**Introduction**

Media is influential in shaping public understanding of disability and media analysis can provide a lens to understand where and how a disability is placed on the public agenda (Ellis and Goggin, 2015; Haller, 2010; Barnes and Mercer, 2010; Riley, 2005; Stadler, 2011). Disability has historically been interpreted through a medical model, where people with disability are defined by their illness and dependence on the medical system (Barnes and Mercer, 2010; Ellis and Goggin, 2015). Media has also framed disability through a medical lens emphasising illness alongside a narrative that focuses on tragedy, charity and powerlessness (Shakespeare, 1994; Stadler, 2011; Goggin, 2009; Barnes and Mercer, 2010). This portrayal potentially adds to the prejudice people with disability experience (Shakespeare, 1994), enforces stereotypes (Riley, 2005), validates the negative manner with which many people with disability are treated (Barnes and Mercer, 2010), and negatively impacts people with disability’s perception of themselves (Zhang and Haller, 2013). Today, there is greater consideration for how society shapes the experience of disability through a social model (World Health Organisation, 2013). The social model of disability considers the interaction between a person’s health condition and their environment (Ellis and Goggin, 2015), and environmental factors include both individual and societal attitudes (World Health Organisation, 2013).

It is estimated up to approximately 20,000 people in Australia live with a spinal cord injury (New et al., 2012; New et al., 2015). In a population of nearly 25.5 million (Australian Bureau of Statistics, 2019) this low prevalence provides little opportunity for people to meet someone with a spinal cord injury and learn about its condition and/or its experience. Spinal cord injury can occur from a traumatic event, such as a motor vehicle accident, fall, sports related activity, or a non-traumatic event, such as haemorrhage or tumour (Field-Fote, 2009). Over the past 100 years, spinal cord injury has evolved from a condition that should not be treated, to being treated and rehabilitated (Donovan, 2007; Schiller and Mobbs, 2012). Greater knowledge, advances in technology, and improved accessibility to resources now enable people with spinal cord injury to live longer active lives in their communities (Field-Fote, 2009). However, despite this progress, barriers to societal inclusion and participation persist for people with spinal cord injury. Barriers include negative public attitudes (Amsters et al., 2016; Barclay et al., 2016; Levins et al., 2004) and poor understanding of the condition (Dickson et al., 2011), for example, a person with quadriplegia may have decreased ability to use their hands, but this could be perceived as being unable to work – when they could simply work in other ways. Media analysis of spinal cord injury provides an opportunity to interpret how the public might understand spinal cord injury and how a lived experience with spinal cord injury may be perceived.

**Disability and Media**

Disability and media analysis research has included genres such as film (Haller, 2010; Safran, 1998), television (Cumberbatch and Negrine, 1992; Haller, 2010), newspapers (Clogston, 1990), advertising (Haller, 2010; Riley, 2005) and digital content (Goggin, 2003; Haller, 2010). This body of work indicates media is intrinsic to the political, cultural and social construct of disability (Goggin and Newell, 2000; Stadler, 2011), with media shaped attitudes contributing both as barriers and facilitators to participation for people with disability (Ellis and Goggin, 2015).

Research on media framing of disability has found both traditional and progressive frames (Clogston, 1990; Ellis and Goggin, 2015; Haller, 2010; Haller, 1995). Traditional media framing of disability places ownership of disability onto the person, considers people with disability to be disadvantaged and dependent on the government for support (Clogston, 1990; Haller, 2010; Haller, 1995), and highlights a financial burden that people with disability have on society (Haller, 1995). Another frame is the ‘supercrip’, whereby a person with disability is considered extraordinary for achieving something deemed unachievable (Clogston, 1990; Haller, 2010; Haller, 1995), such as a person with spinal cord injury managing to work in spite of their spinal cord injury. These frames are recognised as negative representations (Barnes & Mercer, 2010) and are stigmatising towards people with disability (Haller, 2013).

Emerging in the 1980s, progressive media frames reflect a social perspective of disability (Clogston, 1990; Ellis and Goggin, 2015; Haller, 2010), where a person is ‘disabled by society’ (Haller, 1995) rather than their health condition. Progressive media frames portray people with disability in the same way as people without disability, acknowledge the civil rights of people with disability (Clogston, 1990; Haller, 2010; Haller, 1995), consider legalities on how someone with disability is treated, and/or recognise that in an accessible environment people with disability are consumers and profitable to society and business (Haller, 1995). This framing of disability is recognised as a positive representation (Barnes & Mercer, 2010) with potential to empower people with disability (Haller, 2013).

Despite evidence of progressive frames in the 21st century (Devotta et al., 2013) a review of the literature shows media have mostly persisted with using traditional framing of disability (Burns and Haller, 2015; Gold and Auslander, 1999; Green and Tanner, 2009; Mellifont and Smith-Merry, 2015; Saunders et al., 2018). For example, Briant, Watson and Philo (2013) found a shift away from a ‘sympathetic’ (p.874) tone in an analysis of newspaper articles in the United Kingdom from 2004/5 to 2010/11, however traditional framing persisted with narratives on fraud and disability benefits, and the use of derogatory language (Briant et al., 2013). Health conditions examined using media analysis include limb loss (Abernethy et al., 2017), acquired brain injury (Saunders et al., 2018), and anxiety disorders (Mellifont and Smith-Merry, 2015). Analysis of film characters with limb loss from 1966 to 2015 found characters depicted as heroes increased over time with the appearance of unrealistic prosthesis more pronounced (Abernethy et al., 2017). A qualitative content analysis of Australian newspaper articles published between 1984 to 2017 suggests medical framing of acquired brain injury focused on a person’s illness rather than their lived experience, within the context of their personal and social environments (Saunders et al., 2018). Offenders, defendants, or people with substance abuse who have an acquired brain injury were more inclined to be negatively depicted, whereas there was a more sympathetic narrative presented in articles describing a person who acquired their brain injury as a victim (Saunders et al., 2018). The traditional framing of disability was also found in an Australian media analysis of anxiety disorders from 2000 and 2015 (Mellifont and Smith-Merry, 2015), where emphasis laid in funding and consequent cost on society.

Portrayal of athletes with disability is a relevant and related area of disability media studies. It is of particular relevance to spinal cord injury given the origins of the Paralympic movement starting with the Stoke Mandeville Games in 1948 (Frankel, 2012), an event specifically for people with spinal cord injury. Positive disability sport news frames have shown to change peoples’ attitudes towards people with disability and improve social interaction (von Sikorski and Schierl, 2014). Similarly, exposure to Paralympic media has led to ‘more positive norms about disabled people's competence’ (Carew et al., 2019), contributing to a positive shift in society’s attitudes towards people with disability (Pullen et al., 2020). Media however rarely features athletes with disability other than during a Paralympic Games (Brittain, 2004; Hardin, 2006), and despite progress towards a positive athletic narrative, traditional representations prevail, such as the supercrip frame and narrative focusing on disability and hardship (Beacom et al., 2016; Buysse and Borcherding, 2010; De Léséleuc et al., 2010; Cheong et al., 2016; Ik Young and Crossman, 2009; Maika and Danylchuk, 2016; Mason, 2013; Schantz and Gilbert, 2001; Smith and Thomas, 2005; Thomas and Smith, 2003; Tynedal and Wolbring, 2013). In an Australian context, content analysis of television coverage of the 2016 Paralympic and Olympic Games suggested the Paralympic Games were broadcast as an ‘entertainment show’ (Rees et al., 2018), as opposed to a major sporting event, deflecting from the athleticism of athletes with disability (Rees et al., 2018).

**Spinal cord injury and Media**

Most research on media representation and spinal cord injury is based on media effects theory and examines how positive portrayals influence public perception. For example, a study that examined the portrayal of a police officer with paraplegia in a short film found people without a disability considered a person with spinal cord injury to be more eligible for employment afterwards (Reinhardt et al., 2014). Another study found increased perceived competence after viewing videos of a person with spinal cord injury participating in activities of daily living, sport or exercise (Kittson et al., 2013).

There is little investigation that focuses explicitly on *traditional* media representation of spinal cord injury, outside of spinal cord injury research. Analysis of newspaper coverage of spinal cord injury research in the United States of America found reporting of cure focused research (80%) outnumbered reporting of rehabilitation research (11%) (Kehn and Kroll, 2011). Peaks in article frequency occurred in 2001 at the time of the U.S. President’s ‘federal funding restriction on embryonic stem cell research’ (Kehn and Kroll, 2011) and in 2004 at the time of Christopher Reeve’s death. Disparity between cure and rehabilitation research news reporting highlights the role of prominent advocates, politics, and events (Kehn and Kroll, 2011).

**Theoretical Framework**

Agenda setting (McCombs, 2005b) and framing (Goffman, 1974) theories are commonly used theoretical frameworks in disability media studies (Ellis and Goggin, 2015). Agenda setting theory contends media influences what people think about (McCombs, 2005b), in turn influencing peoples’ attitudes and opinions (McCombs, 2005a). Framing addresses contents’ salient message/s – identifying what information is ‘more noticeable, meaningful, or memorable’ (Entman, 1993) to the viewer or reader. Framing considers not only what is present in content, but also what is absent (Entman, 1993), indirectly impacting what is understood. Using a schema developed by Clogston (1990) and developed further by Haller (1995) how news is framed in this study is examined through both traditional and progressive framing of disability.

The evolution of the medical management of spinal cord injury has been well documented, along with increasing investigation into the determinants of the health and wellbeing for people with spinal cord injury. There remains however a paucity of literature that addresses how spinal cord injury is portrayed in media. An analysis of how spinal cord injury is portrayed in traditional media would provide a cultural perspective of how this health condition is perceived. Media analysis is an effective method to retrospectively examine narrative surrounding spinal cord injury. Using agenda-setting and framing theories, this study aims to answer the following two questions:

1. How has spinal cord injury been framed in an Australian newspaper?
2. Has this framing changed over time?

**Method**

**Design**

Content analysis is a valid method for investigating media portrayal of disability (Haller, 2010). To examine media portrayal of spinal cord injury over time in Australia, a thematic content analysis of newspaper coverage of spinal cord injury was conducted.

**Sample and Data Collection**

As the main aim of the study was to examine media framing over time, newspaper selection was based on availability of articles from 1950 to 2018. 1950 was chosen because this decade saw the emergence of specialist care for people with spinal cord injury in Australia (Schültke, 2001; Schiller and Mobbs, 2012; Donovan, 2007). Two databases (Trove and Factiva) were accessible to the researchers. Using these databases, The Canberra Times was identified as the sole Australian newspaper available throughout this entire time period. Although a limitation of selecting The Canberra Times is its smaller readership compared to other major Australian newspapers (39,000 to 60,000 weekly) (Roy Morgan, 2019), it is the primary newspaper in Australia’s capital city, and a test of sample articles demonstrated news reporting of interstate and international events. The main strength of selecting The Canberra Times was that it provided data spanning close to 70 years, which would enable the key question of how spinal cord injury has been framed in the media over time to be answered. Despite the inherent limitations, the approach of studying articles from one major Australian newspaper was taken as it met the main criteria for this study - a valid exploration of spinal cord injury representation over time.

Search terms used were spinal cord injur\* OR paraplegi\* OR quadriplegi\* OR tetraplegi\* and collected from 01/01/1950 to 31/12/2018. A total of 1,689 articles were retrieved (Trove n= 1,152, 13/11/1951 to 19/12/1995; Factiva n=537, 1/10/1996 to 20/11/2018). All articles were transferred to data analysis software NVivo 12 (QSR International, 2018) and checked for relevance. Newspaper articles were included if based on humans with non-traumatic/traumatic/congenital spinal cord injury; spinal cord injury research; social or medical context of disability that mentions spinal cord injury; or, articles where spinal cord injury is mentioned and centred on news that helps shape the historical medical and social context of spinal cord injury in Australia e.g. changes in third party legislation, introduction of the National Disability Insurance Scheme, and introduction of mandatory wearing of seat belts. Articles were excluded if they were about animals with spinal cord injury; film/book/television/theatre review with a character with spinal cord injury; injuries not resulting in a spinal cord injury; or, articles where the mention of spinal cord injury is a secondary theme, such as article makes mention of a friend/family member/acquaintance with spinal cord injury however the article itself is not related to spinal cord injury. Once filtered according to inclusion and exclusion criteria 1,049 articles were eligible for coding, spanning 67 years (13/11/1951 to 20/11/2018). The 1980s produced the greatest number of news articles (n=305). The number of news articles retrieved in the 1990s (n=152) may have been reduced given the ten-month gap between Trove and Factiva searches (19/12/1995 to 1/10/1996).

**Data Analysis**

Twelve *a priori* codes (Table 1) were developed from a literature review, and a coding guideline created to improve the validity of data extraction and analysis (Hsieh and Shannon, 2005; Krippendorff, 2013; Macnamara, 2005). The 12 *a priori* codes and guideline were tested with a sample of articles, with minor changes made to improve clarity. Data analysis first involved deductively sorting each identified article into one of the 12 *a priori* codes, according to the overall motif (content) of the article. If an article did not fit into one of the a priori codes, it was coded as *Other*. Articles were also coded in connection to the year published, and if mentioned, reported mechanism of spinal cord injury (traumatic or non-traumatic). The second phase of analysis involved inductively assigning a code to each article according to the story line (context) of the content. Inductive codes were grouped by topic (categories) within each of the 12 *a priori* codes. Key concepts/themes were drawn from the categories and complimented with a descriptive analysis for broader exploration.

**Results**

**How has spinal cord injury been framed?**

Deductive sorting of articles found the three most prevalent *a priori* codes were - *‘cause and injury’* (cause of a spinal cord injury and the injuries sustained); *‘participation’* (highlighting a person with spinal cord injury participating in their community such as sport, work, hobbies or family); and *‘socioeconomic factors’* (such as insurance, cost of care, compensation) (Table 1). Just over half of all articles (n=580) reported a mechanism of spinal cord injury, with the majority reporting traumatic (n=542) such as motor vehicle accidents, while non-traumatic was rarely mentioned (n=38). Inductive coding of articles according to story line/context revealed three dominant narratives: *tragedy*, *over-achievement*, and *financial burden*. Two of these narratives, *tragedy* and over*-achievement* sit in contrast to each other, potentially polarising public understanding of spinal cord injury.

*Tragedy*

News on legal and compensation cases following spinal cord injury, legislation on compensation, liability, and amount of compensation awarded offered a tragic view of spinal cord injury. The process of determining liability with the aim to receive maximum compensation incorporated a catastrophic narrative of disability with emphasis on injury, disability, and financial award, as seen below:

***‘$741,580 damages after car crash’*** *‘Mr Shaw, who the court expects to live for the next 40 years, has been left a tetraplegic - the next stage beyond a quadriplegic. All his limbs and his trunk to the upper part of his chest are paralysed…….The court was told he had lost all chance of marriage or taking part in any kind of sport, has virtually no chance of making friends, and needs treatment by a doctor twice a week and by a urologist once or twice a year and an orthopaedic specialist once a year.’* (The Canberra Times, 1977)

***‘$86,633 to paraplegic’*** *‘A 20 year old girl whose life expectance was said to be about 35 to 40 years and whose marriage prospects were extremely remote, was awarded $86,644 damages today as a paraplegic’* (The Canberra Times, 1970a)

In concert with this focus on injury and disability, two unexpected sub-themes of *‘death’* and *‘victim of crime’* emerged that accentuate the tragic narrative of spinal cord injury*.* All articles categorised with *‘death’* focused on stories about euthanasia. News on euthanasia included cases for and against, with either someone with spinal cord injury being the focus or spinal cord injury provided as an example. Articles linked to ‘*victim of crime’* included stories of theft, murder, and sexual assault where a person with spinal cord injury was the victim. These sub-themes feed into a tragic narrative of spinal cord injury, aligning with the traditional framing of spinal cord injury, which has the potential to feed negative attitudes and stigma towards people with spinal cord injury.

*Over-achievement*

In contrast to the *tragedy* narrative is that of *over-achievement*, reflected in the many stories focusing on *‘sport’* (Table 1). These stories included news relating to spinal cord injury sports events, such as Commonwealth Paraplegic Games (from 1962), Paralympic Games (from 1964), and National Paraplegic and Quadriplegic Games (from 1975), with a sub-context of team selection, records broken, medals won, performances, achievements and awards. The *‘sport’* sub-theme also included descriptions of physical feats by a person with spinal cord injury, for example pushing a wheelchair from Melbourne to Sydney (1979), climbing the highest mountain in Southeast Asia (1981), canoeing solo along the Murray River (1981) and Rick Hansen’s push around the world (1986). Sport in this context lends itself to the supercrip media frame (a traditional frame) with emphasis on ‘superhuman’ achievements, potentially placing unwarranted expectations on people with spinal cord injury. The *‘vocation and education’* sub-theme also brings attention to the supercrip frame with stories emphasising the overcoming of adversity and challenges with return to work or study, and captured in headlines such as:

***‘Paraplegic offered employment’*** (The Canberra Times, 1970b)

***‘Hard Work And Determination Pay Off’***(The Canberra Times, 1998)

Overinflating achievement in this context potentially undermines what some people with spinal cord injury would consider ‘ordinary’ life.

*Financial Burden*

A number of articles focused on the financial burden of spinal cord injury, reflected in stories where context was based on *‘fundraising and charities’* and *‘insurance, compensation and legislation’* (Table 1). News stories included law reform on lump sum compensation payments (1980s-2000s), third party insurance (1980s), and calls for a national compensation scheme (1970s-1980s) and a no-fault motor vehicle accident system (1980s). A sub-theme of ’*government benefits and taxes’* featured in stories on financial disincentives, taxpayer costs, and pensions:

***‘Invalid pensions threatened’*** *‘Among those declared ineligible were paraplegics, people who were bedridden and those who had been told by their doctors that they would die if they attempted to work again.’* (The Canberra Times, 1980)

Together with article headlines linked to the *tragedy* narrative, there is a strong message of financial burden associated with spinal cord injury, both on the individual and society. Collectively this focus on cost and economic supports further indicates media coverage in Australia frames spinal cord injury in a traditional model.

**Table 1: Themes of media reporting of spinal cord injury**

|  |  |
| --- | --- |
| **Content - *a priori* codes (deductive)** | **Context - emergent categories (inductive)** |
| **Cause and Injury *(n=331)*** | * ***Legalities and compensation (n=253)*** * *Cause and consequent spinal cord injury (n= 26)* * *Prevention (n=25)* * *Recovery (n=10)* * *High-profile person (n=10)* * *Fundraising (n=7)* |
| **Participation *(n=306)*** | * ***Sport (n=214)*** * *Avocation (n=34)* * *Vocation and education (n=32)* * *Illegal activity (n=14)* * *Relationships (n=10)* * *Peer support and advocacy (n=2)* |
| **Socioeconomic Factors (n=149)** | * ***Fundraising and charities (n=80)*** * ***Insurance, compensation and legislation (n=60)*** * *Government benefits and taxes (n=9)* |
| Environment (n=61) | * *Access and housing (n=39)* * *Transport (n=22)* |
| Prevention *(n=49)* | * *Road safety (n=22)* * *Sport safety (n=16)* * *Water safety (n=4)* * *Risk behaviour (n=4)* * *Firearm control (n=2)* * *Work safety (n=1)* |
| Cure and Recovery *(n=46)* | * *Research (n=39)* * *Treatment (n=7)* * *Technology (n=2)* |
| Personal Account (n=30) | * *Reflections of accident causing spinal cord injury (n-=11)* * *Experience of re-learning/rehabilitation (n=10)* * *Importance of relationships (n=8)* * *Return to work/study/hobbies (n=7)* * *Adapting (n=6)* * *Advocacy and awareness (n=6)* * *Body image and sexuality (n=3)* * *Problems with compensation (n=3)* * *Marriage break up (n=3)* * *‘I’m still the same person’ (n=3)* * *Living independently (n=2)* * *Euthanasia (n=2)* * *Care (n=2)* * *Living independently (n=2)* |
| Management and Treatment *(n=29)* | * *Specialised spinal cord injury services (n=10)* * *Conventional therapies (n=6)* * *Fertility (n=4)* * *Medications (n=2)* * *Alternate therapies (n=2)* * *Surgery (n=2)* |
| Medical Other (n=18) | * ***Death (n=13)*** * *Secondary complications experienced by someone with spinal cord injury (n=2)* * *Mistreatment (n=1)* * *Spinal cord injury demographics (n=1)* |
| Other (n=15) | * ***Victim of crime (n=13)*** * *Aprils Fool’s Joke (n=2)* |
| Technology (n=10) | *\** |
| Social Other (n=3) | *\** |
| Psychosocial (n=2) | \* |

\*low numbers not conducive to a thematic analysis

**How has framing changed over time?**

Prevailing *a priori* codes – *‘cause and injury’*, *‘participation’* and *‘socioeconomic factors’* all peaked in the 1980s and trended similarly over time (Figure 1). Content where the main motif was the voice of someone with spinal cord injury, coded as *‘personal account’* (n=30), comprised 3% of articles. However, the number of articles in this code increased over time with most articles featuring in the 2000s (n= 10) and 2010s (n=9), as illustrated in these two quotes:

***‘Crake excelling in his biggest challenge’*** *''Of course you still think back to moments where I'd love to get back on the bike or run up stairs, but when I have moments like that I look at what I still have. I've got my wife, family and wonderful friends, and I try and look at the positives that still remain in my life.''* (Tuxworth, 2011)

***‘Gutsy graduate in a class of his own’*** *'I didn't want to be stereotyped. I wanted my friends to know it was still me, but of course I probably shouldn't have worried.''* (Peterson, 2010)

The introduction of content based on *‘personal account’* along with *‘participation’* aligns with progressive framing of spinal cord injury. However, closer inspection of articles coded in *‘participation’* reveal a continued presence of the traditional supercrip frame. Together with consistent content focusing on ‘*cause and injury’* and *‘socioeconomic factors’,* and narrative eluding to *tragedy* and *financial burden*, the data show that despite a rise in progressive frames there is a persistent trend in traditional framing of spinal cord injury over time, suggesting that media reporting is behind in supporting the cultural shift of looking at disability through a social lens.

[insert Figure 1]

**Discussion**

Findings of this study demonstrate that despite emergence of progressive frames, spinal cord injury is predominately framed through a traditional lens which did not change substantially over time. The rise of progressive frames via content offering a *‘personal account’* acknowledges the lived experience, enabling people with spinal cord injury to feel recognised and empowered. However, persistent traditional framing of spinal cord injury potentially perpetuates negative attitudes and stigma towards people with spinal cord injury. Persistent traditional framing and rise of progressive framing is consistent with previous literature (Burns and Haller, 2015; Gold and Auslander, 1999; Green and Tanner, 2009; Mellifont and Smith-Merry, 2015; Saunders et al., 2018; Devotta et al., 2013). Additionally, this study suggests traumatic spinal cord injury is most news worthy, with little description of non-traumatic spinal cord injury, yet incidence of non-traumatic spinal cord injury in Australia is estimated to be twice to that of traumatic spinal cord injury (New and Sundararajan, 2008). The contrasting emergent narratives of *tragedy* and *over-achievement* is consistent with previous studies examining media portrayal as reported by people with disability (Kama, 2004; Ross, 1997; Ross, 2001). Together with the under reporting of non-traumatic spinal cord injury this potentially creates misunderstanding of spinal cord injury and its lived experience.

Typically, spinal cord injury was framed as a *tragedy.* One of the most common story types in The Canberra Times were legal cases and compensation, echoing the findings of previous work in media and disability studies (Barnes and Mercer, 2010; Gold and Auslander, 1999). The process of determining liability and the hope to receive maximum compensation lent itself to a tragic narrative of disability and impairment. This tragic framing of spinal cord injury shapes a picture of hardship, potentially tarnishing the perceived lived experience of someone with spinal cord injury. Over time specific language linked to tragedy did change, with earlier depictions of people with spinal cord injury stating for example that they had “lost all chance of marriage or taking part in any kind of sport, has virtually no chance of making friends” less likely to be seen post the turn of the century. The other tragic narrative was that of *‘death’* and stories on euthanasia. The latter is not exclusive to news reporting of spinal cord injury, found also in prominent films such as Who’s Life is it Anyway? (1981), Million Dollar Baby (2004), The Sea Inside (2004) and You Before Me (2016). Themes surrounding death, together with vulnerability exposed in articles describing a person with spinal cord injury as a victim of crime, also has the potential to contribute to a limited view of spinal cord injury and its lived experience.

The tragic news narratives are a contrast to the alternate narrative of *over-achievement*, dominated in news stories with context around ‘*sport’* and *‘vocation’*. Stories of sport highlighted the physicality, competitiveness and accolades experienced by someone with spinal cord injury. Positive disability sport news frames have been shown to change people’s attitudes towards people with disability and improve social interaction (von Sikorski and Schierl, 2014). A positive connection is also acknowledged between images of sport and competence of people with spinal cord injury (Kittson et al., 2013). Despite the positive narrative associated with these news stories, in a population who experience multiple barriers to participation and inclusion, the impact on someone who chooses not to or is unable to participate in sport potentially becomes more profound when the alternate frame found in this study portrays a more tragic picture. Vocation news stories closely aligns to a supercrip frame, usually saved to describe athletes with disability, where it was considered a super achievement to return to work or study. Considering the narrative linked to the *‘legalities and compensation’* category, where it was reported unlikely that a person with spinal cord injury could work again, it can be appreciated how the news worthiness of these stories take hold. Vocational rehabilitation following spinal cord injury was pioneered by Dr. Gustav Guttman in the 1940s (Schültke, 2001), however return to work rates for people with spinal cord injury remain low (31-47%) (Young and Murphy, 2009). Barriers to returning to work include transport, health complications and attitudes (Lidal et al., 2007). The influence of insurance and compensation schemes on return to work for people with spinal cord injury is readily acknowledged (Mpofu et al., 2015), a conflict appreciated from the analysis of news articles in this study. Interpreting the relationship of spinal cord injury with insurance and compensation as portrayed by media provides a context to understanding engrained barriers that may exist for people with spinal cord injury to return to work.

Along with both the *tragedy* and *over-achievement* narratives of spinal cord injury, the third narrative *financial burden* shows that Australian newspapers coverage of spinal cord injury was in line with previous research. Spinal cord injury does have a telling economic expense (Tovell, 2019), however combined with the financial awards highlighted in *‘legalities and compensation’* there is notable emphasis on cost that spinal cord injury has on the individual and society, supported by other media and disability studies (Briant et al., 2013; Mellifont and Smith-Merry, 2015; Goggin, 2009). This financial emphasis can contribute to a sense of burden, compelled by stories of liability where blame is either pointed in the direction of the person who has acquired the spinal cord injury or towards the person who caused it.

Content promoting the voice of people with spinal cord injury (*‘personal account’*) reflects an emerging progressive frame. Including the voice of people with spinal cord injury acknowledges the lived experience, potentially offers a more accurate account, and provides opportunity for people with spinal cord injury to feel recognised and empowered. Progressive media framing of disability emerged in the 1980s (Clogston, 1990; Haller, 2010; Haller, 1995) however *‘personal account’* in this study rose in the 2000s. This rise may reflect the endorsement of the International Classification of Functioning, Disability and Health (ICF) by the World Health Organisation in 2001. The ICF recognises the role of environmental and social factors in the creation of disability (World Health Organisation, 2013), potentially providing impetus for change in the reporting and consequent framing of spinal cord injury in Australia from this time.

This newspaper analysis shows that Australian print media, through the analysis of one newspaper over time, has offered a very limited view of spinal cord injury, with traditional framing, polar narratives, and under reporting of non-traumatic spinal cord injury. Although polar narratives of tragedy and over-achievement are real, alongside the absence of stories recognising experiences in between, these poles have the potential to misinform the public’s understanding of what it’s like to live with spinal cord injury. Persistent traditional framing of spinal cord injury in the media can perpetuate society’s negative attitudes towards people with disability, including those with spinal cord injury. Together these findings show how barriers faced by people with spinal cord injury may be formed when seeking inclusion and opportunities to participate in their community, such as through work, education, relationships, and leisure.

**Conclusion**

This study contributes to the body of work investigating media portrayal of disability and provides a record of cultural perspectives of spinal cord injury. Findings show emerging progressive news frames, however traditional framing of spinal cord injury was consistent throughout. Contrasting narratives of *tragedy* and *over-achievement* was pronounced, and when compared to incidence rates, non-traumatic spinal cord injury was under represented. These findings potentially shape negative attitudes towards people with spinal cord injury and polarise public understanding of spinal cord injury and its experience.

Awareness and attitudes towards spinal cord injury can influence an understanding of the lived experience and be barrier for people with spinal cord injury to re-integrate into life. Appreciating that spinal cord injury can happen to anyone, it also has the potential to shape the rehabilitation experience for someone with a newly acquired spinal cord injury, including family and friends. Acknowledging the benefits that a print media content analysis offers to help interpret public attitudes and understanding, investigating lay perceptions of spinal cord injury and the experiences of people with spinal cord injury with media will compliment findings of this study.

The main strength of this study is the analysis of news articles spanning almost 70 years, allowing us to answer the question of how media has framed spinal cord injury over time. We acknowledge however that a major limitation is the focus on one newspaper. Future studies may extend this work using an expanded sample of newspapers or by including data from online or social media outlets. Quantitative information on article size and placement was not collected, which may have provided a valuable perspective on the level of impact of news stories. Comparison with other health conditions would help identify if any differences exist in representation of other disability cohorts. The limitation of having one investigator collect all data was addressed by rigorously adhering to the data collection guidelines and conducting multiple reviews of included articles. Despite these limitations, this paper offers a valid examination of spinal cord injury portrayal in the media, over time.

**References**

Abernethy CL, Duncan LJ and Childers LW. (2017) A Content Analysis on the Media Portrayal of Characters with Limb Loss. *Journal of Prosthetics and Orthotics* 29: 170-176.

Amsters D, Schuurs S, Pershouse K, et al. (2016) Factors which facilitate or impede interpersonal interactions and relationships after spinal cord injury: a scoping review with suggestions for rehabilitation. *Rehabilitation Research and Practice* 2016.

Australian Bureau of Statistics. (2019) *Population clock*. Available at: <https://www.abs.gov.au/ausstats/abs%40.nsf/94713ad445ff1425ca25682000192af2/1647509ef7e25faaca2568a900154b63?OpenDocument>.

Barclay L, McDonald R, Lentin P, et al. (2016) Facilitators and barriers to social and community participation following spinal cord injury. 63: 19-28.

Barnes C and Mercer G. (2010) *Exploring disability,* Malden, USA: Polity Press.

Beacom A, French L and Kendall S. (2016) Reframing impairment? Continuity and change in media representations of disability through the Paralympic Games. *International Journal of Sport Communication* 9: 42-62.

Briant E, Watson N and Philo G. (2013) Reporting disability in the age of austerity: the changing face of media representation of disability and disabled people in the United Kingdom and the creation of new ‘folk devils’. *Disability & Society* 28: 874-889.

Brittain I. (2004) Perceptions of disability and their impact upon Involvement in sport for people with disabilities at all levels. *Journal of Sport & Social Issues* 28: 429-452.

Burns S and Haller B. (2015) The politics of representing disability: exploring news coverage of the Americans with Disabilities Act and the National Disability Insurance Scheme. 25: 262-277.

Buysse JAM and Borcherding B. (2010) Framing gender and disability: a cross-cultural analysis of photographs from the 2008 Paralympic Games. *International Journal of Sport Communication* 3: 308-321.

Carew MT, Noor M and Burns J. (2019) The impact of exposure to media coverage of the 2012 Paralympic Games on mixed physical ability interactions. 29: 104-120.

Cheong JPG, Khoo S and Razman R. (2016) Spotlight on athletes with a disability: Malaysian newspaper coverage of the 2012 London Paralympic Games. *Adapted physical activity quarterly : APAQ* 33: 15.

Clogston JS. (1990) *Disability coverage in 16 newspapers,* Louisville, KY: Avocado Press.

Cumberbatch G and Negrine RM. (1992) *Images of disability on television,* New York: Routledge.

De Léséleuc E, Pappous A and Marcellini A. (2010) The media coverage of female athletes with disability. Analysis of the daily press of four European countries during the 2000 Sidney Paralympic Games. *European Journal for Sport and Society* 7: 283-296.

Devotta K, Wilton R and Yiannakoulias N. (2013) Representations of disability in the Canadian news media: a decade of change? *Disability and Rehabilitation* 35: 1859-1868.

Dickson A, Ward R, O'Brien G, et al. (2011) Difficulties adjusting to post-discharge life following a spinal cord injury: An interpretative phenomenological analysis. *Psychology, Health & Medicine* 16: 463-474.

Donovan WH. (2007) Spinal cord injury - past, present, and future. *The Journal of Spinal Cord Medicine* 30: 85-100.

Ellis K and Goggin G. (2015) *Disability and the Media*: Palgrave Macmillan.

Entman RM. (1993) Framing: toward clarification of a fractured paradigm. *Journal of Communication* 43: 51-58.

Field-Fote EC. (2009) *Spinal cord injury rehabilitation,* Philadelphia, PA: Philadelphia, PA : F. A. Davis.

Frankel HL. (2012) The Sir Ludwig Guttmann Lecture 2012: the contribution of Stoke Mandeville Hospital to spinal cord injuries. 790.

Goffman E. (1974) *Frame analysis. An essay on the organisation of expereince.,* New York: Harper & Row.

Goggin G. (2003) *Digital disability : the social construction of disability in new media,* Lanham: Lanham : Rowman & Littlefield.

Goggin G. (2009) Disability, media, and the politics of vulnerability. *Asia Pacific Media Educator*: 1-13.

Goggin G and Newell C. (2000) Crippling Paralympics? Media, Disability and Olympism. *Media International Australia* 97: 71-83.

Gold N and Auslander GK. (1999) Media reports on disability: a binational comparison of types and causes of disability as reported in major newspapers. *Disability and Rehabilitation* 21: 420-431.

Green K and Tanner S. (2009) Reporting disability. *Asia Pacific Media Educator*: 43-54.

Haller B. (1995) Disability rights on the public agenda: Elite news media coverage of the Americans with Disabilities Act. In: Gordon TF (ed). ProQuest Dissertations Publishing.

Haller B. (2013) “Stigma or empowerment? What do disabled people say about their representation in news and entertainment media?” (with Lingling Zhang, Towson University). Review of Disability Studies, Fall 2013 issue. *Review of Disability Studies*.

Haller BA. (2010) *Representing disabillity in an ableist world: essays in mass media.,* Louisville, KY: Avocado Press.

Hardin M. (2006) Disability and sport: (non)coverage of an athletic paradox. In: Raney AA and Bryant J (eds) *Handbook of sports and media.* New York, UNITED STATES: Routledge, 625-634.

Hsieh H-F and Shannon SE. (2005) Three Approaches to Qualitative Content Analysis. *Qualitative Health Research* 15: 1277-1288.

Ik Young C and 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. *International Journal of Applied Sports Sciences* 21: 16-34.

Kama A. (2004) Supercrips versus the pitiful handicapped: Reception of disabling images by disabled audience members. *Communications* 29: 447-466.

Kehn M and Kroll T. (2011) Reporting trends of spinal cord injury research representation: a media content analysis. *Disability and Health Journal* 4: 121-128.

Kittson K, Gainforth HL, Edwards J, et al. (2013) The effect of video observation on warmth and competence ratings of individuals with a disability. *Psychology of Sport & Exercise* 14: 847-851.

Krippendorff K. (2013) *Content analysis : an introduction to its methodology,* Thousand Oaks, California: SAGE.

Levins SM, Redenbach DM and Dyck I. (2004) Individual and societal influences on participation in physical activity following spinal cord injury: a qualitative study. *Physical Therapy* 84: 496-509.

Lidal IB, Huynh TK and Biering-Sørensen F. (2007) Return to work following spinal cord injury: a review. *Disability and Rehabilitation* 29: 1341-1375.

Macnamara JR. (2005) Media content analysis. Its uses benefits and best practice methodology. *Asia-Pacific Public Relations Journal* 6.

Maika M and Danylchuk K. (2016) Representing Paralympians: The ‘Other’ Athletes in Canadian Print Media Coverage of London 2012. *The International Journal of the History of Sport* 33: 401-417.

Mason F. (2013) Athletic, but ambivalent, and in brief: Canadian newspaper coverage of sledge hockey prior to Vancouver 2010. *Sport in Society* 16: 310-326.

McCombs M. (2005a) The agenda-setting function of the press. In: Overholser G and Jamieson KH (eds) *The press.* New York: New York : Oxford University Press, 156-168.

McCombs M. (2005b) A look at agenda-setting: past, present and future. *Journalism Studies* 6: 543-557.

Mellifont D and Smith-Merry J. (2015) The Anxious Times: an analysis of the representation of anxiety disorders in The Australian newspaper, 2000–2015. *Asia Pacific Media Educator* 25: 278-296.

Mpofu E, Craig A, Millington M, et al. (2015) Return to work practices and research with spinal cord injury: an Australian perspective. *The Australian Journal of Rehabilitation Counselling* 21: 65-76.

New PW, Baxter D, Farry A, et al. (2015) Estimating the incidence and prevalence of traumatic spinal cord injury in Australia. *Archives of Physical Medicine and Rehabilitation* 96: 76-83.

New PW, Farry A, Baxter D, et al. (2012) Prevalence of non-traumatic spinal cord injury in Victoria, Australia. *Spinal Cord* 51: 99.

New PW and Sundararajan V. (2008) Incidence of non-traumatic spinal cord injury in Victoria, Australia: a population-based study and literature review. *Spinal Cord* 46: 406-411.

Peterson M. (2010) Gutsy graduate in a class of his own. *Canberra Times.* Federal Capital Press of Australia Pty Ltd, 6.

Pullen E, Jackson D and Silk M. (2020) Watching disability: UK audience perceptions of the Paralympics, equality and social change. 0: 0267323120909290.

QSR International. (2018) *NVivo qualitative data analysis software. Version 12.* Available at: <https://www.qsrinternational.com/>.

Rees L, Robinson P and Shields N. (2018) A major sporting event or an entertainment show? A content analysis of Australian television coverage of the 2016 Olympic and Paralympic Games. *Sport in Society* 21: 1974-1989.

Reinhardt JD, Pennycott A and Fellinghauer BAG. (2014) Impact of a film portrayal of a police officer with spinal cord injury on attitudes towards disability: a media effects experiment. *Disability and Rehabilitation* 36: 289-294.

Riley CA. (2005) *Disability and the media: prescriptions for change*.

Ross K. (1997) But where's me in it? Disability, broadcasting and the audience. 19: 669-677.

Ross K. (2001) All ears: radio, reception and discourses of disability. 23: 419-437.

Roy Morgan. (2019) *Australian newspaper readership, 12 months to June 2019*. Available at: <http://www.roymorgan.com/industries/media/readership/newspaper-readership>.

Safran SP. (1998) The first century of disability portrayal in film: an analysis of the literature. *The Journal of Special Education* 31: 467-479.

Saunders BJ, Lansdell G, Eriksson A, et al. (2018) Friend or foe: the media’s power to inform and shape societal attitudes towards people with acquired brain injury. *Disability & Society* 33: 932-953.

Schantz O and Gilbert K. (2001) An ideal misconstructed: newspaper coverage of the Atlanta Paralympic Games in France and Germany. *Sociology of Sport Journal* 18: 69-94.

Schiller MD and Mobbs RJ. (2012) The historical evolution of the management of spinal cord injury. *Journal of Clinical Neuroscience* 19: 1348-1353.

Schültke E. (2001) Ludwig Guttmann: emerging concept of rehabilitation after spinal cord injury. *Journal of the History of the Neurosciences* 10: 300-307.

Shakespeare T. (1994) Cultural representation of disabled people: dustbins for disavowal? *Disability & Society* 9: 283-299.

Smith A and Thomas N. (2005) The "inclusion" of elite athletes with disabilities in the 2002 Manchester Commonwealth Games: an exploratory analysis of british newspaper coverage. *Sport, Education and Society* 10: 49-67.

Stadler J. (2011) Media and disability. In: Watermeyer B, Swartz L, Lorenzo T, et al. (eds) *Disability and social change. A South African agenda.* Cape Town, South Africa: HSRC Press, 373-386.

The Canberra Times. (1970a) $86,644 to paraplegic. *Canberra Times (ACT : 1926 - 1995).* ACT, 10.

The Canberra Times. (1970b) IN THE A.C.T. COURTS Paraplegic offered employment. *Canberra Times (ACT : 1926 - 1995).* ACT, 8.

The Canberra Times. (1977) COURT REPORTS $741,580 damages after car crash. *Canberra Times (ACT : 1926 - 1995).* ACT, 6.

The Canberra Times. (1980) PUBLIC SERVANTS &#39;RESIST ORDER&#39. *Canberra Times (ACT : 1926 - 1995).* ACT, 8.

The Canberra Times. (1998) Hard Work And Determination Pay Off. *Canberra Times.* 3.

Thomas N and Smith A. (2003) Preoccupied with able-bodiedness? An analysis of the british media coverage of the 2000 Paralympics Games. *Adapted Physical Activity Quarterly* 20: 166.

Tovell A. (2019) Spinal cord injury, Australia, 2015–16. Injury research and statistics series no. 122. In: AIHW (ed). Canberra.

Tuxworth J. (2011) Crake excelling in his biggest challenge. *Canberra Times.* Federal Capital Press of Australia Pty Ltd, 6.

Tynedal J and Wolbring G. (2013) Paralympics and its athletes through the lens of the New York Times. *Sports* 1: 13-36.

von Sikorski C and Schierl T. (2014) Inclusion of persons with disabilities through media sports: attitudinal and behavioral news-framing effects. *International Journal of Sport Communication* 7: 90-112.

World Health Organisation. (2013) How to use the ICF: a practical manual for using the International Classifiaction of Functioning, Disability and Health (ICF). Exposure draft for comment. Geneva: World Health Organisation.

Young A and Murphy G. (2009) Employment status after spinal cord injury (1992–2005): a review with implications for interpretation, evaluation, further research, and clinical practice. *International Journal of Rehabilitation Research* 32: 1-11.

Zhang L and Haller BA. (2013) Consuming image: how mass media impact the identity of people with disabilities. *Communication Quarterly* 61: 319-334.