doctors, family members, and autistic individuals were the three most prominent information sources, representing 32.7%, 26.9%, and 16.9%, respectively, of all the sources interviewed. In studying the coverage of autism in the New York Times (NYT) and the Washington Post (WP), McKeever (2013) found that medical/scientific professionals, government officials, family members, and nonprofit organizations were the sources most often used, while individuals with autism only appeared in 14% of the news stories. The predominance given to medical professionals might contribute to the medicalization of autism (Clarke, 1980), while the silencing of autistic people in the media renders them even more powerless in the discursive construction of autism. Relying on family members of autistic people, especially their mothers, as the primary source in such coverage might create the illusion that it is ultimately the mothers or the families in general who need to rise up to the occasion to be responsible for their children or loved ones with autism (Clarke, 2012). Government officials as an information source can be used to promote public health policy (Quintero Johnson, Sioneau, & Scott, 2011), while information shared by nongovernmental organizations (NGOs) can be taken as a sign of community support for public health issues (Boyle, Donald, Dean, Conrad, & Mutch, 2007). Hence we ask RQ2:

RQ2: What are the major sources cited or quoted in Chinese newspapers’ coverage of autism?

Cause framing refers to how the media make attributions about a certain condition and assign blame (Entman, 1993). It affects how the audience makes judgments about the condition and those who suffer from it. For instance, in studying how the audience responded to media coverage of obesity, Jeong (2007) found that when the media attributed obesity to genetic causes or environmental causes that individuals had little or no control over, the audience was less likely to blame obese people and more willing to offer help; however, when the media attributed obesity to individual behaviors that were largely controllable, the audience was more likely to blame obese people, which might have resulted in increased stigma associated with obesity. A few studies offer insights into how the media framed the cause of autism. Clarke (2012) found that causes were seldom discussed in women’s magazines in the United States and were framed in scientific terms in general-audience magazines, with vaccination prominently featured as the cause of autism. McKeever (2013) found that 35% of the news articles on autism in NYT and WP discussed the cause of autism, but this study did not offer details on the types of causes discussed. Understanding cause framing in the media’s representation of autism is important because cause framing tells the audience who is responsible for autism. Hence we ask the next RQ:
RQ3: How do Chinese newspapers frame the causes of autism?

Solution framing is another essential component of the framing process through which the media assign responsibility to different parties or individuals for dealing with a certain condition (Entman, 1993). Past research shows that solutions are discussed more than causes in the media’s framing of autism. McKeever (2013) found that around half of the news stories (48%) on autism in NYT and WP discussed solutions to autism. Clarke (2012) found that women’s magazines and general-audience magazines in the United States framed solutions to autism in drastically different ways. In women’s magazines, it was the mothers’ responsibility to fight against all odds to protect, raise, and celebrate their autistic children. General-audience magazines, on the other hand, focused on preventing autism by abolishing controversial vaccinations. The media’s solution framing places responsibilities by telling the public who should be responsible for taking care of people with autism. This leads to the next RQ:

RQ4: How do Chinese newspapers frame the solutions of autism?

Finally, existing studies have examined the media framing of autism in terms of the types of discourses used. The reportage of health-related topics can adopt different discourses, including human-interest discourse and scientific discourse. The human-interest discourse personalizes a topic by presenting individual experiences and appeals to the emotion of the audience (Luther & Zhou, 2005). Hong (2013) found that use of the human-interest discourse in TV coverage of medical advances increased viewers’ involvement in the stories and created a positive attitude toward these advances. The scientific discourse, on the other hand, presents health-related topics by citing scientific research, using medical data, and adopting an objective tone; it appeals to the rational side of the audience (Clarke, 2012). Both scientific and human-interest discourses are used in the media coverage of autism. McKeever (2013) found that the human-interest discourse was the most salient discourse in the coverage of autism in NYT and WP, followed by the scientific discourse and the policy discourse. In studying the coverage of autism in American magazines, Clarke (2012) found that general-audience magazines discussed autism in a scientific discourse, while women’s magazines’ coverage of autism was characterized by a human-interest discourse. Stories that focus on human interest can increase public concern about a disease or disorder (McKeever, 2013), while stories that feature basic science knowledge and medical advances can educate the general audience about different health topics. A combination of human-interest and scientific discourse, as we propose, can incorporate the advantages of both discourses. This leads to the final research question:

RQ5: To what extent are human-interest discourse and scientific discourse used in Chinese newspapers’ coverage of autism?

METHOD

Sampling

To address the RQs just listed, we conducted a content analysis of the autism coverage in five leading newspapers in China for the 10-year period between January 1, 2003, and December 31, 2012. This period witnessed several major milestones in the development of the Chinese government’s policy on autism. In 2006, autism was officially recognized as a mental disability. Three years later, the Autism Committee of the Chinese Mental Disease Association was established in Beijing. In 2010, the Ministry of Health issued Child Autism Diagnosis, Treatment and Rehabilitation Guideline as the official guideline for the diagnosis and treatment of autism. In 2012, the China Disabled Persons’ Federation issued The 12th Five-Year Implementation Plan for Mental Disorder Prevention, Treatment and Rehabilitation to improve the living conditions of millions of Chinese living with disabilities, including autism.

We selected one national daily newspaper (People’s Daily) and the largest daily newspaper from each of the four largest cities in China (Beijing Evening News, Xinmin Evening News, Today Evening News, and Southern Metropolis Daily) to represent the leading newspapers in China. Wisers database, a widely recognized Chinese e-newspaper database, was used to locate news stories on autism from the five newspapers. Search terms included zibizheng (autism) and guduzheng ("lonely disease," which is another Chinese translation of autism). The initial search yielded 1,590 stories after eliminating duplicate stories, irrelevant stories such as advertisements, TV guides, and corrections to former news reports. Finally, we used a systematic sampling method (Krippendorff, 2012) to select 50% of these articles as our final sample (n = 795), which is a representative subsample of the population but of a more manageable sample size.

Unit of Analysis and Measurements

The unit of analysis was an individual news story about autism. A codebook was developed to measure the variables discussed in the RQs. First, the basic demographic information of each article was coded, including the identification (ID), date of publication, and newspaper in which it appeared.

Second, to examine the topics of these news stories, a 10-item coding scheme was developed based on the topic categories in existing studies (e.g., Jones & Harwood, 2009;
Kang, 2012). Each story was coded as addressing one of the following 10 topics: (1) infrastructure (the availability or unavailability of infrastructure and educational/intervention resources for autistic people, such as intervention facilities, special education schools, special education programs in regular schools, music therapy, and animal-assisted therapy); (2) charity (fund-raising, donation, and community-based volunteering events for autistic individuals); (3) science (including both articles introducing scientific advancements in autism-related research and popular science articles about autism risks, diagnosis, causes, and treatments); (4) art and cultural activities (art, films, and fiction about autism or cultural/artistic/athletic achievements of autistic people); (5) family story (story of a family with an autistic person); (6) announcements or surreptitious advertisements1 (introducing an autism-related public event in good faith or as a public relations move); (7) social cases (e.g., autistic people as the perpetrator or victim of a crime); (8) celebrity story (story of a celebrity who was diagnosed with autism, is suspected to have autism, or has an autistic family member); (9) MMR vaccine controversy (i.e., the link between the MMR vaccine and autism); and (10) misuse of the word “autism” (i.e., erroneous use of the term autism to refer to introverted personalities or unsocial behaviors).

Third, each article was coded based on the role of the autistic individual(s) in the story: (1) leading role, (2) supporting role, or (3) incidental reference. If a story mainly focused on autism, and an autistic individual was the central character in the story, it was coded as “leading role.” If the main character in an article was not an autistic person but the parents, caregivers, health care professionals, or volunteers involved in treating autism and autism were the focus of the story, it was coded as “supporting role.” If an article’s main focus was not on autism-related issues and only had incidental references to autism, it was coded as “incidental reference.” Only when a story was coded as (1) or (2) using this measurement was the following supplemental coding performed.

The next coding category was developed based on Kang (2012) and Huws and Jones (2011) to explore the sources cited in the news coverage of autism. Each article was coded based on whether it cited any of the following sources: (1) individuals who have been diagnosed with autism; (2) the mother of an autistic person; (3) the father of an autistic person; (4) grandparents of an autistic person; (5) other family members of an autistic person; (6) academics (e.g., psychologists, epidemiologists, or neurologists); (7) government officials; (8) health professionals (e.g., doctors, nurses, or other health care providers); (9) community supporters (e.g., nonprofit organizations, sponsors, donors, or volunteers); (10) journalists; and (11) other sources. An article could cite multiple sources.

Next, each article was coded based on whether it mentioned any of the following five causes of autism (McKeever, 2013; Szatmari, 2003): (1) genetics; (2) individual behaviors (e.g., unsafe drug use during pregnancy); (3) the environment (e.g., pollution); (4) vaccinations; (5) unclear/complex (e.g., describing the cause as unknown or complex). Similarly, each article was coded for the types of solutions discussed in existing studies (Hua & Yang, 2013; McKeever, 2013; Sheinkopf & Siegel, 1998): (1) institutional care (e.g., placing autistic individuals into rehabilitation centers or sending them to special education schools); (2) alternative interventions (e.g., an aquarium that offers dolphin therapy to autistic children or a charity organization that uses music therapy to treat children with autism); (3) family-based interventions (e.g., training of autistic children at home by parents); (4) medical treatment (e.g., treating autistic individuals with medications or traditional Chinese medicine such as acupuncture and massage); and (5) prevention (e.g., avoiding alcohol and chemicals during pregnancy).

Finally, each article was coded for the use of the following types of discourses: (1) scientific, (2) human interest, (3) both, or (4) other (Clarke, 2012; Ray & Hinnant, 2009). To be coded as using scientific discourse, an article had to talk about autism-related issues using scientific language. Citing scientific studies, quoting academics, and providing statistics were some of the characteristics of scientific discourse (Clarke, 2012). An article was coded as using human-interest discourse if it discussed the personal stories of autistic people or their families. If an article used both scientific and human-interest discourses, it was coded as “both” (e.g., a story starts with a personal narrative and then switches to scientific information). Stories adopting neither the scientific discourse nor the human-interest discourse were coded as “other.”

Coding and Intercoder Reliability

After two rounds of training, the first author coded all the articles in the sample (n = 795) and the second author coded a randomly selected 10% of the articles (n = 80). Cohen’s kappa was calculated to assess intercoder reliability for each coding category: topic (κ = .91), role type (κ = 1.00), sources cited (κ = 1.00), cause (κ = 1.00), solution (κ = .92), and type of discourse (κ = .90).

RESULTS

During the 10 years studied (2003–2012), the number of stories published each year displayed a visible upward trend despite occasional fluctuations (see Figure 1).

RQ1 sought to understand issue framing in Chinese newspapers’ coverage of autism. The top three most prominent topics were charity \( (n = 221, 27.8\%) \), infrastructure \( (n = 128, 16.1\%) \), and science \( (n = 113, 14.2\%) \). News stories in these three categories constituted 58% of all stories \( (n = 462) \). It should also be noted that 8.7% of the articles \( (n = 69) \) misused the word “autism” to mean “being introverted” or “being indoors.” Interestingly, only 0.5% of the news stories \( (n = 4) \) were about the MMR vaccine controversy, an issue that has ignited extensive public health scares and debate in the West in recent decades. (See Table 1 for detailed descriptive statistics for all topics.)

Furthermore, we analyzed the longitudinal trend of issue framing. On the whole, the 10 years saw varied increases in the top three issue frames used: charity, infrastructure, and science (see Figure 2). Between 2003 and 2007, all three issue frames saw moderate increases and the differences among them remained relatively small. Starting in 2008, the charity frame skyrocketed to become the most dominant issue frame, followed by the infrastructure frame. In 2011, the charity frame was used twice as much as the infrastructure frame and three times as much as the science frame. The science frame saw the least increase in the 10 years.

Despite the rise in the number of articles on autism, almost half of all the stories \( (n = 351, 44.2\%) \) only included incidental references to autism. Autistic people played a leading role in less than 20% of the news stories \( (n = 148, 18.6\%) \), and played a supporting role in 37.2% \( (n = 296) \) of them. Only those articles with more than an incidental mention of autism \( (n = 444) \) were included in the data analysis conducted to answer RQs 2–5.

RQ2 examined the sources used by Chinese newspapers in covering autism. People with autism were seldom given voice, as they were cited or quoted in only 32 stories \( (7.2\%) \). Family members were the most quoted source \( (31.5\%) \), and not surprisingly, Chinese newspapers mentioned mothers as the most prominent source among all family members \( (n = 110, 24.8\%) \), more often than fathers \( (n = 42, 9.5\%) \), grandparents \( (n = 5, 1.1\%) \), or other family members \( (n = 6, 1.4\%) \). Health professionals represented the second most cited source, appearing in 25.5% of the stories \( (n = 113) \). Community supporters, such as volunteers, sponsors, and donors, were the third most prominent source, cited or quoted in 11.3% of stories \( (n = 50) \). Other less prominent sources included academic researchers \( (n = 35, 7.9\%) \), government officials \( (n = 40, 9.0\%) \), and journalists \( (n = 9, 2.0\%) \). Less than 10% of the articles cited “other sources,” which referred to any additional sources such as film directors, actors, and lawyers (see Table 2).

RQ3 explored how Chinese newspapers framed the causes of autism. Obviously, the causes of autism were seldom discussed, appearing in only 46 out of 444 stories that contained more than an incidental mention of autism. Genetic causes were the most prominent cause mentioned \( (n = 20, 4.5\%) \), followed by unclear or complex causes \( (n = 17, 3.8\%) \), individual behavioral causes \( (n = 4, 0.9\%) \), environmental causes \( (n = 3, 0.6\%) \), and vaccinations \( (n = 2, 0.4\%) \). (See Table 3 for detailed descriptive statistics of cause and solution frames used.)
TABLE 2  
Sources Cited in Leading Chinese Newspapers’ Coverage of Autism, 2003–2012 (n = 444)

<table>
<thead>
<tr>
<th>Information Source</th>
<th>Number of Stories (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autistic people</td>
<td>32 (7.2%)</td>
</tr>
<tr>
<td>Mother of an autistic person</td>
<td>110 (24.8%)</td>
</tr>
<tr>
<td>Father of an autistic person</td>
<td>42 (9.5%)</td>
</tr>
<tr>
<td>Grandparents of an autistic person</td>
<td>5 (1.1%)</td>
</tr>
<tr>
<td>Other family members of an autistic person</td>
<td>6 (1.4%)</td>
</tr>
<tr>
<td>Academic sources</td>
<td>35 (7.9%)</td>
</tr>
<tr>
<td>Government officials</td>
<td>40 (9.0%)</td>
</tr>
<tr>
<td>Health professionals</td>
<td>113 (25.5%)</td>
</tr>
<tr>
<td>Community supporters</td>
<td>50 (11.3%)</td>
</tr>
<tr>
<td>Journalists</td>
<td>9 (2.0%)</td>
</tr>
<tr>
<td>Other (film directors, actors, lawyers, etc.)</td>
<td>43 (9.7%)</td>
</tr>
</tbody>
</table>

TABLE 3  
Cause and Solution Frames in Leading Chinese Newspapers’ Coverage of Autism, 2003–2012 (n = 444)

<table>
<thead>
<tr>
<th>Frames</th>
<th>Number of Stories (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes</td>
<td></td>
</tr>
<tr>
<td>No discussion of causes</td>
<td>398 (89.6%)</td>
</tr>
<tr>
<td>Causes discussed</td>
<td>46 (10.4%)</td>
</tr>
<tr>
<td>1. Genetic/congenital</td>
<td>20 (4.5%)</td>
</tr>
<tr>
<td>2. Unclear/complex</td>
<td>17 (3.8%)</td>
</tr>
<tr>
<td>3. Individual behavior</td>
<td>4 (0.9%)</td>
</tr>
<tr>
<td>4. Environmental causes</td>
<td>3 (0.6%)</td>
</tr>
<tr>
<td>5. Vaccination</td>
<td>2 (0.4%)</td>
</tr>
<tr>
<td>Solutions</td>
<td></td>
</tr>
<tr>
<td>No discussion of solutions</td>
<td>294 (66.2%)</td>
</tr>
<tr>
<td>Solutions discussed</td>
<td>150 (33.8%)</td>
</tr>
<tr>
<td>1. Institutional interventions</td>
<td>79 (17.8%)</td>
</tr>
<tr>
<td>2. Alternative interventions</td>
<td>27 (6.1%)</td>
</tr>
<tr>
<td>3. Family-based interventions</td>
<td>26 (5.9%)</td>
</tr>
<tr>
<td>4. Medical treatment</td>
<td>15 (3.4%)</td>
</tr>
<tr>
<td>5. Prevention</td>
<td>3 (0.6%)</td>
</tr>
</tbody>
</table>

To answer RQ4, we examined the solutions discussed and found that Chinese newspapers discussed solutions much more than causes, with a total of 150 news stories containing some discussion of the solutions to autism. The most frequently discussed solution was institutional care (n = 79, 17.8%), followed by alternative interventions (n = 27, 6.1%), and family-based interventions (n = 26, 5.9%). It is also noteworthy that 10% of the 150 stories mentioned using medications to “treat” or “cure” autism (n = 15). Finally, a few stories mentioned preventive strategies for autism (n = 3, .6%). For example, a popular science story reported that in order to prevent autism in their children, pregnant women should have “adequate nutrition, moderate exercise, and avoid getting a cold.”

RQ5 asked what types of discourses were used in the coverage of autism. About 21% (n = 92) of the news stories used the human-interest discourse only, 9.7% of the news stories (n = 43) used the scientific discourse only, while the “combined” discourse providing both personal stories and scientific information was the least frequently used (n = 31, 7.0%). The majority of news stories (n = 278, 62.6%) employed a spectator’s perspective, such as using a public relations discourse, or reporting a social news story without human-interest or scientific narratives. In addition, we analyzed the longitudinal trend of the types of discourses (see Figure 3). The most visible pattern lay in the dominance and the strong upward trend in the usage of “other discourse,” such as the discourse of PR or crime news, which has soared since 2008 and peaked in 2011. In contrast, the use of the human-interest and science discourses only showed a slight increase in actual numbers and actually decreased in percentage over the 10 years.

DISCUSSION

Mass media are the primary channel through which people learn about autism in China (Jin, 2012). It not only provides the public with scientific information about autism, but also frames their attitudes toward autism and autistic people by selectively highlighting certain aspects while downplaying other aspects of the disorder. Presented here is a content analysis of the coverage of autism in five leading newspapers in China in the 10-year period of 2003 through 2012. It finds that autism has received increased coverage in leading newspapers in China, even though the total amount of coverage is still relatively small compared to leading newspapers in the United States (cf. McKeever, 2013).

In terms of issue framing, our data indicate that charity frame, infrastructure frame, and science frame were the three most prominent issue frames used. Over time, the use of the science frame only increased slightly between 2003 and 2012, while the use of the charity frame and infrastructure frame witnessed steep increases after 2008. The charity frame discusses autism in terms of charitable donations and community events in support of autistic individuals...
and organizations for autistic people. The number of articles adopting the charity frame increased by three times between 2008 and 2011, which makes it the most prominent issue frame in the coverage of autism. The predominance of the charity frame sends the message that people with autism are helpless individuals in need of charity, which can potentially contribute to the stigmatization of autism. The infrastructure frame discusses the availability or unavailability of infrastructure such as educational resources and intervention facilities. Most of the news articles adopting this frame report the establishment of such resources in a positive light. This reflects the development of intervention and training resources for autistic individuals in China. The science frame covers autism by reporting the advancement of scientific research on autism or by introducing basic information about the risks, diagnosis, and treatment of autism. News stories focusing on the science frame provide the readers with educational information. However, the use of the science frame only increased slightly in number and decreased in percentage between 2003 and 2012. In other words, the leading newspapers in China might increase the public's awareness of autism by publishing more articles on the topic, but are not educating the public adequately about the condition.

The fourth leading issue frame was the art and culture frame, which covers art, films, or fiction about or by autistic people. The number of articles adopting the art and culture frame peaked in 2011 with the release of an award-winning film, *Ocean Heaven*, telling the story of a dying father and his autistic son in 2010. The MMR vaccination frame, which is highly salient in autism coverage in the Western media (Holton, Weberling, Clarke, & Smith, 2012), appeared in less than 1% of the news articles. One possible explanation is that the MMR vaccination is state mandated in China and thus newspapers are unlikely to challenge the government by suggesting that the MMR vaccine might lead to autism (Ren, Peters, Allgaier, & Lo, 2012). Finally, around 9% of the articles used the term “autism” incorrectly, equating being autistic with being introverted or unsocial. This type of misuse is alarming and potentially dangerous. It indicates that the reporters in China might not have been adequately trained in covering health-related issues, which can result in inaccuracies and misrepresentations of health information in the news content. The lack of reliable and trustworthy health information may prevent individuals from seeking professional help and could result in misdiagnosis and under-diagnosis. Furthermore, erroneous information in the media leads to unnecessary pain for autistic individuals and their family members. For instance, de Clerck (2006) reported the story of how a Chinese mother of an autistic son was devastated with guilt after reading in the news that autism was caused by a lack of maternal love.

In terms of the source framing of autism in Chinese newspapers, people with autism were cited in only 7.2% of the news stories, compared to 16.9% in U.S. television news (Kang, 2012), and 14% in *NYT* and *WP* (McKeever, 2013). Further investigation into the characteristics of autistic individuals quoted in the news stories shows that 60% of them (n = 19) were those with special talents, such as athletes, scientists, and music prodigies. Such depictions might contribute to the construction of the stereotype that autistic individuals are savants. This stereotype creates unrealistic expectations for autistic individuals, and when such expectations are not met leads to further disappointment (Draaisma, 2009). Family members were cited more frequently than health care professionals in the coverage of autism. This stands in contrast to the findings of studies conducted in the West. For instance, McKeever (2013) found that scientific experts and government officials were cited more than family members in the coverage of autism in *NYT* and *WP*. Similarly, Kang (2012) concluded that doctors were cited more than family members in stories on autism in TV news in the United States. The fact that family members are cited more than doctors in Chinese newspapers’ reportage of autism might indicate that autism is a family matter instead of a medical matter or societal problem. Since there is literally no cure for autism, it is the family who is ultimately responsible for dealing with and living with their autistic children. Another striking difference in the source framing between the Chinese and Western news media is that government officials hardly appear at all in Chinese newspapers’ coverage of autism. Government officials were cited in only 9% of the news stories on autism in leading newspapers in China, compared to 41% in *NYT* and *WP* (McKeever, 2013). In addition, information and perspectives provided by nongovernmental organizations (NGOs) and other community supporters were also limited, despite their vast potential in health promotion and health information dissemination (Boyle, Donald, Dean, Conrad, & Mutch, 2007). Practically, the lack of governmental and NGO voices not only highlights the insufficient governmental and societal support for those living with autism, but also indicates that the Chinese government is reluctant to be open about this marginalized population, posing challenges to the development of autism care services.

Causes of autism were discussed much less than solutions. Only around 10% of the news articles mentioned the causes of autism. When causes were mentioned, genetic causes were most frequently discussed, followed by unclear or complex causes and individual behavioral causes. This is a relatively accurate reflection of the tentative conclusions made by the scientific community (e.g., Szatmari, 2003). However, some news stories also contained erroneous information about the cause of autism. For instance, quite a few stories attributed autism to parental neglect. A lack of discussion of the cause of autism might contribute to public misunderstanding about autism. Among the 33% of the articles that discussed solutions, institutional care was most frequently mentioned, followed by alternative interventions and family-based interventions. At first look, this seems to indicate that institutions instead of families are framed
as being responsible for people living with autism, which contradicts our conclusion to RQ2 that autism is primarily framed as a family problem. However, further investigation into the type of institutional intervention discussed shows that institutional care still falls into the category of family responsibility, as these institutions are often created and run by parents of autistic children to provide care for other autistic children, while state or publicly run institutions are largely absent.

Past research shows that personalization dispels the stigma associated with a health condition (Smith, 2007). Our data indicate that about one-third of the news articles adopted the human-interest discourse by presenting the personalized story of an autistic person. Furthermore, the use of human-interest discourse fluctuated before 2006 and decreased in percentage afterward. Around 15% of the news stories used the scientific discourse and the use of this discourse also decreased in percentage over time. Instead, the use of other types of discourses, such as the public relations (PR) discourse or the sensational discourse of criminal news, increased in the 10 years. Put together, the use of the discourse frame in Chinese newspapers’ coverage of autism is likely to lead to further stigmatization of autism. First, the combined human-interest and scientific discourse, which can provide both readability and informativeness, is the least frequently used. The use of human-interest and scientific discourses decreases in percentage over time. Moreover, the soaring number of PR stories not only increasingly victimized autistic people as helpless individuals in need of charity, but also potentially commercialized autism as a vehicle for extending corporations’ own influences and profits. Furthermore, portraying autistic people as a danger to public safety may create a negative image of autistic people, hinder the development of the social support system, and discourage autistic people and their families from seeking help (Jones & Harwood, 2009; Ray & Hinnant, 2009).

Overall, autism has received increased coverage in the five leading newspapers in China over the past 10 years, which might contribute to the public’s familiarity with the disability at least within big cities, and might help to demystify it. However, such reportage is not without its problems. First, when the science about autism is presented, it is more or less accurate. However, there is not much of it. Furthermore, in those articles that do not focus on science, there is often misinformation about autism. Autism is often equated with being introverted or unsocial. Obviously, the news media in China need to do a better job of educating the public about autism. Furthermore, autistic people are often portrayed as helpless individuals that need charity. Their stories are infrequently told and their own voices are seldom heard, except when they are autistic savants. These factors might lead to the further stigmatization of autism in the Chinese society. In addition, the coverage of autism often portrays autism as the problem of individual families. Even though news stories do discuss society’s responsibility, most of the time they frame autism as a problem that families of autistic people need to deal with. Such framing leads to the privatization of autism and makes the public even less likely to demand policy-level support for people living with autism. Compared to their Western counterparts (e.g., McKeever, 2013), Chinese newspapers are clearly not playing the role of media advocates. These findings are important to researchers, public health practitioners, and policymakers who work on public communication of health and science. From a health education perspective, much more effort should be put into awareness-raising and advocacy campaigns that communicate information about autism to society.

The results of this study are limited by the sample’s representativeness. The current study only investigated five leading newspapers, including the most prestigious national paper and one leading newspaper from each of the four largest cities in China. These newspapers do not represent all newspapers in the country. Future studies could examine how newspapers cover autism outside of metropolitan areas, where people’s access to such information is much more limited. Furthermore, it would also be interesting to explore the representation of autism in the entertainment media, including movies and TV shows, which might have a stronger impact on the audience. The Internet represents another source of information on autism. Different from traditional media such as newspapers or TV, which represent channels for passive information scanning, the Internet represents a channel for active information seeking (Kelly et al., 2010). While the general public is more likely to learn about autism through information scanning, autistic individuals and their families are more likely to seek out information and social support through the Internet. Future studies of autism-related information on the Internet such as online discussion forums about autism can provide insights into the quantity and quality of information available for the latter. Finally, future research needs to examine the relationships between media frames and audience responses in the reportage of autism and other disabilities, and how health news messages may influence the audience in the long term.

REFERENCES


