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## The stigma of autism in china: an analysis of newspaper portrayals of autism between 2003 and 2012

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### ABSTRACT

Autism is a highly stigmatized developmental disability in many societies, and the media are major contributors to such stigma. Presented here is the first systematic analysis of Chinese newspapers' coverage of autism for stigma-causing content. More specifically, this analysis examines the age of autistic people reported, the image of autistic people, and the use of stigma cues (in terms of peril, mark, and shame) and challenge cues (in terms of personification, hope, and fight) in five leading newspapers in China between 2003 and 2012. It finds that while the reportage of autism increases over time, which might contribute to the public's heightened awareness of the condition, such reportage is often biased. The most common stereotypes about autism in Chinese newspapers are autistic people as children, as patients, or as savants. The most often-used challenge cues are personification and hope, but their uses significantly decrease in percentage from 2003 to 2012. The most often used stigma cues are peril and mark. The use of the shame cue is relatively less frequent, but it increases significantly over the 10-year period. Theoretically, this article provides an application of stigma communication theory in a non-Western context. Practically, it not only contributes to the current knowledge about media representation of autism in China, but also suggests that it is important for media agencies and health care professionals to promote media guidelines and train health journalists for reporting disability issues in a nonstigmatizing way.

Stigma is a mark that makes an individual discredited or rejected by society (Goffman, 1963). Stigmas attached to certain health conditions, such as obesity, mental illness, and HIV/AIDS, negatively affect both the clinical course and the treatment outcome of these conditions (Link & Phelan, 2001). Another one of these conditions is autism. Empirical research has shown that autistic people and parents of autistic children are frequently stigmatized (Davidson & Henderson, 2010; Gray, 2002). The manifestations of health-related stigmas are culturally determined, especially in developing countries (Weiss, Ramakrishna, & Somma, 2006). In China, the discrimination against people living with autism is further heightened by the public's low awareness of the condition, lack of social support for those afflicted, and cultural pressure toward having a normal child (Hua & Yang, 2013; McCabe, 2007). Firstly, there is a strong lack of resources, especially the lack of professionals and intervention programs for Chinese children with autism (McCabe, 2007). In 2014, there were fewer than 100 doctors who have expertise with autism in China, and existing intervention institutions in the whole country can only provide services to 10% of children with autism (Pan & Li, 2014). Second, certain child-care values in China among parents or grandparents with young children pose a practical difficulty for the early identification of autism. For example, some of the symptoms of autism, such as delayed speech development, are considered normal in Chinese culture

(Zhou & Yu, 2014). As a result, researchers and professionals have emphasized the urgency of promoting autism awareness and reducing the stigma of autism in China (McCabe, 2007; Wang, 2013).

In the past, the Chinese government and medical community launched national educational programs to reduce stigma against people with hepatitis B and HIV/AIDS. Yet so far, the Chinese health care community still treats autism as a clinical issue rather than as an important public health problem. It was not until 2010 that the Ministry of Health of People's Republic of China issued the first official guideline for the diagnosis and treatment of autism. To date, no health education programs have been launched in China to reduce the stigma of autism, which posits an urgent need to understand the way in which autism stigma was constructed in Chinese society and what educational efforts should be carried out accordingly.

The media are important channels for the dissemination of health information and are particularly useful in educating the public about health conditions that are less known (Brodie, Hamel, Altman, Blendon, & Benson, 2003). On the one hand, the media are blamed for the creation of stigmas associated with diseases and disabilities (Wahl, 1995). Textual and visual media messages about certain health conditions, such as mental illness and obesity, often include negative, stereotypical, and frightening portrayals, which create and reinforce the stigmas associated with these conditions (Heuer, McClure, & Puhl,

2011; Smith, 2007a, 2007b). On the other hand, research also showed that exposure to empathetic, nonstereotypical, and positive media portrayals is associated with increased knowledge and decreased stigma (Corrigan, Powell, & Michaels, 2013; Ritterfeld & Jin, 2006), which indicates important implications for health journalism and public educational efforts.

Presented here is the first systematic analysis of stigma-related content in autism coverage by five leading newspapers in China between 2003 and 2012. It shows that while the reportage of autism increases over time, which might contribute to the public's increased awareness of the condition, these newspapers are increasingly more likely to present a stigmatized portrayal of autism. Theoretically, this article applies the framework of stigma communication (Smith, 2007b) in a non-Western context. Previous content analysis studies using Smith's (2007b) framework have been conducted primarily within the United States (e.g., Anderson & Bresnahan, 2013; Johnson, Henderson, Pedersen, & Stonecipher, 2011); very few studies have examined how this framework or parallel stigma frameworks can be applied to a non-Western context (for an exception, see Zhuang & Bresnahan, 2012). This article also adds character portrayal as an additional dimension of stigma communication in a mediated context. Practically, it not only contributes to the current knowledge about media representation of autism in a single country, but also provides practical implications for health journalism and health care professionals to promote public awareness of autism and other development disabilities, combat social stigma, and improve the environment for people with disabilities.

## Literature review

### Stigma

Stigma, first defined by Goffman (1963) as "spoiled identity," refers to a mark or an attribute that makes an individual discredited or rejected by society. Link and Phelan (2001) built on Goffman's (1963) work and identified several important components of health-related stigmas, including labeling, negative stereotyping, exclusion, status loss, and discrimination. Some illnesses, such as infectious diseases, mental disorders, and developmental disabilities, appear to be more stigmatized than other physical diseases like cancer and heart disease (Gill & Liamputtong, 2011; Klin & Lemish, 2008; Smith, 2007b; Soffer & Ajzenstadt, 2010). Stigmatization associated with mental or developmental disorders is a major impediment to early diagnosis and effective treatment (World Health Organization, 2009).

Stigma is created and maintained through communication. Smith's (2007a) stigma communication theory was the first theoretical attempt to define stigma as a communicative phenomenon. Based on the assumption that "stigmas are social constructions serving social functions" (p. 467), Smith (2007a) proposed the following components of stigma communication: "Stigma communication includes specific content—marks, labels, responsibility, and peril—in order to induce affective and cognitive responses to create stigma attitudes, to generate protective action tendencies, and to encourage the sharing of these messages with others" (p. 477). Smith (2012) then

provided the first empirical test of her stigma communication theory within the context of a hypothetical infectious disease alert and demonstrated support for the model of stigma communication. Using Smith's (2007a) framework, Anderson and Bresnahan (2013) studied lay people's descriptions of male and female bodies of various sizes and provided support for Smith's (2007a) stigma components by finding evidence of each message feature in stigma communication about body sizes. Furthermore, Smith (2007b) demonstrated that media depictions of health are topic specific: There are some systematic differences in the types of media messages used to portray different health issues. Some health topics (e.g., cancer, heart disease) are presented in more of a challenge format, which uses positive message features such as social inclusion, optimism, hope, and fight, while some other health issues (e.g., sexually transmitted diseases [STDs], staph/flu, tuberculosis) appear in a format that contains stigmatizing cues such as social exclusion, marks, responsibility, shame, and disgust.

Stigma has a wide range of social and health consequences. The social consequences of stigma include exclusion from social life, decreased likelihood of being employed or getting married, and damaged marital and family relations (Weiss et al., 2006). As a result, people suffering from stigmatized health conditions tend to conceal them from others (Phelan, Bromet, & Link, 1998). In terms of its health consequences, stigma may prevent people from recognizing their health problems and seeking help, which might lead to delayed diagnosis and treatment discontinuation (Weiss et al., 2006). Autism is a health condition highly stigmatized in both Eastern and Western societies (Gray, 2002; Mak & Kwok, 2010).

### Stigma and autism

Autism spectrum disorder (ASD) is a group of developmental brain disorders that significantly affects an individual's language, communication, and social interaction abilities (National Institutes of Health, 2009). Autistic individuals and their families are vulnerable to social stigma and often feel excluded from social life (Farrugia, 2009; Gray, 2002; Mak & Kwok, 2010; Woodgate, Ateah, & Secco, 2008). Researchers have found that living and negotiating with stigma is a prevalent theme in parents' experience of having an abnormal child (Farrugia, 2009; Gray, 2002). A majority of the parents, especially mothers, experience stigma, both felt and enacted, on an ongoing basis (Gray, 2002). In social situations, people may exhibit harsh judgments of an autistic child's unusual behaviors and attribute them to bad parenting, which brings shame to such children's families and restricts their parents' social life (Farrugia, 2009). In addition, parents of autistic children also reported that they felt their children were stigmatized and socially rejected, which in turn added to the feelings of isolation among parents (Woodgate et al., 2008). A recent survey in Hong Kong suggested that parents' internalization of affiliate stigma can be very severe, which negatively affects caregivers' psychological well-being (Mak & Kwok, 2010).

While the Western world has gradually realized the public health implications of stigma, research on culture-specific stigma toward autism in developing countries is still in its

infancy and is worthy of further investigation (Weiss et al., 2006). Each culture has its own health beliefs and responses to illnesses. Health-related stigma is embedded in the norms and values of a culture. Such stigma will in turn affect individuals' health attitudes and behaviors (Soffer & Ajzenstadt, 2010; Weiss et al., 2006). This article seeks to fill a void in existing health-related stigma research by analyzing how the stigma of autism is presented in Chinese newspapers. Following Anderson and Bresnahan's (2013) suggestion that researchers should "consider the culture, power, epoch, and context that gives rise to the stigmatized condition they are studying" (p. 612), an overview of the current status of people living with autism in China is presented next.

### **Autism in China**

Currently, an estimated 13.7 million people in China live with diagnosed or undiagnosed autism, accounting for 1% of the country's population (Sun, Allison, Auyeung, Baron-Cohen, & Brayne, 2013). Although it has been more than 30 years since the first diagnosis of autism in China (McCabe, 2008), stigma and misunderstanding associated with the disorder are still prevalent in Chinese society (Wang, 2013). Besides financial problems and the lack of institutional care (de Clerck, 2006; Hua & Yang, 2013), stigma and stereotypes toward autism are among the most significant challenges that Chinese families with autistic members have to face in its specific cultural context. First, as the traditional Confucian culture of China places great emphasis on conformity to norms to avoid bringing shame to the entire family (Chang & Kemp, 2004), parents of autistic children often experience an elevated level of shame and isolation due to autistic children's deviant behaviors (McCabe, 2007). For instance, a survey of 309 Chinese parents of autistic children from a variety of geographic and socio-economic backgrounds reported that 70% of these parents felt neglected by society and discriminated against, 38.7% felt anxious, and 17.4% felt guilty (Hua & Yang, 2013). In addition, autistic children frequently face social exclusions, the most significant of which is exclusion from schools. In a society like China that puts enormous emphasis on academic success, the exclusion of autistic children from school marks them as nontypical children who cannot fulfill cultural and social expectations, and almost guarantees marginalization in their adult life (McCabe, 2007).

Media effect research has generally concluded that media exposure is associated with stigmatizing attitudes toward people with particular health conditions (e.g., Pearl, Puhl, & Brownell, 2012). Through the creation and reproduction of meanings, mass media's representations of disabilities can shape societal perceptions, strengthen stereotypes, and lead people to devalue and reject stigmatized individuals (Huws & Jones, 2011; Lyons, 2000; Wilkinson & McGill, 2009). The media play an important role in the creation of stigma associated with autism. Existing studies reveal several prominent biases in media portrayals of autism in Western countries. First, although autism is widely recognized as "a lifelong disability of biological origin" (Dodd, 2004, p. 114) that affects all age groups, the media generally focus on children rather than adults when covering autism (Huws & Jones, 2011; Wilkinson

& McGill, 2009). Such infantilized portrayals may contribute to the public neglect of other age groups (Huws & Jones, 2011) and cause a lack of attention and resources for adults with autism. This leads to the first research question (RQ1):

**RQ1:** What is the age of people with autism portrayed in Chinese newspapers?

Furthermore, some researchers have pointed out that the media also contribute to the stigmatization of autism through the dissemination of stereotypes and "common myths" about people living with this disorder. Individuals with autism have been portrayed as either dangerous (Jones & Harwood, 2009; Ray & Hinnant, 2009) or unloved, imprisoned, and horribly treated in the popular press (Jones & Harwood, 2009; Sarrett, 2011). These two stereotypes are harmful, as they treat autism as a deviance and may lead to the marginalization of people with autism. Draaisma (2009) examined the fictional representation of autistic characters and found that their images were often oversimplified as savants with special talent, while recent clinical research suggests that most autistic people actually have an intellectual disability and less than 3% of people with autism are of above-average intelligence (Charman et al., 2011). The overrepresentation of savant children in autism coverage is worrisome, as it contributes to the creation of "unrealistic expectations about the abilities or capabilities of people with autism" (Huws & Jones, 2011, p. 102). This leads to RQ2:

**RQ2:** How are people with autism portrayed in Chinese newspapers (i.e., are they portrayed as dangerous, unloved, and poorly treated, or autistic savants)?

Other than presenting a specific image of autistic people, the media can also contribute to the development of autism-related stigma through specific message cues. Smith (2007b) categorizes the media representation of health issues into two formats: challenge and stigma. The stigma format includes the following cues: mark, responsibility, group labeling, peril, and shame. Marks are visible cues that invoke automatic responses and suggest how people should respond. Responsibility refers to the attribution process associated with the health issue in question. Stigmatizing messages tend to argue that those who suffer from a health condition somehow choose to do so, and they only have themselves to blame for whatever condition they are in. Group labeling means that society assigns collective labels to people with a certain health condition that differentiates them from the rest, and in doing so, creates the mentality of us against them. Peril refers to the fact that stigmatizing messages emphasize the dangers that the group poses to society. Finally, shame refers to the portrayal of people associated with a health condition as being embarrassed or humiliated by it. Collectively, the use of these stigma cues creates stigma around a condition and generates negative emotions such as fear and disgust (Smith, Ferrara, & Witte, 2007).

Alternatively, health topics can be presented in the challenge format. This format represents a much more positive approach to health coverage. Instead of assigning a group label to people living with a certain health issue, the challenge

format includes personalization of the health issue by presenting the stories of individuals (personification), messages of optimism by discussing treatment options and positive outcomes (hope), language that suggests group solidarity (us language), and statements suggesting the determination to battle the health concern (fight). Such messages emphasize in-group membership, a sense of confidence in future outcomes, and the courage to conquer the illness. Examining the use of challenge or stigma cues in the coverage of autism will shed light on whether such coverage is likely to create either a stigmatized or a positive impression of autism among the audience. This leads to the final RQ:

**RQ3:** To what extent are challenge and stigma cues used in Chinese newspapers' portrayal of autism?

## Method

### Sampling

As part of a larger study (Bie & Tang, 2015), the current study analyzed the 10-year coverage of autism in five leading Chinese newspapers from 2003 to 2012 to answer the RQs already discussed.<sup>1</sup> Based on circulation, readership, and reputation, *People's Daily* was selected as the most influential national newspaper, and *Beijing Evening News*, *Xinmin Evening News*, *Today Evening News*, and *Southern Metropolis Daily* were selected as the most influential daily newspapers in the four largest cities in China. We searched for the keywords *zibizheng* (autism) and *guduzheng* ("lonely disease," which is another Chinese translation of autism) in Wisers Database, an electronic database of newspapers published in China, and identified 1,590 nonrepetitive news stories containing these terms. We systematically sampled 50% of the news articles ( $n = 795$ ) to include in the final sample.

### Unit of analysis and measurements

#### Role Type

Since a considerable percentage of the news articles only contained a cursory mention of autism or autistic persons, we first coded each article based on the role of autistic individual(s) in the story in terms of (a) leading role, (b) supporting role, and (c) incidental mention. When a story focused on autism and autistic persons occupied a central position in the story, it was coded as "leading role." When a story was about autism, but the central character of the story was not an autistic person (e.g., family members, caregivers, volunteers), then the article was coded as "supporting role." Finally, when the article was not about autism but had a cursory mention of autism or autistic persons, it was coded as "incidental mention." Articles in this category did not have enough information to allow the inference of stigma, and thus were excluded from further coding. In the end, in total 444 articles remained in the sample and were coded for the following variables.

#### Age

Each article was coded for the age of the autistic persons reported in terms of (a) children only (when all autistic persons discussed were children), (b) adults only (when all autistic persons discussed were adults), or (c) general population (when the news article discussed both autistic children and adults or when it discussed autistic persons without revealing their age) (Wilkinson & McGill, 2009).

#### Image of autistic person

Each article was coded as to whether it portrayed the autistic person as a (a) patient, (b) victim, (c) dangerous individual, or (d) autistic savant. A patient was someone who needed professional care and medical intervention. A victim was someone worthy of sympathy and was usually the target of philanthropic work. An autistic person was depicted as dangerous when the person committed crimes and endangered the safety of others. An autistic savant referred to an autistic person who had some kind of special talent—for instance, in music or mathematics (Draaisma, 2009; Huws & Jones, 2011; Jones & Harwood, 2009; Ray & Hinnant, 2009).

#### Challenge cues

Adapting the theorization and operationalization proposed by Smith (2007b) to the context of autism coverage, we coded three challenge cues most relevant to autism coverage: personification, hope, and fight. An article was coded as using the personification cue when it talked about the story of a specific person living with autism. Hope was coded when an article discussed successes in managing autism or the possibility of overcoming it. One example of a depiction of hope was, "My son learned to play the piano and to communicate with others. He is making progress every day." If an article included a discussion of how people battle against autism, it was coded as fight, an example of which was, "He never stops fighting autism and has become a hero among his classmates."

#### Stigma cues

Three stigma cues discussed in Smith (2007b) were adopted and adapted for the study of autism coverage: peril, mark, and shame. An article was coded as using the peril cue when it explicitly discussed the dangers, problems, emotional suffering, and financial burdens caused by autism. One example of the use of the peril cue was, "Autistic children bring their families unimaginable pain." Mark referred to the discussion of signs that would let people realize that someone had autism, such as unusual behaviors, limited communication skills, and lack of eye contact. An example of mark was, "He always clicks his fingers and displays other stereotypical behaviors such as making strange noises." Finally, an article was coded as communicating shame associated with autism when it discussed how family members were embarrassed by their autistic children or relatives, or tried to hide the fact from the public. An example of the shame cue was, "The child often gets mocked by others for his unusual behaviors." Because

<sup>1</sup>For a detailed discussion of rationales of sampling decisions, refer to Bie and Tang (2015).

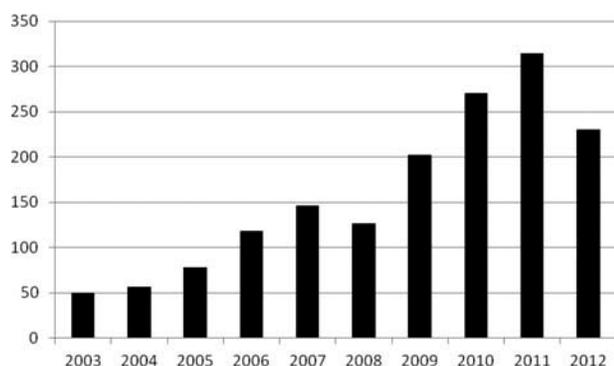
of linguistic and cultural differences, some stigma cues in Smith's framework were excluded from current analysis. For example, labeling was excluded because some autism-related Chinese phrases can be viewed as both labeling and neutral (e.g., an autistic child).

### Coding and intercoder reliability

After the codebook was developed, two authors coded a randomly selected subsample of 20 news articles, compared their results, discussed their disagreements, and clarified any misunderstandings involved. This process was repeated several times until the number of intercoder disagreements was reduced to a minimum. After the training, the first author coded all articles in the sample ( $n = 444$ ) and the second author coded a randomly selected 10% of the articles ( $n = 45$ ). Coding 10% of the sample was considered sufficient for calculating intercoder reliability (e.g., Cho, Hall, Kosmoski, Fox, & Mastin, 2010; De Brún, McKenzie, McCarthy, & McGloin, 2012). Cohen's kappa was calculated to assess intercoder reliability for each coding category: age ( $\kappa = 1.0$ ), image of autistic person ( $\kappa = .90$ ), use of challenge format ( $\kappa = .91$ ), and use of stigma format ( $\kappa = 1.0$ ).

### Results

The five leading newspapers included in the study published a total of 1590 stories that included brief or substantial discussion of autism between 2003 and 2012. The number of stories published each year on autism displayed a visible upward trend despite occasional fluctuations (see Figure 1). To analyze the stigma-causing components in these newspapers, 50% of these articles were coded ( $n = 795$ ). The results reported here were based on 444 articles that included more than an incidental mention of autism (*People's Daily*: 19, *Beijing Evening News*: 38, *Xinmin Evening News*: 102, *Today Evening News*: 40, and *Southern Metropolis Daily*: 245).



**Figure 1.** Number of stories mentioning autism in five leading Chinese newspapers, 2003–2012.

Note. This figure is based on all stories that mentioned autism published in five leading newspapers in China from 2003 and 2012. The total number of articles is 1590.

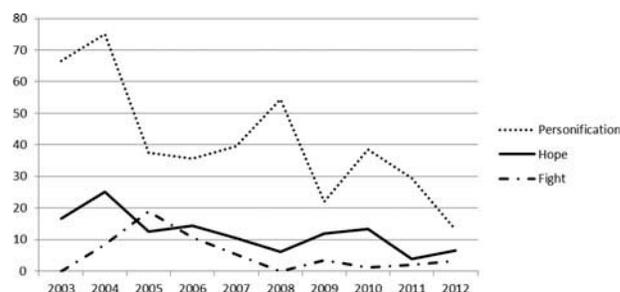
RQ1 asked the age of autistic people depicted in news articles. It was found that children with autism were featured in 84.2% ( $n = 374$ ) of the pieces. Only 6.5% of the articles portrayed adults living with autism ( $n = 29$ ). About one-tenth of the articles ( $n = 41$ ) either mentioned both children and adults or did not include information on the age of the autistic individuals discussed.

RQ2 asked how autistic individuals were portrayed in the news. Our data indicated that in 36.0% of the articles ( $n = 160$ ), autistic individuals were portrayed as patients in need of medical intervention and professional care. Autistic savants with special talents represented the second most prominent image of autistic people, appearing in 12.5% of the news stories ( $n = 56$ ). Another prominent image of autistic people portrayed in the newspapers was that of victims, appearing in 9.7% ( $n = 43$ ). Autistic people were depicted as dangerous or violent in only 3.6% of the news articles ( $n = 16$ ).

RQ3 asked the extent to which challenge and stigma cues were used in news coverage of autism. In terms of the challenge cues, personification was used most often, appearing in 33.6% of the articles ( $n = 149$ ), followed by hope (9.7%,  $n = 43$ ) and fight (3.6%,  $n = 16$ ). Among stigma cues, peril (15.3%,  $n = 68$ ) and mark (14.6%,  $n = 65$ ) appeared most frequently. Shame and disgust were only found in 3.8% of the articles ( $n = 17$ ).

Linear regression analyses were conducted to assess the longitudinal trend in the percentages of articles adopting different challenge and stigma cues. First, it was found that over time the use of the challenge format, which represented a positive approach in the coverage of autism, actually decreased in terms of the percentage of articles using the personification cue ( $R^2 = .62$ ,  $F(1, 8) = 12.89$ ,  $p < .01$ ,  $\beta = -4.98$ ) and the hope cue ( $R^2 = .56$ ,  $F(1, 8) = 10.04$ ,  $p < .05$ ,  $\beta = -1.49$ ) (see Figure 2). The decrease in the use of fight as a challenge cue was not statistically significant.

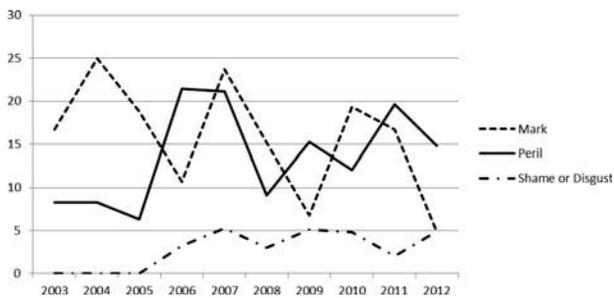
In terms of the use of the stigma cues in the news coverage of autism, over time the discussion of the peril associated with autism and the shame or disgust resulting from being autistic or having an autistic family member actually increased in percentage from 2003 to 2012. The increase in the use of the shame cue was statistically significant ( $R^2 = .50$ ,  $F(1, 8) = 8.00$ ,  $p < .05$ ,  $\beta = .52$ ),<sup>2</sup> while the increase in the use of peril was not. The use of mark decreased over time, albeit insignificantly (see Figure 3).



**Figure 2.** The use of challenge cues in the coverage of autism in five leading newspapers in China, 2003–2012.

Note. Longitudinal trends in the percentage of news stories about autism using three challenge cues: personification, hope and fight in five leading newspapers in China from 2003 to 2012.

<sup>2</sup>Initially, the longitudinal change in the use of the shame cue was not statistically significant. However, after replacing the value of one outlier with the mean, the regression model became significant.



**Figure 3.** The use of stigma cues in the coverage of autism in five leading newspapers in China, 2003–2012.

Note. Longitudinal trends in the percentage of news stories about autism using three stigma cues: mark, peril, and shame in five leading newspapers in China from 2003 to 2012.

## Discussion

To explore the extent to which the news media might have contributed to the stigmatization of autism, the current study content analyzes the coverage of autism in five leading Chinese newspapers over the 10-year period between 2003 and 2012. More specifically, it examines the age of autistic people reported, the image of autistic people, and the use of stigma and challenge cues in these news articles.

First, our data clearly demonstrate the infantilization of autistic people in leading newspapers in China. Around 85% of the articles discuss autism as a condition that only affects infants and children. This is consistent with the findings in the West. In measuring the frequency of nouns used with respect to people with autism in the British newspaper *The Guardian*, Wilkinson and McGill (2009) found that the word “children” was used 46 times, compared to adult-related words (“men” or “adults”) that were found 3 times, and age-ambivalent words (“people,” “son,” and “daughter”) that were used on 16 occasions. This overrepresentation of children with autism in the news media, which is decoupled from the real-world age distribution of the autistic population, reflects journalists’ neglect of adults with autism (Huws & Jones, 2011; Wilkinson & McGill, 2009). Government programs and nongovernmental agencies not only need to improve educational opportunities for autistic children, but also need to provide services and support to help autistic adults live and work. This lack of attention to the needs of adults with autism has damaging social, economic, and health consequences in that it might divert resources and support available to adults living with autism.

Another major finding of our study is that autistic people are most likely to be portrayed as either patients or savants. By representing children with autism as patients who cannot take care of themselves and who cause suffering to their parents, these news stories actually portray autism as a social and family burden, which may strengthen the community’s negative impression of autism and hamper autistic individuals’ involvement and integration into the community (Huws & Jones, 2011). In addition, the misleading representation of talented autistic people in Chinese media—which is consistent with previous Western-based analyses into the representation of autism in both news media (Jones & Harwood, 2009) and entertainment media (Draaisma, 2009)—also has important public health implications. Compared to the clinical reality of autism, the relatively high percentage of savant

stories in the media is believed to bias public understanding of autism and to reinforce the social stereotype of autistic persons as savants (Draaisma, 2009).

Finally, based on stigma communication theory, the current study examines the use of challenge and stigma cues in the coverage of autism. The challenge format represents a more positive way to describe a health topic. Personification is the challenge cue most used in autism coverage in leading newspapers in China, appearing in about one-third of the news articles. It presents stories of individuals living with autism and shows journalists recognizing and appreciating these people rather than treating them as statistics. However, the considerable lack of hope and fight cues in Chinese newspaper coverage of autism creates a sense of powerlessness and contributes to the social stereotype of “autism as problem” (Jones & Harwood, 2009, p. 15). This suggests an urgent need for more positive media portrayals of autistic individuals that contain hope and fight cues in order to help reduce autism-related stigma in society.

Peril and mark are the two stigma cues most prominent in Chinese newspapers’ coverage of autism, appearing in about 15% of the articles. Peril refers to the physical, psychological, economic, and social problems posed by a stigmatized group (Smith, 2007a). For example, an article from *Southern Metropolis Daily* stated, “When a child is diagnosed with autism, his parents are immediately inundated with endless anxiety and weariness.” Another story by *People’s Daily* reported, “The treatment of autism is very costly. Families often face enormous financial burdens. For almost 30% of the families with autistic children, their entire family incomes cannot even cover their children’s rehabilitation costs and [they] have to get into debt to afford treatment.” Mark, in the context of autism, refers to recognizable signs that show an autistic individual’s social, communication, and behavioral problems. For example, *Southern Metropolis Daily* described an autistic girl, saying: “She often gets into a tantrum while riding the bus and bursts into piercing shrieks.” These two types of stigma cues may lead to negative perceptions about autistic persons. They may evoke a sense of disgust, reinforce the continued belief of autism as a burden to society and individual families (Huws & Jones, 2011), and lead to the formation of more negative attitudes and social distancing behaviors toward individuals living with autism.

Even though both stigma and challenge cues are found in newspaper coverage of autism, our data also indicate that newspapers become less likely to use two out of the three challenge cues over time: personification and hope. At the same time, the percentage of newspaper articles featuring the stigma cue shame shows an upward trend over the 10 years examined. These findings suggest that the use of the news media as a positive public health communication tool has the potential to backfire. Although the five leading Chinese newspapers witnessed a visible increase in the amount of autism coverage during the 10 years analyzed, the increasing representation of the negative sides of the disorder and the underrepresentation of positive images suggest important challenges to future media education efforts. Raising public awareness of a growing health issue may unintentionally reinforce stigma and discrimination at the same time (Johnny & Mitchell, 2006). Health professionals should be more aware of the adverse effects associated with health

communication in the media and will need to carefully consider how to prevent practices that are potentially harmful to stigmatized individuals and their families.

Several limitations of this study should be acknowledged. First, this study is restricted to five elite newspapers in examining Chinese media news coverage of autism. It remains unknown whether the pattern of discourses from smaller local media outlets will be consistent with that of the most widely circulated newspapers. Future studies should “continually ask what has been framed and not framed and what are the other possibilities” (Jones & Harwood, 2009, p. 16) by examining how autism-related stigma messages are conveyed by other media such as TV, magazines, or the Internet. Lastly, the results of the current analysis cannot establish a link between exposure to autism-related stigma messages and how the lay audience members perceive and internalize the stigma content. Further research will be helpful to determine the extent to which topic-specific stigma messages can change the audience’s beliefs and attitudes (Smith, 2007b).

Overall, the results of this comprehensive analysis of autism coverage in newspapers reveal several compelling practical considerations for both practitioners and journalists. First, public health professionals must recognize the divergence between the clinical reality and the public perception, and consider the potential influence of such problematic media coverage of autism in designing appropriate health education messages. Second, as a sizable portion of the general public relies on media sources rather than interpersonal channels to gain information about disability (Iwakuma & Nussbaum, 2000), the public must be provided with accurate and balanced information regarding autism as well as other disabilities, and media advocacy efforts to promote nonstigmatizing information regarding disabilities are equally as important as clinical efforts. As Thompson (2000) noted, disability issues have long been overlooked in the communication scholarship. Findings of this study highlight the urgency to (a) develop and enforce media guidelines for reporting disabilities, like “Reporting and Writing About Disabilities” by the National Disability Rights Network and “Guidelines for Reporting and Writing about People with Disabilities” by the Research and Training Center on Independent Living, in more countries; and (b) train health journalists to cover health and disability topics in a nonstereotypical manner (Jones & Harwood, 2009).

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