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<https://doi.org/10.1057/s41599-025-05361-2>

OPEN

A multi-country and region comparison of the news coverage of the 2020 Tokyo Paralympic Games

Jadeera P. G. Cheong¹, Niki Cheong², Mark Brooke³, Hanae Endo⁴, Weerawat Limroongreungrat⁵, Agus Mahendra⁶, Akila Shanmuga Sundaram⁷, Peggy Choi⁸, Mahdi Esfahani⁹, Payam Ansari¹⁰, Vinnie Hall¹¹, Dev Roychowdhury¹², Po-Hsiu Lin¹³, Xiaolong Song¹⁴, Tânia Bastos¹⁵, Ali Al-Shamli¹⁶, Huyền Ngô Thị¹⁷, Majed M. Alhumaid¹⁸, Rizal Razman¹, Omar Hindawi¹⁹ & Selina Khoo¹⁸ 

The study analysed news coverage of the 2020 Tokyo Paralympic Games in newspapers in 17 countries or regions (Australia, China, Hong Kong, India, Indonesia, Iran, Ireland, Japan, Malaysia, Oman, Portugal, Chinese Taipei, Saudi Arabia, Singapore, Thailand, the United Kingdom and Vietnam). In addition, Facebook posts of the respective newspaper organisations were also analysed. This is a quantitative study and offers an extensive comparative overview of trends and patterns in media representation of the Games in different parts of the world. The results showed that the total number of articles and photographs varied greatly between countries and regions. Analysis of the Facebook posts showed a similar trend to newspapers. The subject of interest is predominantly still the male athletes, and particularly those competing in wheelchairs. In nearly all the publications sampled, media coverage featured more content of their local athletes than foreigners. Overall, there appears to be a great disparity in terms of coverage and content of the Paralympic Games between the 17 countries or regions.

¹ Faculty of Sports and Exercise Science, Universiti Malaya, Kuala Lumpur, Malaysia. ² Department of Digital Humanities, King's College London, London, UK. ³ Centre for Academic Persistence, Arden University, Leeds, UK. ⁴ Faculty of Health and Sport Sciences, Doshisha University, Kyoto, Japan. ⁵ College of Sports Science and Technology, Mahidol University, Nakhon Pathom, Thailand. ⁶ Physical Education Teacher Education for Elementary School, Universitas Pendidikan Indonesia, Bandung, Indonesia. ⁷ Department of Physical Education and Sports, Central University of Tamil Nadu, Thiruvavur, India. ⁸ Department of Sport and Recreation, Technological and Higher Education Institute of Hong Kong, Hong Kong, Hong Kong. ⁹ Department of Sport Science, Imam Reza International University, Mashhad, Iran. ¹⁰ Department of Sport and Event Management, Business School, Bournemouth University, Bournemouth, UK. ¹¹ Faculty of Languages and Linguistics, Universiti Malaya, Kuala Lumpur, Malaysia. ¹² Health Research Hub, DR ACADEMY, Melbourne, Australia. ¹³ Graduate Institute of Sport, Leisure and Hospitality Management, National Taiwan Normal University, Taipei, Taiwan. ¹⁴ School of Physical Education, Fujian Polytechnic Normal University, Fuzhou, China. ¹⁵ Center of Research, Education, Innovation and Intervention in Sport (CIF2D), Faculty of Sport, University of Porto, Porto, Portugal. ¹⁶ Physical Education Program, Faculty of Education and Arts, Sohar University, Sohar, Oman. ¹⁷ Faculty of Library and Information Science, University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City, Vietnam. ¹⁸ Department of Physical Education, King Faisal University, Al-Ahsa, Saudi Arabia. ¹⁹ Department of Sport Rehabilitation, Faculty of Physical Education and Sport Science, The Hashemite University, Zarqa, Jordan. ✉email: selina@um.edu.my

Introduction

The Paralympic Games are an international mega-sporting event for athletes with a disability, with 4393 athletes from 162 countries or regions participating at the Tokyo 2020 Paralympic Games (International Paralympic Committee n.d. Tokyo 2020 Paralympics Results—Official Event Standings). This is a considerable growth since the first Paralympic Games in Rome in 1960, where there were 400 athletes from 23 countries (Craven, 2016). As the Games have developed, so too has their audience and media coverage. A cumulated audience of 3.8 billion people watched the 2008 Beijing Paralympic Games (International Paralympic Committee n.d. Beijing 2008 Paralympic Games). The total broadcast time increased by 200% from the Athens 2004 Paralympic Games (International Paralympic Committee n.d. Athens 2004 Paralympic Games). In Tokyo 2020, it is estimated that the global audience was around 4.25 billion (Pearson & Misener, 2021).

With the growth of media coverage of the Paralympic Games in recent decades, both quantitative and qualitative research exploring its development has also increased. The expanding interest in this field has led to the publication of scoping and systematic reviews of relevant literature, particularly one focusing on the media portrayal of elite Para sport athletes (Rees et al. 2019) and another looking at literature around gender in disability sports (Culver et al. 2022). Research on media coverage is important because, as O'Hara and Hall (1984) state, the media provides “what appear to be the most plausible frameworks we have of telling ourselves a certain story about the world” (p 8). Moreover, Lenskyj (2008) argues that the media are “largely responsible for the social construction of the lasting images and memories that audiences retain” (p 22). Narratives produced by sports media construct ways of seeing, thinking and being, and scholars have explored how media produces narratives of athletes with disabilities (Brooke, 2019; Bruce, 2014; Chang and Crossman, 2009; Cheong et al. 2016; Cheong et al. 2021; Fong and Katz, 2012; Pappous et al. 2011; Selami, 2010; Solves et al. 2018; Thomas and Smith, 2003). Many scholars have noted that media coverage of events like the Paralympic Games has the ability to challenge negative perceptions associated with people with disabilities, and to offer them greater visibility (Brooke, 2019; Marcondes et al. 2024; Shirazipour et al. 2017).

Studies of media coverage of the Paralympic Games have examined whether the media tends to include or exclude athletes with disabilities. Through quantitative analyses of the frequency of coverage and qualitative studies of how these athletes are depicted, the narratives constructed by the media can be made more visible and changes implemented. Studies are concerned with the placement of sports reports of the Paralympic Games, and the subject matter covered related to identity markers such as an individual's role in the Games. The underrepresentation of female athletes in disability sport, specifically, has been of particular interest in the scholarship (see Culver et al. 2022; Marcondes et al. 2024; Martinez-Bello et al. 2023; Rees et al. 2019; Weiler-Abels et al., 2021). While most studies in the past focused on print media, there are an increasing number of studies looking at different forms of Para sport media, including BBC television's coverage of the 2014 Invictus Games in the United Kingdom (Shirazipour et al. 2017), NBC's television coverage of the 2018 Winter Paralympic Games (Weiler-Abels et al. 2021) and Twitter coverage by NBC and CNC in the United States and Canada of the 2022 Winter Paralympics (Antunovic et al. 2024). Studies have also focused on both print and digital media together (Poteko & Bartoluci, 2025). Evidence also reveals consistent gains in the quality of media coverage of the Paralympic Games. According to Cheong et al. (2021), through exposure to athletes' sporting performances rather than their physical impairments, the Paralympic Games have helped raise awareness and even positively change opinions towards people with disabilities.

There have been explorations of country-specific Paralympic media coverage such as Canada (Fong & Katz, 2012), Malaysia (Cheong et al. 2016), Singapore (Brooke, 2019), and Spain (Solves et al. 2018). There are also a limited number of studies that examined and compared newspaper coverage in different geographical localities. These include studies by Boykoff and Yasuoka (2015) who analysed media coverage of the Paralympic Games in the United Kingdom and the United States, Buysse and Borchering (2010) who analysed photographic coverage of the 2008 Paralympic Games in newspapers from China, Italy, New Zealand, South Africa and USA, as well as Pappous et al. (2011) who explored coverage of the 2000 and 2008 Paralympic Games in France, Germany, Greece, Spain, and the United Kingdom. Cheong et al. (2021) cross-compared newspaper coverage of the 2016 Games in 11 countries or regions. More recently, Poteko and Bartoluci (2025) compared media representation at the 2024 Paralympic Games, focusing on Slovenia and Croatia. Collectively, these studies tend to demonstrate that the media coverage of the Paralympic Games has been overshadowed by that of the Olympic Games. It is evident that there are significant incongruities between media representation across contexts, with some countries or regions, such as Oman, Saudi Arabia, and Chinese Taipei, barely covering the Paralympic Games in their local print newspapers (Cheong et al. 2021).

Moving forward, the study presented in this paper extends on Cheong et al.'s (2021) comparison of media coverage of the Rio 2016 Paralympic Games. As a primarily quantitative study, that paper was, to our knowledge, the most extensive scholarly work in terms of breadth of sample locations, and features findings related to certain Paralympic sports depicted alongside demographic variables such as the athletes' nationality, gender, and disability type in 11 countries or regions. The study presented in this paper expands the number of countries or regions to 17 during the Tokyo 2020 Paralympic Games, offering a more expansive global view of media representation of the Games in the discussion about the growth of Para sport coverage over the past couple of decades. In addition to the use of print media data to allow for continuity from the previous study, this current study also includes social media coverage on accounts run by the newspaper outlets featured, in recognition of the significant fall in print circulation of newspapers in many parts of the world in the years leading up to the Games (Newman et al. 2021). The inclusion of social media data—particularly from Facebook—into the study allows for an additional layer of analysis, identifying if print media representation of the 2020 Paralympic Games also translates to online news dissemination.

Our intention with this study was to offer an expanded and more updated findings that will be valuable scholarly knowledge, in the same way the findings from the Rio 2016 Paralympic Games paper have been reported by scholars studying specific aspects of media representation of the Paralympic Games, including focus on demographics such as gender (Marcondes, 2024) or role in Para sport such as coaches (Alexander et al. 2022), countries not featured in the previous study such as Brazil (Marcondes et al. 2024), and different media platforms such as broadcast media (Yang & Lin, 2023) and social media (Antunovic et al. 2024). We offer, in our conclusion, recommendations of areas for further studies that could be valuable additional contributions to academic advancement.

Methods

The data collection period was from 23 August until 6 September 2021 (the Tokyo 2020 Paralympic Games were delayed by a year due to COVID-19 considerations). The dates covered one day

each before and after the Games, scheduled to include coverage leading up to the Opening Ceremony as well as coverage from the Closing Ceremony. Adopting a quantitative approach, we conducted a content analysis of our datasets, which consisted of both physical print news articles and Facebook posts online by the same media organisations. Specifically, articles and photographs (both print and online) were collected and coded for analysis.

Sample. Replicating the Rio 2016 Paralympic Games study (Cheong et al. 2021), newspaper circulation numbers for each country were used as a reference point to identify which print newspapers would be included in this study. The two print newspapers with the highest circulation numbers from each country were chosen as the sample. In total, data were collected from 17 countries or regions: Australia, China, Hong Kong, India, Indonesia, Iran, Ireland, Japan, Malaysia, Oman, Portugal, Chinese Taipei, Saudi Arabia, Singapore, Thailand, the United Kingdom and Vietnam throughout the collection period. The 17 countries or regions include those we believe have not been previously studied where Paralympic Games media coverage is concerned, including Australia, Hong Kong, India, Indonesia, Ireland, Portugal, Thailand and Vietnam. These were included in addition to the others that featured in the 2016 Rio Paralympic Games study, such as China, Iran, Japan, Malaysia, Oman, Chinese Taipei, Saudi Arabia, Singapore, South Africa, South Korea and the United Kingdom (Cheong et al. 2021). Previously, studies on media coverage of the Paralympic Games had also involved newspapers from Canada (Chang et al. 2011; Maika & Danylchuk, 2016), France and Germany (de Léséleuc et al. 2010; Schantz & Gilbert, 2001), South Korea (Chang & Crossman, 2009; Yoo et al. 2024), New Zealand (Bruce, 2014), Spain (Martinez-Bello et al. 2021; Solves et al. 2018), United Kingdom (de Léséleuc et al. 2010; Thomas & Smith, 2003), as well as the United States (Chang & Crossman, 2009; Tyndal & Wolbring, 2013; Yoo et al. 2024).

The newspapers in each country were screened by a researcher, each based in that respective country, for references to the 2020 Tokyo Paralympic Games, covering multiple languages (see Table 1 for the list of newspapers). Only coverage in the main sections of the newspapers was screened. For social media data, the Facebook accounts of the news organisations represented in the country samples of print newspapers were also screened during the collection period. As mentioned in the Introduction, social media data was included in this study to contribute to gaps in the literature surrounding media representation of Paralympic sport events, and scholarship indicating a decline in print media and an increase in the use of social media for news. Specifically, the inclusion of social media data would allow us to note any consistent (or otherwise) patterns or trends in how the Paralympic Games are covered by the same news organisations on different media. For consistency across the sample, only the main Facebook accounts of said organisations were included; this excluded other accounts the organisations may use, such as dedicated sports accounts found in some countries or regions. Specifically, individual posts that referenced the Tokyo 2020 Paralympic Games were coded and analysed.

Procedure. All data collected were coded based on three main themes. First, the “subject” of the articles or photographs was coded based on the following: athletes, non-athletes (i.e., officials, coaches, or volunteers), particular sports, multiple subjects, or “Others” (subjects that did not fit within the aforementioned categories). Second, demographics of the subjects (where relevant) were coded, including gender (i.e., male, female, or both, where more than one subject is featured) and nationality (i.e., local or foreign). Third, disability of the subject (where relevant) was also coded. There were seven coding categories for this:

wheelchair, intellectual disability, amputee, cerebral palsy, visually impaired, *les autres*, and mixed (more than one type of disability). Additionally, we also coded for the total amounts of news and photographic coverage.

Facebook posts were coded similarly, although an additional layer of filtering was implemented. Facebook posts collected were first filtered to identify if they were either web links to news articles uploaded onto the news organisations website, or if they were posts “native” to Facebook (this may include photographs, videos, or infographics), meaning that they uploaded directly to the platform as opposed to the sharing of a link to stories on a news site. In our analysis, the numbers presented for the Facebook posts included both the same articles and photographs as found in the print versions, and native online content. Please see Fig. 1 for the flow diagram for data collection and analysis.

Limitations of the Research Methods. We identified three key limitations relevant to the sampling of our data for this study. The first is related to the selection of participating countries or regions in the study. In order to achieve the ambition of the scale of the study, that is to expand on the 11 countries or regions featured in the 2016 Paralympic Games project, we opted to go with convenience sampling principles. The corresponding author had contacted researchers based on their personal and professional networks around the world (including those involved in the 2016 Paralympic Games project), and all those who had indicated interest were included. While this approach may be seen as a limitation, the number of countries or regions included in the current study ($n = 17$) is extensive and is, to our knowledge, the largest comparative study of its kind to date.

The second limitation is related to the selection of newspapers in each country or region to be included. As mentioned above, our approach was to make this selection based on circulation numbers (the top two in each country included in the study). We acknowledge that this excludes the possibility of identifying bias in our study, particularly where different types of newspapers are concerned (e.g. tabloids and broadsheet, liberal- and conservative-leaning). However, considering the number of countries or regions included in our study spans across several continents, and where different localities may have varied media systems (Hallin & Mancini, 2004), we found that circulation numbers are the most consistent sampling method across the board. In recognising this limitation, we designed the scope of this quantitative study to identify *who* and *what* are represented in media coverage of the 2020 Paralympic Games, instead of *how* they are represented.

Finally, we note the limitation where the inclusion of Facebook as a representative of social media is concerned. While there are several social media platforms that could have been included (e.g. Twitter or Instagram), we opted for Facebook specifically because it is the social media platform that was most used for news across Europe, North America, Asia and Latin America, coming second in Africa¹ (Newman et al. 2021). For consistency reasons, we opted to include the platform (Facebook) that was available and used in the greatest number of countries or regions included in this study. Of the 17, only three countries had no data—in the case of China and Iran, the platform is not available in those countries and as such, were excluded from the study, while in Saudi Arabia, no posts on the Paralympic Games were found on the Facebook pages of the Saudi Arabia outlets.

Results

Print newspaper coverage

Total number of print articles and photographs. In total, 1644 articles and 1385 photographs were analysed. Three newspapers recorded more than 100 articles, with two Japanese newspapers,

Table 1 Total number of articles and photographs in newspapers and Facebook.

Newspaper	Total number of articles in newspapers	Total number of photographs in newspapers	Total number of posts on Facebook	Total number of photographs on Facebook
Australia				
Herald Sun	31	31	21	21
The Daily Telegraph	31	31	18	19
China				
Reference News	17	21	0	0
People's Daily	20	23	0	0
Hong Kong				
MingPoa	26	26	43	43
Oriental News Daily	14	14	18	19
India				
Times of India	23	19	49	47
The Hindu	33	32	33	33
Indonesia				
Kompas	25	21	83	76
Media Indonesia	16	9	37	36
Iran				
Hamshahri	64	39	0	0
Iran	33	63	0	0
Ireland				
Irish Independent	34	31	18	18
Irish Times	37	31	15	15
Japan				
Asahi	250	172	6	6
Yomiuri	457	310	211	186
Malaysia				
Sin Chew	83	69	84	84
The Star	105	84	62	77
Oman				
Oman	11	10	2	2
AlWatan	7	7	0	0
Portugal				
Diário de Notícias	6	6	4	4
Correio da Manhã	10	9	16	16
Chinese Taipei				
Liberty Times	11	10	29	25
United Daily News	13	11	2	2
Saudi Arabia				
Al-Jazirah	3	3	0	0
Arriyadiyah	5	5	0	0
Singapore				
Lianhe Zaobao	10	10	6	6
Straits Times	42	39	17	17
Thailand				
Khaosod	29	33	27	27
Thairath	59	42	53	53
United Kingdom				
Daily Mail	67	89	40	39
The Sun	64	82	1	1
Vietnam				
Thanh Nien	0	0	2	3
Tuoi Tre	8	3	2	2
Total	1644	1385	899	877

Yomiuri and *Asahi* publishing 457 and 250 articles, respectively, and Malaysia's *The Star* publishing 105 articles. Twenty-six newspapers published between 10 and 100 articles, while five newspapers from Oman, Saudi Arabia, Portugal, and Vietnam published fewer than 10 articles each.

The top three countries with the highest number of photographs were Japan, Malaysia and the United Kingdom. Specifically, *Yomiuri* and *Asahi* from Japan printed 310 and 172 photographs, respectively, while the United Kingdom's *Daily Mail* and *The Sun* published 89 and 82 photographs, respectively.

Malaysia's *The Star* and *Sin Chew* published 84 and 69 photographs, respectively. The three countries with the lowest number of photographs were Portugal (*Diário de Notícias*, $n = 6$), Saudi Arabia (*AlJazirah*, $n = 3$; and *Arriyadiyah*, $n = 5$) and Vietnam (*Tuoi Tre*, $n = 3$). Please see Table 1 for the breakdown of articles and photographs by country and region.

Subject of print articles and photographs. All newspapers featured athletes ($n = 2134$) as the main content of the articles, with Japan, Malaysia, and the United Kingdom contributing more than 1000

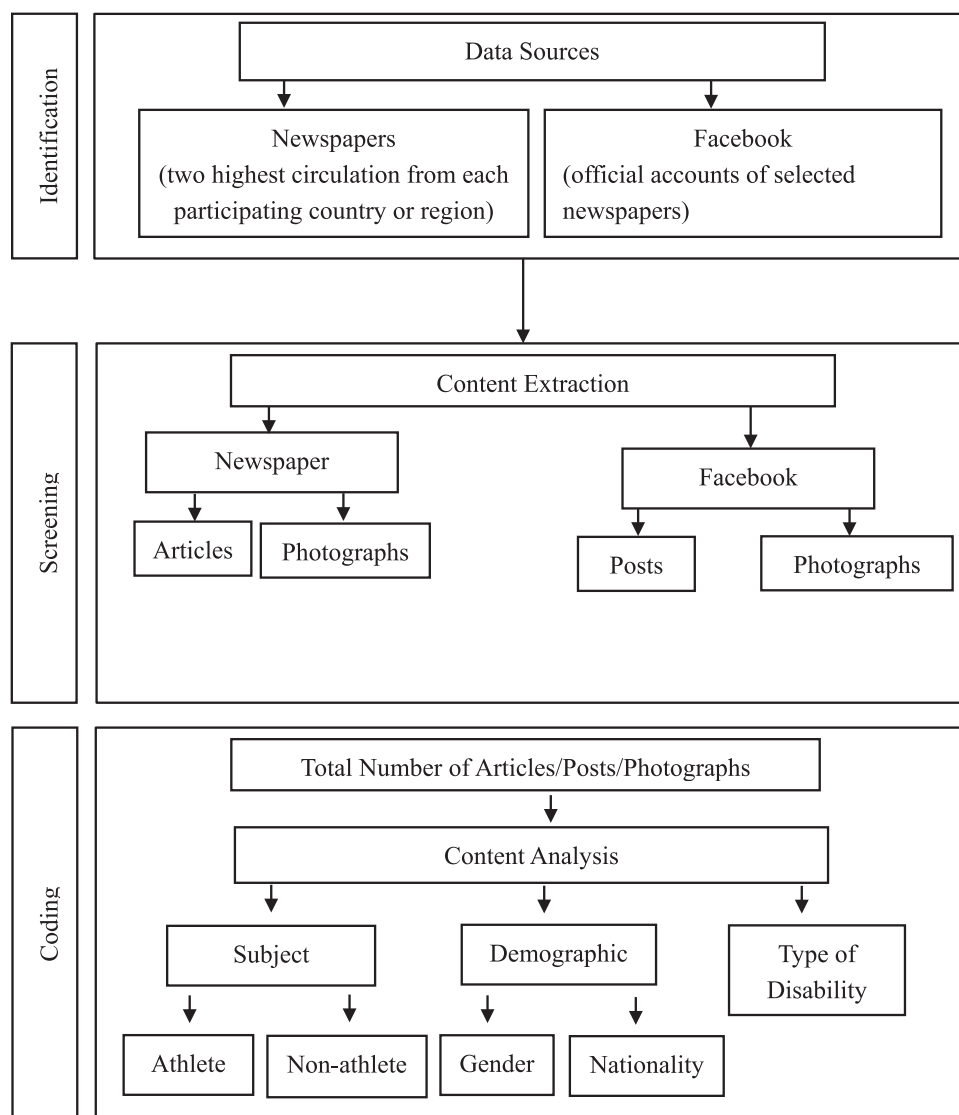


Fig. 1 The flowchart for data selection and analysis.

articles featuring athletes collectively. Besides athletes, officials ($n = 98$), coaches ($n = 49$), and volunteers ($n = 26$) were also featured. Japan's Yomiuri ($n = 21$) published the most articles on officials, while Hong Kong, Indonesia, Ireland, Singapore, and Vietnam did not feature officials in both publications. Malaysia's The Star highlighted coaches the most ($n = 16$), whereas China, Hong Kong, Indonesia, Iran, Portugal, Chinese Taipei, Saudi Arabia and Singapore did not feature coaches in any of their articles. Japan's Yomiuri ($n = 19$) published the most articles on volunteers, followed by Asahi, China's Reference News and Singapore's Lianhe Zaobao with two articles each.

After the category of athletes, the category of Others had the most articles ($n = 631$), followed by Sports ($n = 567$), with Japanese newspapers dominating these two categories. China, Portugal, Saudi Arabia, and Vietnam did not publish any articles on Sports, while Saudi Arabia did not publish any articles in the Others category.

Nationality of subject. Most countries or regions featured more local than foreign subjects. Australia's Herald Sun and The Daily Telegraph published an equal number of local and foreign subjects, while China's Reference News published more foreigners than locals. Please see Table 2.

Gender of subject. More than half of the total newspapers featured more male subjects compared to females. Three countries (China, Ireland, and Singapore) had highlighted more females than males in both their newspapers. Please see Table 2.

Disability of the subject. Wheelchair ($n = 573$) athletes were featured the most, followed by les autres ($n = 479$), amputee ($n = 403$), visual impairment ($n = 316$), cerebral palsy ($n = 135$), and intellectual disability ($n = 94$). Japan contributed the most articles for wheelchair, mixed disability, amputee, visual impairment and les autres athletes, while Malaysia featured athletes with intellectual disability the most ($n = 39$), and Iran contributed to athletes with cerebral palsy the most ($n = 41$). Please see Table 3.

Facebook coverage

Total number of online posts and photographs. In total, there were 899 posts and 877 photographs that were analysed from the Facebook postings. One newspaper recorded more than 200 posts (Yomiuri, Japan). Another two newspapers, Malaysia's Sin Chew ($n = 84$) and Indonesia's Kompas ($n = 83$), published the second and third highest number of posts. Correspondingly, six newspapers (The Sun, UK; Asahi, Japan; The Oman, Oman; Diário de

Table 2 Nationality and gender of subject across newspapers.

Newspaper	Nationality			Gender		
	Local	Foreign	Mixed	Male	Female	Both
Australia						
Herald Sun	27	27	5	11	8	13
The Daily Telegraph	27	27	4	10	11	10
China						
Reference News	3	23	0	10	11	3
People's Daily	29	0	12	10	15	4
Hong Kong						
MingPoa	38	12	2	18	8	22
Oriental News Daily	24	2	2	6	19	12
India						
Times of India	19	4	0	13	4	4
The Hindu	30	2	4	22	8	10
Indonesia						
Kompas	21	9	4	10	10	11
Media Indonesia	18	0	0	8	2	8
Iran						
Hamshahri	94	0	9	21	7	6
Iran	78	3	12	12	13	5
Ireland						
Irish Independent	61	2	1	19	31	7
Irish Times	61	2	0	18	29	9
Japan						
Asahi	351	82	3	191	95	63
Yomiuri	692	73	10	330	178	144
Malaysia						
Sin Chew	139	9	5	112	7	5
The Star	125	55	3	118	31	24
Oman						
Oman	6	1	11	4	1	11
AlWatan	4	0	10	5	0	8
Portugal						
Diário de Notícias	9	3	0	8	1	1
Correio da Manhã	16	3	0	13	4	0
Chinese Taipei						
Liberty Times	21	0	0	12	2	3
United Daily News	24	0	0	9	6	7
Saudi Arabia						
Al-Jazirah	2	1	0	2	0	0
Arriyadiyah	4	1	0	3	0	2
Singapore						
Lianhe Zaobao	12	8	0	4	12	4
Straits Times	45	35	0	31	40	9
Thailand						
Khaosod	45	13	0	29	15	16
Thairath	89	1	1	45	14	32
United Kingdom						
Daily Mail	152	2	2	76	59	15
The Sun	124	14	0	10	60	55
Vietnam						
Thanh Nien	0	0	0	0	0	0
Tuoi Tre	10	0	0	5	0	5
Total	2400	414	100	1195	701	528

Notícias, Portugal; *United Daily News*, Chinese Taipei; *Thanh Nien* and *Tuoi Tre*, Vietnam) published less than five posts each.

Similarly, the top three newspapers with the highest number of photographs were from Japan, Malaysia, and Indonesia. Specifically, Japan's *Yomiuri* posted 186 photographs while Malaysia's *The Star* and *Sin Chew* posted 84 and 77 photographs, respectively. Indonesia's *Kompas* was close with 76 photographs. Table 1 shows the breakdown of the total number of posts and photographs for the newspapers of each country on Facebook.

Subject of online posts and photographs. Similar to print, athletes were the main subject of the Facebook posts and photographs. There were 1040 posts about athletes, with Japan's *Yomiuri*, Malaysia's *Sin Chew* and Thailand's *Thairath* contributing to almost half of the articles about athletes. Besides athletes, other individuals who were directly involved in the Games received little coverage, with 47 posts about officials, 21 about coaches and five about volunteers. Both Malaysian newspapers contributed close to half the news about officials ($n = 24$) and coaches ($n = 10$). Only three newspapers (from Japan, Indonesia, and Thailand, respectively) featured volunteers.

The category of Sport received the second highest coverage ($n = 260$) with Hong Kong ($n = 55$), India ($n = 45$) and Thailand ($n = 138$) outlets being the three biggest contributors in this category. The category Others received a coverage of 184 items, with Malaysia and Japan contributing to more than half of the posts with 59 each.

Nationality of subject. With the exception of newspaper outlets in Australia, Ireland and Vietnam, all other countries or regions had featured more local than foreign subjects. Both Australian newspapers posted equal number of local and foreign subjects while Irish Independent and Vietnam's Tuoi Tre had a ratio of 2 foreigners to 1 local. Please see Table 4.

Gender of subject. More than half of the total newspapers had featured more males compared to females. Seven countries or regions had featured more females than males, with three (Hong Kong; Singapore; United Kingdom) highlighting females more than males in both newspaper outlets Please see Table 4.

Disability of the subject. In total, wheelchair ($n = 297$) athletes were featured the most, followed by les autres ($n = 275$), amputee ($n = 197$), visual impairment ($n = 122$), intellectual disability ($n = 67$), and cerebral palsy ($n = 33$). Japan contributed the most to the category of wheelchair and visual impairment, while Malaysia featured the most in the categories of *les autres*, amputee, and intellectual disability. Please see Table 5.

Discussion

The discussion is divided into two sections. The first section discusses the findings of print newspaper coverage of all 17 countries or regions. The second section discusses the findings of coverage from Facebook postings of 14 countries or regions (excluding China, Iran and Saudi Arabia). Additionally, the second section also includes discussions of the Facebook coverage in comparison to the print newspaper coverage.

Print newspaper coverage. The purpose of this study was to investigate and compare print and social media coverage of the Tokyo 2020 Paralympic Games across 17 countries or regions.

Total number of articles and photographs. There was a huge disparity between the countries or regions in terms of the total number of articles throughout the two-week period of the 2020 Tokyo Paralympic Games. The top three countries with the highest number of articles and photographs were Japan, Malaysia and the United Kingdom, which is consistent with findings from Cheong et al. (2021). Newspapers in Japan contributed over 700 articles, and this amount was almost equivalent to the stories published by all the newspapers of the remaining 16 countries or regions. Similarly, for the total number of photographs, Japanese newspapers dominated with close to 500 photographs published throughout the Games. This dominance could be attributed to Japan being the host country, consistent with other studies.

Table 3 Types of disability of athletes across newspapers.

Newspaper	Wheelchair	Intellectual	Amputation	Cerebral Palsy	Visual	Les Autres	Mixed
Australia							
Herald Sun	15	1	11	7	7	6	13
The Daily Telegraph	8	1	5	4	2	4	16
China							
Reference News	5	0	7	0	0	3	0
People's Daily	9	0	3	0	2	0	1
United Kingdom							
Daily Mail	31	3	25	17	9	48	13
The Sun	18	0	34	9	6	54	7
Hong Kong							
MingPoa	10	2	0	0	2	6	28
Oriental News Daily	8	6	0	0	0	2	12
India							
Times of India	4	1	14	0	0	0	4
The Hindu	6	0	23	0	0	0	9
Indonesia							
Kompas	5	0	8	1	0	7	4
Media Indonesia	1	0	0	0	0	6	4
Iran							
Hamshahri	0	3	31	21	0	14	7
Iran	0	3	40	20	0	7	3
Ireland							
Irish Independent	4	0	16	3	20	9	0
Irish Times	8	0	17	3	20	9	0
Japan							
Asahi	93	13	42	6	70	54	52
Yomiuri	188	22	41	15	136	91	124
Malaysia							
Sin Chew	18	21	40	0	2	41	6
The Star	24	18	13	11	7	53	25
Oman							
Oman	11	0	0	0	0	1	0
AlWatan	0	0	0	1	0	0	0
Portugal							
Diário de Notícias	0	0	2	2	0	2	0
Correio da Manhã	2	0	6	0	2	4	1
Chinese Taipei							
Liberty Times	4	0	0	3	0	16	0
United Daily News	0	0	0	2	0	13	0
Saudi Arabia							
Al-Jazirah	2	0	0	0	0	0	0
Arriyadiyah	4	0	1	0	0	0	0
Singapore							
Lianhe Zaobao	8	0	0	4	2	2	2
Straits Times	32	0	16	5	11	6	8
Thailand							
Khaosod	16	0	5	6	5	9	7
Thairath	29	0	3	0	8	12	32
Vietnam							
Thanh Nien	0	0	0	0	0	0	0
Tuoi Tre	10	0	0	0	0	0	0
Total	573	94	403	135	316	479	378

Pappous et al. (2011) note that countries that have hosted or are due to host Paralympic Games tend to publish more photographs in their newspapers. It should not be surprising, then, that all attention in Japanese newspapers was centred on the largest multi-sport and multi-disability event in the world. This may also explain why the United Kingdom featured so highly, as a former host country. The anomaly in the top three is Malaysia, which has published almost 200 articles and has not hosted the Games before. There are a couple of plausible reasons for this. First, there was extensive media interest in the Paralympic Games after Malaysia won their first gold medals at the Rio 2016 Paralympic Games (Cheong et al. 2021), which contributed to media

attention at the following Games. Second, the Paralympic Games had become a priority for the Malaysian government, with then-Youth and Sports Minister Khairy Jamaluddin offering Malaysian gold medallists at the Rio Games equal prize money as their Olympic counterparts, while the National Sports Council in Malaysia offered in 2016, a pension scheme for all Paralympians medal winners similar to Olympians, putting the two events on par in terms of significance (Augustin, 2016).

In contrast, three countries (Portugal, Saudi Arabia, and Vietnam) had the least number of articles and photographs. This is likely because some of these countries had sent few participants and/or did not achieve much success in the previous Paralympic

Table 4 Nationality and gender of subject across Facebook.

Newspaper	Nationality			Gender		
	Local	Foreign	Mixed	Male	Female	Both
Australia						
Herald Sun	21	1	1	10	12	1
The Daily Telegraph	17	1	1	10	6	3
Hong Kong						
MingPoa	62	2	0	14	26	24
Oriental News Daily	17	4	0	6	8	7
India						
Times of India	42	4	0	29	12	4
The Hindu	31	2	0	25	6	2
Indonesia						
Kompas	63	17	2	28	27	21
Media Indonesia	33	1	3	10	15	12
Ireland						
Irish Independent	2	8	5	18	0	0
Irish Times	3	0	13	14	1	1
Japan						
Asahi	6	0	0	2	0	0
Yomiuri	257	14	0	93	104	35
Malaysia						
Sin Chew	154	10	2	130	24	2
The Star	130	2	2	80	8	36
Oman						
Oman	1	0	3	2		2
Portugal						
Diário de Notícias	8	0	0	7	0	1
Correio da Manhã	30	2	0	23	2	5
Chinese Taipei						
Liberty Times	42	11	0	23	16	2
United Daily News	4	0	0	0	4	0
Singapore						
Lianhe Zaobao	0	0	0	2	10	0
Straits Times	2	0	0	8	24	2
Thailand						
Khaosod	38	0	3	42	10	0
Thairath	73	8	10	90	8	0
United Kingdom						
Daily Mail	48	31	0	28	29	21
The Sun	2	0	0	0	2	0
Vietnam						
Thanh Nien	2	0	3	3	0	2
Tuoi Tre	1	2	0	3	0	0
Total	1089	120	48	700	354	183

Games. For example, both Saudi Arabia and Vietnam sent small contingents, with 29 and 44 athletes in total from all Paralympic Games combined, respectively. In addition, both countries had only won five medals since their first participation in the Paralympic Games (International Paralympic Committee n.d. IPC - Paralympic News. Sports and Results). The case is different for Portugal, which had a relatively large representation with more than 300 athletes and nearly 100 medals to date (Comité Paralímpico de Portugal, 2023). However, a previous study about the characteristics and trends of the media over the Paralympic movement had reported that there was a general dissatisfaction due to low media coverage and devaluation of Paralympic sports in comparison with Olympic sports (Marques et al. 2015). It appeared that while there was an increase in awareness about the Paralympic Games in Portugal, awareness about the importance of the Paralympic movement is still low in Portuguese society.

Subject of articles and photographs. Consistent with previous studies, athletes received the most attention in the newspaper

coverage in all the countries or regions surveyed, as a testament to their dedication, sacrifice and challenge to compete at the highest level (Cheong et al. 2016). Other individuals who were also part of the Games, such as officials, coaches, and volunteers, received minimal coverage. Japan's *Yomiuri* published the most articles on officials and volunteers, with many articles associated with the COVID-19 pandemic, such as the challenges of infection control and running a tournament without spectators. Malaysia's *The Star* highlighted coaches the most—many of those featured were coaches who had previous success at the top level (Paul, 2021). Hong Kong and Indonesia did not publish any articles about officials, coaches, and volunteers, perhaps due to the limited space in printed newspapers for sports coverage, with the available space taken up by highlighting the outstanding achievements of athletes. That China (and its regions) focus more on achievements in sports can be contextualised through studies that have shown the country uses medal success to signal international soft power (Liu, 2020).

Besides athletes, the category of Others had the most coverage, with Iran and Japan publishing the most stories in this category. Further investigation about the coverage under the subject of Others in Iran was stories related to the opening and closing ceremonies, sports contingents, and the history of participation in the Paralympic Games. These topics appeared common across coverage for the Others category across all countries or regions in the sample.

Nationality of subject. All except one newspaper had featured more local than foreign subjects. The heavy focus on local subjects is consistent with findings from previous literature studying the Olympic Games (Jakubowska, 2017) and Paralympic Games (Brooke, 2019). This finding, also discussed by Cheong et al. (2021) in their paper on media coverage of the Rio 2016 Paralympic Games, suggested that the spirit of nationalism is closely linked to Paralympic sport (and sports in general, see Seippel, 2017). Brooke (2019) suggested that this might be the case because of the framing of discourses of challenge and resilience. Only one newspaper, China's *Reference News*, featured approximately eight times more foreigners than locals. This was likely due to it being a newspaper that mainly reports news from around the world outside mainland China (Chase, 2018), prioritising foreign content.

Australia's *Herald Sun* and *The Daily Telegraph* published an equal number of local and foreign subjects. Considering the popularity of sports in Australia (Roychowdhury, 2024), the official partner (Channel 7) of Paralympics Australia wanted to provide comprehensive coverage of the Paralympic Games, which has gained considerable popularity in recent years (International Paralympic Committee, 2022). To achieve this, Channel 7 gathered an impressive number of former and current Paralympians, who brought unrivalled experience, knowledge, and understanding to Paralympic coverage (Bruno, 2021).

With a multicultural populace that takes a keen interest in sporting events and activities, the broadcasting team showcased the diversity and achievements of Paralympians from different countries or regions and cultures, as well as support for the Australian Paralympic Team. As a result, it is likely that the Australian media, both in print and online, wanted to disseminate news consistent with the coverage by Channel 7, which celebrates the achievements of Paralympians (both local and foreign), and reflects the values and interests of their (Australian) audience.

Gender of subject. Approximately two-thirds of the newspapers featured more males compared to females. This gender inequality is consistent with media studies that have been conducted on the Olympic Games (Cheong et al. 2024; Delorme & Testard, 2015,

Table 5 Types of disability of subjects across Facebook.

Newspaper	Wheelchair	Intellectual	Amputation	Cerebral Palsy	Visual	Les Autres	Mixed
Australia							
Herald Sun	3	2	5	5	3	6	6
The Daily Telegraph	2	1	2	4	1	4	8
Hong Kong							
MingPoa	32	4	0	2	0	2	24
Oriental News Daily	9	2	0	0	2	4	5
India							
Times of India	10	0	27	0	0	0	2
The Hindu	6	0	27	0	0	0	0
Indonesia							
Kompas	0	6	0	7	2	36	20
Media Indonesia	1	2	0	3	0	17	13
Ireland							
Irish Independent	1	0	5	0	7	1	0
Irish Times	10	0	10	0	3	3	0
Japan							
Asahi	0	0	0	0	2	0	0
Yomiuri	85	6	12	0	48	38	29
Malaysia							
Sin Chew	14	24	58	0	0	52	18
The Star	8	14	12	4	2	34	4
Oman							
Oman	2	2	0	0	0	0	0
Portugal							
Diário de Notícias	0	0	5	0	0	2	1
Correio da Manhã	4	2	6	2	9	4	3
Chinese Taipei							
Liberty Times	8	0	0	0	5	27	0
United Daily News	0	0	0	0	0	4	0
Singapore							
Lianhe Zaobao	10	0	0	0	2	0	0
Straits Times	22	0	4	2	0	4	2
Thailand							
Khaosod	16	0	0	2	10	3	14
Thairath	44	0	10	0	10	4	26
United Kingdom							
Daily Mail	4	2	12	2	16	28	9
The Sun	0	0	0	0	0	2	0
Vietnam							
Thanh Nien	5	0	0	0	0	0	0
Tuoi Tre	1	0	2	0	0	0	0
Total	297	67	197	33	122	275	184

Packer et al. 2015), as well as previous Paralympic Games (Buyse & Borchering, 2010; Cheong et al. 2016; Cheong et al. 2021; de Leseleuc et al. 2010; Packer et al. 2015), with the possible explanation for this inequality due to higher number of male representation (Cheong et al. 2016; Cheong et al. 2021) and that Para sports was historically male dominated (Rees et al. 2019).

Meanwhile, three countries (China, Ireland, and Singapore) had highlighted more females than males in their newspapers. China was represented by 132 female athletes and 119 male athletes in Tokyo 2020. The number of female athletes winning gold, silver, and bronze medals was greater than the number of male athletes. This could explain why females had received more exposure and media coverage than males in newspapers there. As for Singapore, it is likely that the Singaporean press tended to focus on females more than males because of the strengths of the women's delegation. First, there were more women who represented the country in Tokyo 2020—six women to four men. Secondly, Singapore's medal success was dominated by Singaporean women's backstroke S2 specialist Yip Pin Xiu, who won two gold medals, leading to more media attention; none of the other Singapore competitors won a medal. This corroborates

Singapore's *Lianhe Zaobao's* coverage of the Rio 2016 Paralympic Games (Cheong et al. 2021), which found that this newspaper covered women (75%) more than men. It was argued that this phenomenon occurred because the females were all the nation's medallists (Cheong et al. 2021).

The cases above showed the complexity in trying to give definitive meaning to the data in this study, echoing the systematic review of elite athletes with disabilities which included 17 articles which suggested that it was “unclear whether or not gender discrimination actually exists in reporting of elite athletes with disability in the media.” (Rees et al. 2017, p 378). This is in part due to the historical factors mentioned above, as well as its finding that of seven studies reviewed, almost half found that the gender representation in the media was proportional to gender breakdowns in participation at the Games. While our study did not include such a level of analysis, the same reasoning could be applied with respect to the proportion of medal winners, in the case of Singapore, above. Nonetheless, there is also literature surrounding issues around diversity in sports journalism—one article found that visibility of female sports journalists was under 10% in several

countries (Boczek et al. 2023), which could have factored into the above findings (see also Descamp et al. 2024).

Disability of the subject. Of all the different disabilities featured in the news coverage, wheelchair athletes received the most attention. This particular focus on wheelchair athletes could be explained through several reasons: first, wheelchair sports count for more than a third of all the Paralympic sports in contention; secondly, from a historical perspective, the precursor to the Paralympic Games was the 1948 International Wheelchair Games (DePauw, 2012), leading to wheelchair sports dominating in the early years of the Paralympic Games (Rees et al., 2017); and finally, through cultural significance: wheelchair impairments are visible (Martínez-Bello et al., 2023), and alongside fibre carbon blades runners use, the wheelchair “contribute to the media spectacle of enhanced disabled bodies” (Kolotouchkina et al., 2021, p 3). To this last point, scholars have noted that the wheelchair is “the most universal symbol of disability” (Silva & Howe, 2012, p 182); indeed, a person in a wheelchair is the International Symbol of Access².

Our analysis showed that in a significant number of countries or regions, including Thailand, Singapore, Saudi Arabia, Hong Kong, and Australia, wheelchair athletes featured the most in both newspapers. Other countries like Vietnam only featured wheelchair athletes ($n = 10$). However, this wasn't the case with other countries—many of which featured other disabilities in higher proportion; Iran featured no wheelchair athletes at all. The most notable contributor to the representation of wheelchair athletes in our study is Japan, which had the highest number of articles and photos. Aside from the sheer volume of total articles and photos in the dataset, this finding is also consistent with other studies. One in particular analysed Japanese photographic coverage of the Paralympic Games, and noted that the percentage of wheelchair sports has always been the main feature in news coverage since the Atlanta 1996 Paralympic Games up to the Rio 2016 Paralympic Games (Yajima & Fujita, 2021). Where the 2020 Paralympic Games are concerned, one other possible reason for this trend is that there was a lot of media coverage of the wheelchair basketball team from Japan as a result of winning the silver medal.

This attention to athletes who have done well could also explain why Iran contributed the most coverage on cerebral palsy, while Malaysia contributed the most coverage on intellectual disability. In the case of Iran, athletes with cerebral palsy were able to reach the final stage of the competitions in which they had participated, leading to more media coverage. Similarly, for Malaysia, one of the three gold medals the country took home was won by Abdul Latif Romly, an athlete with intellectual disability. He dominated the headlines as he was the first Malaysian to defend a Paralympic title, having also won gold in the Rio 2016 Paralympic Games.

Coverage from Facebook postings in comparison to print coverage

Total number of posts and photographs in the Facebook coverage. In total, there were 1776 posts and photographs in the Facebook coverage compared to 3029 in print, approximately 40% less than the print media coverage. There was a reduction in coverage from at least one newspaper of all participating countries or regions, except for Hong Kong and Indonesia, where both newspapers had an increase in coverage. These findings suggest that in many countries or regions, print media is still relevant for disseminating sports news, even with the significant use of online media for news consumption globally. In addition, newspapers in some countries or regions may have had multiple Facebook pages, and as such, some of their coverage was spread out across different

social media pages, and therefore, outside the scope of our sample collection. This was certainly the case for the United Kingdom, although in this particular instance, this would have been negligible due to the low number of social media posts about the Paralympic Games in general by news organisations in that country. Another possibility is that the temporal relationship of social media and news (Tenenboim-Weinblatt & Neiger, 2018), which can favour timeliness in news means that media organisations prioritise online posting of breaking news or spectacular breakthroughs, and as such, do not offer as comprehensive coverage of the sporting event as they do in print.

Three countries (China, Iran, and Saudi Arabia) had published articles in the print media but not on Facebook. The social media platform has been banned by the government in China and Iran, while in Saudi Arabia, online users prefer other social media platforms (e.g. X—formerly Twitter) to Facebook (Alotaibi & Alotiby, 2022); this is within our limitation as indicated in the Methods section. Therefore, it was expected that there would be no posts or photographs related to the Tokyo 2020 Paralympic Games on Facebook in these countries.

In terms of the total number of data points, once again, Japan's *Yomiuri* published the most posts and photographs throughout the duration and per day. Meanwhile, Malaysia's *Sin Chew* and Indonesia's *Kompas* published the second and third highest total and average number of posts and photographs, respectively, with *Kompas* posting three times more on Facebook compared to its print coverage. While the examples of Japan and Malaysia seem understandable, considering both countries were among the top three when it came to print media articles and photographs, Indonesia's anomaly could be due to sheer numbers. Indeed, internet users in Indonesia are among the highest in the world (Tarsidi et al. 2023), leading to news organisations relying heavily on social media for news in most cases (Firmansyah, 2022).

For the newspapers with the lowest number of posts, most were from countries or regions that had a small representation at the Paralympic Games with few medals won. This could have influenced public and media interest in the Paralympic Games broadly.

Subject of posts and photographs in Facebook coverage. As with the print newspapers, athletes were also the main subject of the posts and photographs in the Facebook coverage ($n = 1040$). *Yomiuri* (Japan), *Sin Chew* (Malaysia) and *Thairath* (Thailand) contributed to almost half of the posts/photographs about athletes ($n = 436$). The coverage was about the profile or background of athletes, pre-competition information about the athlete, as well as the achievements of athletes. There was much less coverage about the other individuals who were part of the Games, with officials ($n = 47$) receiving more coverage than coaches ($n = 21$) and volunteers ($n = 5$). The Malaysian newspapers contributed to approximately half of the news about officials and coaches ($n = 28$). For example, there were stories about officials in relation to the Chef de mission (“Chef de mission rubbishes claim Ziyad was 28 minutes late to waiting room”, 2021) and stories about the coach of an athlete who was disqualified (“Muhammad Ziyad's coach: I am responsible for disqualification,” 2021). Meanwhile, one example of a story involving volunteers was about the role of volunteers in helping athletes who were injured (“Despite the need to spray painkillers to compete, Le Van Cong still won a silver medal at the Tokyo Paralympic Games,” 2021). These very low numbers for non-athletes are consistent with our argument earlier that only sensational and breaking news—in sports, athletes are usually the main personalities of interest—is prioritised for social media dissemination.

Besides individuals, the category of Sports and Others had received the second and third highest coverage, respectively. Examples of coverage about Sports were about the classifications of wheelchair racing events (Thairath Sport, 2021). As for examples of coverage about Others, the Facebook pages of the

newspapers from Malaysia had highlighted family members (“Mum wills son to long jump gold with screams of ‘Fly Latif... fly Latif!’,” 2021), congratulatory messages (“King and Queen congratulate Bonnie for winning Paralympics gold,” 2021), and cash incentives for athletes (Kaur, 2021), among others.

Gender of the subject in Facebook coverage. Similar to print coverage, male subjects were featured more than female subjects in more than half of the Facebook coverage. One country, Vietnam, featured 100% male subjects in both their newspapers. The bias against females was also reported in a previous study involving Twitter (now X), another social media platform (Adá-Lameiras & Rodríguez-Castro, 2023). One possible reason for inequality could be due to the imbalance in participant numbers, similar to the proportion argument made earlier for a similar finding in the print news. For example, the Portuguese Paralympic delegation participating in the Tokyo 2020 Paralympic Games comprised 33 athletes of whom only 10 were female (Comité Paralímpico de Portugal, 2023).

The United Kingdom, Hong Kong, and Singapore were the only countries or regions where both newspapers highlighted more females than males. In the case of Singapore, it appeared that both print and Facebook coverage shared the same characteristics around gender coverage and were possibly related to medals won. The Singaporean medal success was dominated by female swimmer, Yip Pin Xiu, and none of the other competitors won a medal. For the United Kingdom, para-cyclist Sarah Storey dominated much of the media coverage as she won three gold medals in Tokyo, which made her the most successful British Paralympian in the country’s history. As suggested by Cheong et al. (2021), this could be a reason for the similarly low coverage in Singaporean male athletes at the Rio 2016 Paralympic Games and could also be a relevant explanation for the Tokyo 2020 Paralympic Games. Additionally, another possible reason why countries or regions had more coverage of females could be the same explanation given by Litchfield and Kavanagh (2019), which offered that bias could be reduced and more equity could be shown when it came to news reporting on social media due to spatial parameters. This is consistent with earlier discussions around diversity in sports journalism. It would be interesting to see if this trend will include more and more countries or regions as research on the news coverage of Paralympic Games on social media increases.

Nationality of the subject in Facebook coverage. Print and online media coverage shared the same characteristics, nearly all the countries or regions featured more local than foreign athletes. As above in the print newspaper analyses of this study, and noted in other studies (Brooke, 2019; Cheong et al. 2021), it appeared that there was a trend that media coverage of the Paralympic Games was closely linked to patriotism. This might explain the lack of foreign subjects on Facebook—if social media is used for timely and breaking news, the most relevant to followers and readers would be victories of their own athletes. Conversely, the findings were different for Australia, Ireland, and Vietnam. Both Australian newspapers, *Herald Sun* and *The Daily Telegraph*, published equal numbers of local and foreign subjects, whereas Ireland and Vietnam published more articles about foreigners than locals. In a content analysis of new media news coverage from six countries, Eagleman et al. (2014) suggested that there was less nationalistic biasness online as the internet provided spaces and opportunities for equitable coverage. This could explain the case of Vietnam, where the reporters found it important to highlight the outstanding qualities of counterparts of the Vietnamese competitors, as well as other outstanding athletes from other countries (Khuê, 2021).

Disability of the subject in Facebook coverage. Disabilities were featured in the same pattern as the print media, whereby wheelchair athletes were featured the most, followed by mixed disability, *les autres*, amputee, visual impairment, intellectual disability, and cerebral palsy. While Japan still contributed the most wheelchair and visual impairment, Malaysia featured the most *les autres*, amputee and intellectual disability, perhaps due to the athletes with these disabilities contributing to the best performances, and as such, making the cut in terms of editorial choices of which news are significant enough to be shared online through social media dissemination.

Conclusion

The study presented in this paper builds on the 11-country analysis of newspaper coverage of the 2016 Rio Paralympic Games to include print newspaper coverage of 17 countries or regions, and Facebook posts from newspapers of 14 countries or regions. In total, 1644 articles and 1385 photographs in print and 899 posts and 877 photographs in Facebook postings were analysed in this study. Primarily a quantitative study, the number of countries or regions included will make this a more extensive study in terms of geographical location. Our study also includes a wide range of data points where media representation of the Tokyo 2020 Paralympic Games is concerned, including the type of subjects (including athletes, coaches, officials and more), gender and nationality of the subject, as well as the type of disability. As a summary, the main subject was predominantly male athletes, while those in wheelchairs seem to receive more attention than those with other disabilities. As expected, in nearly all the countries or regions, there was more coverage of local athletes.

Moving forward, future studies could build on the breadth of data points in our study (as illustrated in the various tables presented in this article), including our findings and analysis. The extensive number of countries or regions included in this study in itself could be beneficial both for individual localities and comparative perspectives. Where demographics of our subjects are concerned, this would benefit future studies aimed at expanding studies around gender equity in Para sport media coverage, allowing for explorations into different areas of intersectionality. Additionally, in relation to upcoming and future Paralympic Games, more countries or regions could potentially be studied and content analysis to include headlines and summaries of stories.

This current study is primarily quantitative, and while we have endeavoured to include some analysis on the trends and patterns that have emerged from the data, the extent of discussions is limited by the scale of the study. Considering this, future research that adopts more qualitative approaches may offer in-depth analysis of the underlying causes of the observed disparities and biases, among other findings.

Data availability

The datasets analysed for this study consist of publicly available print media material and from the media organisation’s respective Facebook pages.

Received: 29 August 2024; Accepted: 17 June 2025;
Published online: 04 July 2025

Notes

- 1 In Africa, Facebook comes a close second only 1% behind WhatsApp which was listed as the most used platform in that continent.
- 2 https://en.wikipedia.org/wiki/International_Symbol_of_Access?

References

- Adá-Lameiras A, Rodríguez-Castro Y (2023) Analysis from a gender perspective of the Olympic Games on Twitter. *Eur Sport Manag Q* 23(3):683–699
- Alexander D, Duncan LR, Bloom GA (2022) A critical discourse analysis of the dominant discourses being used to portray parasport coaches in the newspaper media. *Qual Res Sport Exerc Health* 14(4):511–529. <https://doi.org/10.1080/2159676X.2021.1947885>
- Alotaibi K, Alotiby A (2022) Most common social media platforms in Saudi Arabia for sharing COVID-19 medical information. *Saudi J Health Syst Res* 2(2):78–84
- Boykoff J, Yasuoka M (2015) Gender and politics at the 2012 Olympics: media coverage and its implications. *Sport Soc* 18(2):219–233
- Antunovic D, Bundon A, Lehrfeld L, Gancayco P (2024) “New Heights” in Storytelling?: considerations for cross-national analyses of broadcasters’ social media coverage of the Paralympics. *Commun Sport* <https://doi.org/10.1177/21674795241238139>
- Augustin R (2016) Pension scheme for all Paralympic heroes, past and present. *Free Malaysia Today*. <https://www.freemalaysiatoday.com/category/nation/2016/09/13/pension-scheme-for-all-paralympic-heroes-past-and-present>
- Boczek K, Dogruel L, Schallhorn C (2023) Gender byline bias in sports reporting: examining the visibility and audience perception of male and female journalists in sports coverage. *Journalism* 24(7):1462–1481. <https://doi.org/10.1177/14648849211063312>
- Brooke M (2019) The Singaporean Paralympics and its media portrayal: real sport? Men-only? *Commun Sport* 7(4):446–465
- Bruce T (2014) Us and them: the influence of discourses of nationalism on media coverage of the Paralympics. *Disabil Soc* 29(9):1443–1459
- Bruno G (2021) Tokyo 2020 Paralympic Games: Full list of Channel 7 hosts, commentators, and reporters from the Paralympics. Retrieved August 23, 2021. <https://news.com.au/sport/paralympics/tokyo-2020-paralympic-games-full-list-of-channel-7-hosts-commentators-and-reporters-from-the-paralympics-c-3754721>
- Buysse JM, Borchering B (2010) Framing Gender and Disability in Sport: A cross-cultural analysis of photographs from the 2008 Paralympic Games. *International Journal of Sport Communication* 3:308–321
- Chang IY, Crossman J (2009) When there is a will, there is a way: a quantitative comparison of the newspaper coverage of the 2004 Summer Paralympic and Olympic Games. *Int J Appl Sports Sci* 21(2):16–34
- Chang IY, Crossman J, Taylor J, Walker D (2011) One world, one dream: a qualitative comparison of the newspaper coverage of the 2008 Olympic and Paralympic Games. *Int J Sport Commun* 4(1):26–49
- Chase T (2018) Translating the news in China: the evolution of Reference News and its future in a digital news landscape. *Media Int Aust* 168(1):140–152
- Chef de mission rubbishes claim Ziyad was 28 min late to waiting room (2021). *The Star*
- Cheong JPG, Chew E, Razman R et al. (2024) Malaysian newspaper coverage of the 2012 and 2016 Olympic Games. *Malays J Mov, Health Exerc* 13(1):1. https://journals.lww.com/mjmh/fulltext/2024/01000/malaysian_newspaper_coverage_of_the_2012_and_2016.1.aspx
- Cheong JPG, Khoo S, Inoue C et al. (2021) An 11-country analysis of newspaper coverage of the 2016 Rio Paralympic Games. *Disabil Soc* 36(5):795–811
- Cheong JPG, Khoo S, Razman R (2016) Spotlight on athletes with a disability: Malaysian newspaper coverage of the 2012 London Paralympic Games. *Adapt Phys Act Q* 33(1):15–32
- Comité Paralímpico de Portugal (2023) Portugueses nos Jogos. Retrieved Sep 07, 2023. <https://paralimpicos.pt/portugueses-nos-jogos-paralimpicos>
- Craven P (2016) The Paralympic Games and the Promotion of the Rights of Persons with Disabilities. <https://www.un.org/en/chronicle/article/paralympic-games-and-promotion-rights-persons-disabilities>
- Culver DM, Shaikh M, Alexander D et al. (2022) Gender equity in disability sport: a rapid scoping review. *J Clin Sport Psychol* 16(4):383–405. <https://doi.org/10.1123/jcsp.2021-0074>
- de Léséleuc E, Pappous A, Marcellini A (2010) The media coverage of female athletes with disability. Analysis of the daily press of four European countries during the 2000 Sydney Paralympic Games. *Eur J Sport Soc* 7(3–4):283–296. <https://doi.org/10.1080/16138171.2010.11687863>
- Delorme N, Testard N (2015) Sex equity in French newspaper photographs: a content analysis of 2012 Olympic Games by L’Equipe. *Eur J Sport Sci* 15(8):757–763
- DePauw KP (2012) A historical perspective of the Paralympic Games. *J Phys Educ Recreat Dance* 83(3):21–31. <https://doi.org/10.1080/07303084.2012.10598739>
- Descamps Y, Kilvington D, Price J (2024) Sport, discrimination, and the Olympic and Paralympic Games: introduction to the special issue. *Int J Sport Soc* 15(3):0–0. <https://doi.org/10.18848/2152-7857/CGP/v15i03/0-0>
- Despite the need to spray painkillers to compete, Le Van Cong still won a silver medal at the Tokyo Paralympic Games (2021). *Thanh Nien*
- Eagleman A, Burch LM, Vooris R (2014) A unified version of London 2012: new-media coverage of gender, nationality, and sport for Olympics consumers in six countries. *J Sport Manag* 28(4):457–470
- Firmansyah F, Novita S, Rachmiate A et al. (2022) How the print media industry survived in the digital era. *J Aspiikom* 7(1):1. <https://doi.org/10.24329/aspiikom.v7i1.1013>
- Fong A, Katz S (2012) USA vs. Canada. An analysis of media coverage of Paralympic athletes. *Heroes or zeros* pp 113–120
- Hallin DC, Mancini P (2004) Comparing media systems: three models of media and politics. Cambridge University Press, Cambridge
- International Paralympic Committee (2022) Post-Tokyo 2020 study shows Australia’s Paralympians are more popular than ever. <https://www.paralympic.org/feature/post-tokyo-2020-study-shows-australia-s-paralympians-are-more-popular-ever>
- International Paralympic Committee (n.d.) Athens 2004 Paralympic Games. Retrieved September 07, 2023. <https://www.paralympic.org/athens-2004>
- International Paralympic Committee (n.d.) Beijing 2008 Paralympic Games. Retrieved September 07, 2023. <https://www.paralympic.org/beijing-2008>
- International Paralympic Committee (n.d.) IPC—Paralympics News, Sports and Results. Retrieved September 07, 2023. <https://www.paralympic.org>
- International Paralympic Committee (n.d.) Tokyo 2020 Paralympics Results—Official Event Standings. Retrieved September 07, 2023. <https://www.paralympic.org/tokyo-2020/results>
- Jakubowska H (2017) Framing the winter olympic games: a content analysis of Polish newspapers coverage of female and male athletes. *Pol Socio Rev* 197(1):67–82
- Kaur M (2021) Cash rewards await 2020 Paralympics medal winners from Perak Khuê Đ (2021) The amputee table tennis player astounded the Paralympics with his performance using only...his mouth. Retrieved August 26, 2021. https://tuoitre.vn/vdv-bong-ban-cut-tay-gay-an-tuong-o-paralympic-nho-thi-dau-bang-mieng-20210826115307853.htm?fbclid=IwAR2-t3umqOATV-cU9Yp2_q0ammbRu0B2PhT8CV_Ge0Cf6EHEtCaPQfM3Rkw
- King and Queen congratulate Bonnie for winning Paralympics gold (2021) *The Star*
- Kolotouchkina O, Llorente-Barroso C, García-Guardia ML, Pavón J (2021) Disability, sport, and television: media visibility and representation of Paralympic Games in news programs. *Sustainability* 13(1):256. <https://doi.org/10.3390/su13010256>
- Lenskyj HJ (2008) Olympic industry resistance: challenging Olympic power and propaganda. State University of New York Press, New York
- Litchfield C, Kavanagh E (2019) Twitter, Team GB and the Australian Olympic Team: representations of gender in social media spaces. *Sport Soc* 22(7):1148–1164
- Liu D (2020) Signaling soft power through medal success: China as an example. *Sport Soc* 23(11):1827–1840. <https://doi.org/10.1080/17430437.2020.1804109>
- Maika M, Danylchuk K (2016) Representing Paralympians: the ‘Other’ Athletes in Canadian Print Media Coverage of London 2012. *Int J Hist Sport* 33(4):401–417. <https://doi.org/10.1080/09523367.2016.1160061>
- Marcondes IM, Cidade RE, Selves J et al. (2024) Gender (In)Equity in the Brazilian paralympic committee coverage of the paralympic games. *Int J Sport Commun* 17(4):378–389. <https://doi.org/10.1123/ijsc.2024-0055>
- Marques RFR, Marivoet S, Almeida MAB et al. (2015) A abordagem mediática sobre o desporto paralímpico: perspetivas de atletas portuguesas. *Motricidade* 11(3):123–147
- Martínez-Bello VE, Bernabé-Villodre MM, Cabrera García-Ochoa Y et al. (2023) The representation of athletes during Paralympic and Olympic Games: a Foucauldian analysis of the construction of difference in newspapers. *Disabil Soc* 38(6):1053–1075. <https://doi.org/10.1080/09687599.2021.1983413>
- Muhammad Ziyad’s coach: I am responsible for disqualification (2021) *The Star*
- Mum wills son to long jump gold with screams of ‘Fly Latif... fly Latif!’ (2021) *The Star*
- Newman N, Fletcher R, Schulz A et al (2021) Reuters Institute Digital News Report 2021. Reuters Institute for the Study of Journalism, Oxford, UK
- O’Hara J, Hall S (1984) The narrative construction of reality: an interview with Stuart Hall. *South Rev* 17:3–17
- Packer C, Geh D, Goulden O et al. (2015) No lasting legacy: no change in reporting of women’s sports in the British print media with the London 2012 Olympics and Paralympics. *J Public Health* 37(1):50–56
- Pappous A, Marcellini A, De Léséleuc E (2011) From Sydney to Beijing: the evolution of the photographic coverage of Paralympic Games in five European countries. *Sport Soc* 14(3):345–354
- Paul R (2021) Jaganathan: Rivals trying to upset us by saying we are favourites. *The Star*
- Pearson E and Misener L (2021) Paralympians still don’t get the kind of media attention they deserve as elite athletes. Retrieved September 01, 2021. <http://theconversation.com/paralympians-still-dont-get-the-kind-of-media-attention-they-deserve-as-elite-athletes-166879>
- Poteko K, Bartoluci S (2025). Unpacking the Paris 2024 paralympic games: a comparative analysis of media representations in Slovenia and Croatia. *Commun Sport* <https://doi.org/10.1177/21674795251330485>
- Rees L, Robinson P, Shields N (2019) Media portrayal of elite athletes with disability—a systematic review. *Disabil Rehabil* 41(4):374–381. <https://doi.org/10.1080/09638288.2017.1397775>
- Roychowdhury D (2024) The Popularity of Sports in Australia. <https://www.drdevroy.com/popularity-of-sports-in-australia/>

- Schantz OJ, Gilbert K (2001) An ideal misconstrued: newspaper coverage of the Atlanta Paralympic Games in France and Germany. *Socio Sport J* 18(1):69–94
- Seippel Ø (2017) Sports and Nationalism in a Globalized World. *Int J Socio* 47(1):43–61. <https://doi.org/10.1080/00207659.2017.1264835>
- Selami Ö (2010) Investigation of Beijing 2008 Olympic Games photos in the Turkish sports media in terms of gender discrimination. *Ovidius University Annals, Series Physical Education & Sport/Science, Movement & Health* 10(2)
- Shirazipour CH, Meehan M, Latimer-Cheung AE (2017) An analysis of BBC television coverage of the 2014 Invictus Games. *Adapt Phys Act Q* 34(1):33–54. <https://doi.org/10.1123/APAQ.2016-0121>
- Silva CF, Howe PD (2012) The (In)validity of supercrip representation of paralympian athletes. *J Sport Soc Issues* 36(2):174–194. <https://doi.org/10.1177/0193723511433865>
- Solves J, Pappous A, Rius I et al. (2018) Framing the paralympic games: a mixed-methods analysis of Spanish media coverage of the Beijing 2008 and London 2012 Paralympic Games. *Commun Sport* 7(6):729–751
- Tarsidi DZ, Suryadi K, Budimansyah D et al. (2023) Social media usage and civic engagement among Indonesian digital natives: An Analysis. *J Civics* 20(2):257–269. <https://doi.org/10.21831/jc.v20i2.60812>
- Tenenboim-Weinblatt K, Neiger M (2018) Temporal affordances in the news. *Journalism* 19(1):37–55. <https://doi.org/10.1177/1464884916689152>
- Thairath Sport (2021) Coming as scheduled, “Pongsakorn-Pichet-Athiwa” raced through to compete for 100 m wheelchair gold. <https://www.facebook.com/ThairathSport/posts/pfbid0BzLLCvCbKGVnDNppoDumY7u45BxGc7Z6rjh8fb9regFNQeYxnkrRpvY67GbEnl>
- Thomas N, Smith A (2003) Preoccupied with able-bodiedness? An analysis of the British media coverage of the 2000 Paralympic Games. *Adapt Phys Act Q* 20(2):166–181
- Tynedal J, Wolbring G (2013) Paralympics and its athletes through the lens of the New York Times. *Sports* 1(1):13–36
- Weiller-Abels K, Everbach T, Colombo-Dougovito AM (2021) She’s a Lady; he’s an Athlete; they have overcome: portrayals of gender and disability in the 2018 Paralympic Winter Games. *J Sports Media* 16(1):123–148. <https://www.proquest.com/scholarly-journals/shes-lady-hes-athlete-they-have-overcome/docview/2581549034/se-2?accountid=8630>
- Yajima Y, Fujita M (2021) An analysis of the photographic coverage of Paralympic Games in Japan from 1996 to 2018. *J Paralympic Res Group* 15:91–118
- Yang L, Lin Z (2023) The national hero, the supercrip, and the self-reliant figure: Paralympic champions on China Central Television’s sports channel. *Sport Soc* 26(9):1477–1491. <https://doi.org/10.1080/17430437.2022.2147064>
- Yoo JJ, Min B, Koh Y (2024) Cross-national news narratives of the Paralympic Games: computational text analysis of the media coverage in the United States and South Korea. *Commun Sport* 12(2):230–253. <https://doi.org/10.1177/21674795221090420>

Acknowledgements

This research was supported by the Universiti Malaya Bantuan Kecil Penyelidikan BKP Grant (Grant no. BK012-2017).

Author contributions

Conceptualisation and Methodology: JPGC, NC, and SK. Analysis: JPGC and NC. Writing: Original draft—JCPG and MB. Editing: NC, RR, and SK. Revisions: NC. Investigation: NC, MB, HE, WL, AM, ASS, PC, ME, PA, VH, DR, P-HL, SXL, TB, AAL-S, NTH, MMA, OH. Supervision: NC and SK. Project administration: SK and RR.

Competing interests

The authors declare no competing interests.

Ethical statements

Ethical approval was not required as this article does not contain any studies with human participants performed by any of the authors.

Informed consent

This article does not contain any studies with human participants performed by any of the authors.

Additional information

Correspondence and requests for materials should be addressed to Selina Khoo.

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