

Title page.

Title.

Stigma: the representation of anorexia nervosa in UK newspaper Twitter feeds.

Running title.

Anorexia nervosa in UK newspaper Twitter feeds.

Authors:

Dr Matt Bowen.

University of Chester.

Faculty of Health and Social Care.

Riverside Campus.

Castle Drive.

CH1 1SL.

Email: m.bowen@chester.ac.uk

Tel: 01255 511961

Professor Andy Lovell.

University of Chester.

Faculty of Health and Social Care.

Riverside Campus.

Castle Drive.

CH1 1SL.

Email: a.lovell@chester.ac.uk

Tel: 01244 51 1631

Dr Rhian Waller.

University of Chester.

School of Arts and Media

Parkgate Campus.

CH1 4BJ

Email: r.waller@chester.ac.uk

Tel: 01244 515331

Ethical statement.

This study is based on publicly available data and therefore did not require ethical review.

There are no conflicts of interest in relation to this study.

Stigma: the representation of anorexia nervosa in UK newspaper Twitter feeds.

Background

There is evidence that the representation of mental health in newspapers has an influence on readers' attitudes, however, relatively little is known about how the industry presents accounts of anorexia nervosa. Further, the industry increasingly uses Twitter as a medium for reaching readers and this remains an under-examined area of research.

Aims

To explore the representation of anorexia nervosa in the UK national press' Twitter feeds.

Method

Frame analysis was used to examine the manner in which anorexia nervosa was represented in the Twitter feeds of all national UK newspapers between 2009-2019 (n=332). This qualitative approach used Braun and Clarke's stages of thematic analysis, while drawing on Van Gorp's use of a frame matrix to support the definition of the news frames.

Results

The analysis identified four news frames: social model, illness model, stress-recovery model and clickbait model.

Conclusions

The newspapers drew on a range of perspectives in their representation of anorexia nervosa, which typically were not stigmatising in their accounts. However, there was a pattern of using sensationalistic images in some of the tweets, which may encourage readers to view people with anorexia nervosa as Other, and as a consequence contribute to stigmatisation.

Declaration of interest

No declarations of interest

Introduction.

People diagnosed with anorexia nervosa (henceforth abbreviated to anorexia) are characterised by weight loss resulting in a Body Mass Index (BMI) <18.5 kg/m², an intense fear of putting on weight, and a disturbance in the appreciation of their current body weight or shape (Mustelin et al., 2016). In the United Kingdom (UK) it has a prevalence rate of 0.6% of the population among people aged 16 years and over (National Institute for Health and Care Excellence [NICE], 2017), and 0.8% of the population from the age of 10 years old (Micali et al., 2013). It is ten times more prevalent among females than males (Micali et al., 2013). While anorexia can be considered in the context of wider categories of eating disorders and problems with eating (Micali et al., 2013), it is distinguished by having the highest mortality rate as a direct result of a mental health disorder (Moskowitz & Weiselberg, 2017) because of the association with compromised physical health.

Evidence about the aetiology of anorexia suggests a multifactorial process. Due to the cultural significance of food and body shape there has been interest in models that emphasise the socio-cultural dimension of aetiology (Cruwys et al., 2016). Further, as anorexia is patterned strongly along gender there has been theoretical interest in a feminist understanding of the impact of patriarchal structures and female oppression (Holmes, Drake, Odgers & Wilson, 2017; Holmes, 2016). While the complexity of identifying specific sociocultural factors in the aetiology of a disorder presents challenges to scientific research, there is evidence that self-objectification is a significant risk factor (Schaefer & Thompson, 2018; Jackson & Chen, 2015). On the other hand, there is also growing evidence of a neurobiological component (Collantoni, Meneguzzo, Tenconi, Manara & Favaro, 2019; Mishra, Anand & Umesh, 2017) and particularly of a genetic component (Li et al., 2017; Duncan et al., 2017). However, no biologically driven treatment has presented itself and there is no recommended pharmacological intervention (NICE, 2017). There is also evidence of a significant psychological component, including impaired theory of mind functioning (Bora & Kose, 2016), high levels of perfectionism (Dahlenburg, Gleaves & Hutchinson, 2019), and high comorbidity with obsessive-compulsive disorder (Levinson et al., 2018). Current treatment practices and evidence suggests a combination of psychotherapy, psychoeducation and support (Schmidt et al., 2016; Wild et al., 2016; Murray, Quintan, Loeb, Griffiths & Le Grange, 2018).

There has been growing interest in the manner in which mental health is represented in the press, informed by an understanding of the impact of stigma on the lives of people diagnosed with a mental disorder. People with a diagnosis of a mental illness typically are less likely to be employed (Hipes et al., 2016), more likely to have been given a prison sentence (Fazel, Hayes, Bartellas, Clerici & Trestman, 2016), more likely to live in less desirable housing (Byrne et al., 2013), and have a reduced life

expectancy (Livingstone, 2013). At an interpersonal level they are at risk of friends and family distancing themselves (Hamilton et al., 2016) and at an intra-psychic level they are vulnerable to experiencing low self-esteem and low self-efficacy as a result of stigma (Thornicroft, 2006). Further, the awareness of these phenomena in society is associated with delays in seeking appropriate treatment and help (Clement et al., 2015).

There is evidence that the public holds some stigmatising views in relation to anorexia, in particular an attitude of blaming (Stewart, Keel & Schiavo, 2006; Roehrig & McLean, 2010; Geerling & Saunders, 2015). Likewise, there is evidence people with anorexia are aware of stigmatising views that tend to trivialise the difficulties they experience being held within the wider community (Dimitropoulos, Freeman, Musakat, Domingo & McCallum, 2016; Griffiths, Mond, Murray & Touyz, 2014). The latter indicate a risk that people will be reluctant to seek out help when they need it, and may be vulnerable both to internalising negative beliefs and the impact self-stigma has on mood and self-efficacy (Thornicroft, 2006).

There are a number of different models of stigma utilised when considering mental health, which place different emphases on sociological factors (Link & Phelan, 2013), psychological factors (Corrigan & Watson, 2002), or adopt a social psychiatry perspective (Thornicroft, 2006). However, these different models share common features about the processes involved. Namely, that a process of separating “us” from “them” leads to people being treated negatively as a result of their social identity of having a diagnosis of a mental illness. At an interpersonal level this is understood to involve both cognitive elements of how a disorder is understood, and affective elements of how people react emotionally to those with a mental illness, which can be enacted as discrimination (Link & Phelan, 2014).

Qualitative studies of the representation of mental health in the press indicate a pattern of emphasising otherness (Cummins, 2010; Foster, 2006) and dangerousness (Olstead, 2002; Blood, 2002). However, a limitation of these studies is that they have examined the broad category of mental illness, rather than discrete disorders such as anorexia, which may not be framed in terms of risk to others.

Quantitative studies about the representation of mental health in the UK press have provided mixed findings with regards to eating disorders. Some results indicate a relatively high proportion of stigmatising representations (Rhydderch et al., 2017), and other studies suggest that articles tend to promote understanding (Goulden et al., 2011; Bowen & Lovell, 2019). These varying conclusions in part reflect different approaches to the analysis. However, they all share an approach of looking at eating disorders as a whole, and there are no studies that specifically look at the representation of

anorexia. Given the significance of anorexia in terms of high mortality rate (Moskowitz & Weiselberg, 2017) and that both the underlying aetiology and appropriate treatment are distinct within the broader category of eating disorders (N.H.S., 2017), this indicates a gap in knowledge.

Media representations may impact reader responses to people with mental health problems. For instance, reader attitudes become more negative after reading reports about an individual with a mental disorder committing an act of violence (McGinty, Webster & Barry, 2013; Wilson, Ballman & Buczek, 2016). Likewise, service users report being less likely to seek support from others, including informal support, after reports in the media of an individual with mental illness committing violence, for fear that they will be treated negatively (Hoffner, Fujioka, Cohen & Seate, 2017). Research in this area is limited by only identifying immediate impact, and reported attitudes rather than behaviours, however, they do point to the media as a source of influence. That said, the relationship between the media and the public is generally conceived of as a cyclical one, recognising that public expectations influence the press outputs as well as the press influencing readers (Morris, 2006).

The newspaper industry in the UK has been in decline over the last 10 years as increasing numbers of people turn to the Internet and social media as their source of information (Scourfield et al. 2018). However, the UK is still characterised by a newspaper industry with relatively high levels of national newspaper circulation, with the daily readership (including print and online access) of the 9 national newspapers ranging from 744,000 to 6,300,000 (Publishers Audience Measurement Company, 2019). Twitter has been universally adopted by the industry as the social media platform of choice (Scourfield et al. 2018). Each national newspaper has a Twitter account with a flow of news items and have significant numbers of Twitter followers (from 197 thousand to 8.5 million) who enjoy the benefit of accessing news at no cost. Despite this development there is relatively little known about the representations of mental health in newspaper Twitter feeds (Bowen & Lovell, 2019).

This study is relatively novel in three respects: the focus on anorexia nervosa, the use of a qualitative approach, and the use of newspaper Twitter feeds as a dataset.

Research aim and questions.

The research aim of the study was: an exploration of the representation of anorexia nervosa in UK newspaper Twitter feeds.

The study addressed two questions:

- What news frames were employed in UK newspaper Twitter feeds in their representation of anorexia nervosa?

- How may the news frames employed in UK newspaper Twitter feeds challenge or contribute to the processes of stigmatisation towards people with anorexia nervosa?

Method.

The research method adopted in this study is frame analysis. Frame analysis was originally developed by Goffman as an approach to analyse phenomena in society (Goffman, 1974). Subsequently, its development has primarily been in media research. The term news frame has been used to refer to packages of news that demonstrate an underlying logic in how a social phenomenon is understood (Altheide, 2013). On one hand, they provide a means for the media to operate in an efficient way to simplify communication of complex topics by drawing on commonly recognised packages of understanding (Boesman et al., 2016). On the other hand, it highlights that media entities actively decide which of the available ideologies to promote as the appropriate way of understanding a phenomenon (Xie, 2015).

Initial development of frame analysis of the media highlighted that frames are constructed to “promote a particular problem definition, causal explanation, moral evaluation, and/or treatment recommendation” (Entman, 1993, p54). This has been elaborated further and arguably most thoroughly by Van Gorp who has constructed a framing matrix as the basis for analysis, which includes: cultural theme/problem definition/causal reasoning/ consequence/ possible action/moral response (Van Gorp, 2007; Van Gorp & Vercruyssen, 2012). This model has been used to examine the media representation of a range of different social issues such as migration (Vossen, Van Gorp & Schulpen, 2018) and dementia (Van Gorp & Vercruyssen, 2012). This type of research highlights the multiplicity of news packages used by the media when representing social issues, the internal coherence of each news frame, and the tensions between competing use frames.

Frame analysis of newspaper Twitter feeds is a relatively underdeveloped area, though it has been used by researchers to examine the representation of veterans (Parrott, Albright, Dyché & Steele, 2018). Research into the analysis of newspaper Twitter feeds has highlighted that while printed newspapers typically have a different format for weekday and weekend newspaper content this is not the case for the continuous stream of Twitter posts (Kim, Jang, Kim, Wan, 2018).

In this study the dataset was constructed from the Twitter feeds of all UK national newspapers (The Telegraph, The Times, The Guardian, The Independent, Daily and Sunday Mail, Daily Express, The Sun, Daily Mirror, Daily Star). Using the advanced search functions in Twitter, tweets that used the terms “anorexia” or “anorexic” between the dates 01.01.2009 to 31.12.2019 were identified, allowing both

text and images to be digitally recorded and these individual tweets were copied into a word document, including both text and images. The dataset consisted of 332 tweets.

The identification of themes was an inductive process informed by Braun and Clarke’s (2006) six stages for conducting thematic analysis: 1) familiarisation, 2) initial codes, 3) initial themes, 4) review themes, 5) define themes and 6) produce the report. The total dataset was independently reviewed by two researchers, and through meetings and discussion 15 codes were identified. Following Braun and Clarke’s (2006) guidance the researchers constructed a map of the codes and initially identified six themes. The dataset was reviewed again in light of this map and through subsequent meetings it was agreed that there were four overarching themes, which included all codes. Clarke and Braun (2018) have reiterated that thematic analysis is appropriate for a range of methodologies, and consistent with this the researchers used Van Gorp’s framing matrix to support the process of defining the themes (stage five). Nowell, Norris, White and Moules’ (2017) guidance on enhancing trustworthiness in thematic analysis was adhered to, including: prolonged engagement with the data, maintaining a reflexive journal, researcher triangulation, minutes of meetings, audit trail, and use of a thematic diagram.

Results.

The results from the analysis indicated four discrete news frames that were employed in the representation of anorexia. These are indicated in Table 1, and expanded below.

Table 1. Matrix of news frames used in the representation of anorexia.

News Frame	Definition	Causal reasoning	Consequences	Possible actions	Moral judgement
Social model	The causes of anorexia lie in social factors	Social/cultural values and structures place undue pressures on individuals	People express the pressure of this strictures through anorexia	Cultural shift in values and/or legislation to force change	Anger at social pressure
Illness model	Anorexia is a health condition	The causes of anorexia are a combination of biological and psychological	Biological and psychological treatment should be available	Further medical research into causes and investment in treatment	Frustration at inconsistent treatment and excitement at possible future
Stress-Recovery model	Anorexia arises from the challenging,	Experiences such as bullying, relationship	The distress caused is expressed	Personal relationships and transforming	Sympathy for the challenges and

	personal life experiences	breakdowns, social pressures	through anorexia	social pressures to positives	admiration at recovery
Clickbait model	The ambivalence of the social pressures and social ideals is enacted in the tweets	Readers and the newspaper industry are part of the perpetuation of social pressures	Representations of anorexia can be both sympathetic and sensationalistic in the same tweet	Newspaper industry to re-examine use of images	Sympathy, disgust and desire at clickbait images

Social Model. One of the most common news frames used by the newspapers in their Twitter feeds was a social model of understanding anorexia. This highlighted a number of different social pressures that were identified as contributing to, if not causing, anorexia. Examples of these social pressures included the fashion and arts industries, e.g. “Anorexic former model Georgina Wilkin blames the fashion industry” (@thetimes 21 Sep 2013), and “Emma Thompson SLAMS Hollywood's 'evil' anorexia problem as she opens up about body shaming” (@Daily_Express 28 Mar 2017). It also identified social media as a significant problem, e.g. “Worrying increase in promotion of anorexia on social media sites” (@Independent 15 Oct 2017), “Selfies showing off weight loss are driving rise in anorexia” (@thetimes 3 Feb 2015). A further commonly identified problem area was popular dieting strictures, e.g. “Why fads for juice diets could lead to anorexia” (@thetimes 25 May 2014), and “‘I was turned anorexic by Instagram fad diets - now I'm exposing all their lies’” (@TheSun 25 Jan 2019). Occasionally, there was promotion of a broad social model, which viewed anorexia as a symptom of a wider social malaise, e.g. “Allison Pearson: Anorexia is a symptom of our sick society” (@Telegraph 16 Mar 2016).

Typically, the solutions proffered related to the specific types of social pressures identified, such as greater control of the fashion and arts industries, e.g. “Bikini photos of top model 'looking anorexic' banned by advertising watchdog” (@MailOnline 15 Nov 2011), “France bans skinny models in crackdown on anorexia” (@guardian 3 Apr 2015). Likewise, pressure on social media providers to monitor and restrict content, e.g. “Instagram has agreed to remove content promoting eating disorders such as bulimia and anorexia after being challenged by the Health Secretary” (@Telegraph 29 April 2019).

Illness Model. A common frame articulated in the Twitter accounts was of an illness model of anorexia, which included direct statements about the need to view anorexia as an illness, e.g. “Anorexia is a mental illness. Treat it properly” (@guardian 10 Dec 2017), and “Anorexia is a mental illness, but the effects are very physical” (@thetimes 28 Aug 2013). Congruent with this model the probable causes of anorexia were at times presented as biological, e.g. “MP with anorexic past gives

DNA to establish genetic links in sufferers" (@Independent 20 Jul 2014), and "Anorexia could have a genetic link" (@MailOnline 12 Sep 2013).

News items about treatments, or more typically interest in potential or emerging treatment, therefore focused on biological processes. This included pharmacological options, e.g. "Anorexia drugs on the horizon: drugs to treat anorexia could be developed following research" (@Telegraph 29 Mar 2009), and "Drug may help anorexia survival" (@Independent 6 May 2012). It also included alternative attempts to address an underlying pathophysiology, e.g. "brain 'pacemaker' could offer hope to severely anorexic patients" (@thetimes 7 Mar 2013), and "Woman cured of severe anorexia after doctors 'rewire' her brain to switch off negative thoughts about food" (@MailOnline 26 Mar 2013).

In the context of UK health provision, this typically meant that the National Health Service was under scrutiny for the quality of its provision. Predictably there was outrage when this provision was found wanting, e.g. "Gifted Cambridge-bound student who died after two-year anorexia battle 'was let down by NHS'" (@MailOnline 26 Nov 2009), "Heartbroken dad blasts health service and says 'cleaner who called 999 did more for my anorexic daughter than NHS'" (@TheSun 9 Dec 2017).

Stress – Recovery Model. Many of the newspaper tweets focused on individual narratives and these drew on a news frame of individual stress and personal recovery. These included examples of people who were celebrities, e.g. "Crown Princess Victoria of Sweden reveals teenage anorexia battle resulted from taking on royal duties at 18" (@MailOnline 29 May 2017), and "Phil Collins' daughter Lily blames dad's divorce for anorexia battle in moving open letter" (@Daily_Express 7 Mar 2017). It also included stress factors such as mistreatment, e.g. "Boy, 12 tells how school bullies drove him to anorexia and he ate just 50 calories a day" (@MailOnline 11 May 2010), "Having my ear bitten off in a vile takeaway attack made me anorexic" (@DailyMirror 7 Jul 2015).

Within this news frame, case studies of people recovered from anorexia often emphasised establishing close friendship or romance, e.g. "How one girl beat anorexia - thanks to finding love in her job at McDonald's" (@DailyMirror 22 Nov 2013), and "Three anorexic girls tell how friendship saved each of them from their illness" (@DailyMirror 29 May 2018).

An interesting element of these recovery stories were examples of how the types of social stress that were often identified within the social model news frame were transformed by individuals as part of the recovery. This included the use of social media, e.g. "Student records her recovery from anorexia on Instagram to inspire body confidence" (@Independent 5 Feb 2018), and "Anorexic woman, 23, makes incredible recovery with the help of social media" (@DailyMirror 20 Mar 2016). It also included examples of people using the fashion industry and beauty contests as part of their personal journey,

e.g. “From teenage anorexic to fashion editor” (@Telegraph 11 Aug 2018), and “How teenager who weighed less than six stone beat anorexia to reach beauty contest final” (@MailOnline 30 Jul 2010).

Clickbait Model. This final news frame, which was repeatedly employed, is one that we refer to as a clickbait model. This model was characterised by contradictory messages between the text of the tweet and the accompanying visual image. In this group of tweets the newspapers drew on the other three news frames, e.g. the social model – “Russian modelling school accused of pressuring anorexic twin sisters, 14, to lose weight” (@MailOnline 6 Dec 2018), the illness model - “Anorexic woman, 26, who weighs just 38lbs is cruelly told by her doctor she could play a living corpse in a horror movie” (@MailOnline 19 Sep 2018), the stress recovery model - “Student left traumatised by sexual abuse reveals her transformation after conquering anorexia” (@Daily_Star 4 Apr 2017). However, in these tweets the accompanying image was of a person, typically a young woman, who was extremely underweight and typically in a sexualised pose. This selection seems calculated to elicit a response of fascinated horror. Part of the complexity of the images is that many of them appeared to have been taken by the young person themselves often in an Instagram-style selfie. While the text of the tweets promoted one of the alternative three news frames, the images were used to elicit an emotional response in the reader to draw them to the news item in a manner that was overtly sensationalistic and arguably ran counter to models that promote understanding and empathy.

Discussion.

In relation to stigma it is encouraging to report that there was no evidence of overtly stigmatising textual messages. In the UK, over the last decade there have been a number of initiatives to promote the positive representation of mental health within the press (Time to Change, no date), and in social media (Team Up, 2014) and specific guidelines about the representation of people with an eating disorder (BEAT, 2011). It may well be that these initiatives have had a positive impact on the press’ representation of anorexia, and it might also be the case that there has been a general shift in societal attitudes in a positive direction, and that these are reflected in the press.

Previous reviews, such as Sieff (2003), have highlighted a consistent pattern in media representations of mental health of emphasising media frames of dangerousness or childishness. This study, by examining representations of anorexia, highlights that the media’s choice of news frames is affected by diagnoses. Where there was congruence between the text and the image, the three news frames that were drawn upon to represent anorexia were the social model, the illness model, and a stress-recovery model. These three models are at times uncomfortable bedfellows. There are cross-model

tensions, for example, between a social model that asserts that anorexia is “a symptom of our sick society” (@Telegraph 16 Mar 2016), and an illness model that celebrates a “woman cured of severe anorexia after doctors 'rewire' her brain” (@MailOnline 26 Mar 2013). Similarly, there are internal tensions between a social model critique of the role of social media and the fashion industry, “Selfies showing off weight loss are driving rise in anorexia” (@thetimes 3 Feb 2015) with narratives about how individuals have gone on to use these as part of their individual recovery, “Anorexic woman, 23, makes incredible recovery with the help of social media” (@DailyMirror 20 Mar 2016). But the press, as a whole, cannot be criticised for promoting a plethora of views that at times are at odds with each other because these reflect the range of views held not only by the public but by experts in the field, including a biopsychosocial model (Munro, Randell & Lawrie, 2017). Indeed, it is a positive role of the press to reflect a variety of views, so long as these are informed views and not ones that feed prejudice and discrimination. Overall, the textual views expressed were consistent with informed opinion, sympathetic towards the experiences of people with anorexia, and advocated on behalf of this group in terms of deficits in service provision.

With regards to the “clickbait” frame, analysis of images in news items has grown in the wider field of media studies (Block, 2020; Powell, van der Meer & Peralta, 2019; Powell, Boomgaarden, De Swert, & de Vreese, 2015). However, it is still uncommon in the investigation of media representation of mental health. Doing so in this study proved to be productive, as the area of greatest concern is where the visual images used were incongruent with the textual message. Despite guidance to the press to avoid sensationalistic images, “especially photographs of certain emaciated body parts” (BEAT, 2011, p 10), the research highlighted repeated uses of images that were sensationalistic, typically of sexualised images of very underweight young women. Viewed through a stigma-informed lens, these images conjured up for the reader a vision of a person with anorexia as Other (Link & Phelan, 2013). While the attached textual message did not promote views such as blaming people with anorexia for their mental distress, or for lack of control (Stewart, Keel & Schiavo, 2006; Roehrig & McLean, 2010; Geerling & Saunders, 2015), the images did evoke a strong sense of distance between the lives of readers and the person with anorexia. Further, in the context of research evidence that self-objectification is a significant risk for disordered eating (Schaefer & Thompson, 2018; Jackson & Chen, 2015) the use of sexualised images of young women to attract the attention of their readers is of concern. Such images may have a negative impact on readers who have anorexia, acting as a trigger to activate self-destructive thoughts and behaviours (Park, Sun & McLaughlin, 2017). Similarly, evidence suggests that stigma contributes as a barrier to people accessing services (Clement et al., 2015) and the otherness qualities of the images may function in this manner to inhibit people from

seeking treatment. Further, these images may encourage members of the public who hold stigmatising opinions (Geerling & Saunders, 2015) to continue to view people with anorexia as other.

As noted earlier there is a cyclical relationship between the media's influence on the public and the public's influence on the media (Morris, 2006). Therefore, an additional reading of these clickbait news frame tweets is to view their outputs not with the emphasis on the media's contribution towards stigmatisation, but on the media as a reflection of social mores. Indeed, they may well offer insight into aspects of social attitudes that typically escape traditional survey (Wykes, Sweeney & Guha, 2019). Newspapers use clickbait strategies to attract the attention of readers because experience has taught journalists and editors that they work (Anderson, Gronning, Hietaketo & Johansson, 2019). Readers are the society that generate social media content and fashion industry revenues through our fascination, titillation, and excited desire. Arguably, the click bait model whereby readers are simultaneously drawn in by sensationalistic images and presented with sympathetic text reflects these competing drives within wider society. This is not to suggest that a newspaper should escape heavy criticism for its insensitivity when it juxtaposes a message of a "Student left traumatised by sexual abuse reveals her transformation after conquering anorexia" (@Daily_Star 4 Apr 2017) with an objectifying, sexualised image of that young woman seriously underweight and posing in her underwear. However, arguably newspapers' criticisms of industries within society that promote restrictive body shapes as ideals, is a sanitised vision and the clickbait news frame provides insight into the tensions present in broader society.

The analysis of the newspapers' use of clickbait as a reflection of public opinion, perhaps also highlights a tension for some people with anorexia in their recovery journey. While people with anorexia may on the one hand receive messages promoting recovery, there are also a plethora of other messages about the interest and attention that being underweight attracts, as well as messages about "body ideals". The analysis of the newspapers supports the need for treatment to explore meaningfully these tensions in the context of wider societal messages (Holmes et al., 2017).

Acknowledgements and conflicts of interest.

This study was carried out without any external funding and there are no conflicts of interest to report.

Ethical statement.

This study is based on publicly available data and therefore did not require ethical review.

There are no conflicts of interest in relation to this study.

Data Sharing.

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

Reference List.

- "Allison Pearson: Anorexia is a symptom of our sick society" (16 Mar 2016), @Telegraph
- Altheide, D. L. (2013). Media logic, social control, and fear. *Communication Theory*, 23(3), 223-238. DOI: 10.1111/comt.12017.
- Andersen, E. M., Grønning, A., Hietaketo, M., & Johansson, M. (2019). Direct reader address in health-related online news articles: Imposing problems and projecting desires for action and change onto readers. *Journalism Studies*, 20(16), 2478-2494. doi:10.1080/1461670X.2019.1603080
- "Anorexic former model Georgina Wilkin blames the fashion industry" (21 Sep 2013), @thetimes
- "Anorexia is a mental illness. Treat it properly" (10 Dec 2017), @guardian
- "Anorexia is a mental illness, but the effects are very physical" (28 Aug 2013), @thetimes
- "Anorexia could have a genetic link" (12 Sep 2013), @MailOnline
- "Anorexia drugs on the horizon: drugs to treat anorexia could be developed following research" (29 Mar 2009), @Telegraph
- "Anorexic woman, 23, makes incredible recovery with the help of social media" (20 Mar 2016), @DailyMirror
- "Anorexic woman, 26, who weighs just 38lbs is cruelly told by her doctor she could play a living corpse in a horror movie" (19 Sep 2018), @MailOnline
- Beat Eating Disorders (2011). Media guidelines for reporting eating disorders.
- "Bikini photos of top model 'looking anorexic' banned by advertising watchdog" (15 Nov 2011), @MailOnline
- Bock, M. A. (2020). Theorising visual framing: contingency, materiality and ideology. *Visual Studies*, 35(1), 1-12.
- Blood, R. W. (2002). A qualitative analysis of the reporting and portrayal of mental illness in the *Courier Mail* and *Sunday Mail*, December 2001 to February 2002. Report prepared for the Public Advocate Office, Queensland. Canberra, Australia, University of Canberra.
- Boesman, J., d'Haenens, L., & Van Gorp, B. (2016). Between silence and salience: A multimethod model to study frame building from a journalistic perspective. *Communication Methods and Measures*, 10(4), 233-247. DOI: 10.1080/19312458.2016.1228864.
- Bora, E., & Köse, S. (2016). Meta-analysis of theory of mind in anorexia nervosa and bulimia nervosa: A specific impairment of cognitive perspective taking in anorexia nervosa? *International Journal of Eating Disorders*, 49(8), 739-740. doi:10.1002/eat.22572
- Bowen, M., & Lovell, A. (2019). Stigma: The representation of mental health in UK newspaper twitter feeds. *Journal of Mental Health (Abingdon, England)*, , 1-7. doi:10.1080/09638237.2019.1608937
- "Boy, 12 tells how school bullies drove him to anorexia and he ate just 50 calories a day" (11 May 2010), @MailOnline

“brain “pacemaker” could offer hope to severely anorexic patients” (7 Mar 2013), @thetimes

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.

Byrne, T., Prvu Bettger, J., Brusilovskiy, E., Wong, Y. I., Metraux, S., & Salzer, M. S. (2013). Comparing neighborhoods of adults with serious mental illness and of the general population: Research implications. *Psychiatric Services*, 64(8), 782-788. doi:10.1176/appi.ps.201200365

Clarke, V., & Braun, V. (2018). Using thematic analysis in counselling and psychotherapy research: A critical reflection. *Counselling and Psychotherapy Research*, 18(2), 107-110. doi:10.1002/capr.12165

Clement, S., Schauman, O, Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N...Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological Medicine*, 45(1), 11-27.

Collantoni, E., Meneguzzo, P., Tenconi, E., Manara, R., & Favaro, A. (2019). Small-world properties of brain morphological characteristics in anorexia nervosa. *PloS One*, 14(5), e0216154. doi:10.1371/journal.pone.0216154

Corrigan, P. W., & Watson, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry*, 1(1), 16-20.

“Crown Princess Victoria of Sweden reveals teenage anorexia battle resulted from taking on royal duties at 18” (29 May 2017), @MailOnline

Cruwys, T., Platow, M. J., Rieger, E., Byrne, D. G., & Haslam, S. A. (2016). The social psychology of disordered eating: The situated identity enactment model. *European Review of Social Psychology*, 27(1), 160-195. doi:10.1080/10463283.2016.1229891

Cummins, I. (2010). Distant voices, still lives: reflections on the impact of media reporting of the case of Christopher Clunis and Ben Silcock. *Ethnicity and Inequalities in Health and Social Care*, 3(4), 18-29.

Dahlenburg, S. C., Gleaves, D. H., & Hutchinson, A. D. (2019). Anorexia nervosa and perfectionism: A meta-analysis. *International Journal of Eating Disorders*, 52(3), 219-229. doi:10.1002/eat.23009

Dimitropoulos, G., Freeman, V. E., Muskat, S., Domingo, A., & McCallum, L. (2016). "you don't have anorexia, you just want to look like a celebrity": Perceived stigma in individuals with anorexia nervosa. *Journal of Mental Health*, 25(1), 47-54. doi:10.3109/09638237.2015.1101422

“Drug may help anorexia survival” (6 May 2012), @Independent

Duncan, L., Yilmaz, Z., Gaspar, H., Walters, R., Goldstein, J., . . . (2017). Significant locus and metabolic genetic correlations revealed in genome-wide association study of anorexia nervosa. *American Journal of Psychiatry*, 174(9), 850-858. doi:10.1176/appi.ajp.2017.16121402

“Emma Thompson SLAMS Hollywood's 'evil' anorexia problem as she opens up about body shaming” (28 Mar 2017), @Daily_Express

Entman R. M. (1993). Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication*, 43(4), 51-58.

- Fazel, S., Hayes, A. J., Bartellas, K., Clerici, M., & Trestman, R. (2016). Mental health of prisoners: Prevalence, adverse outcomes, and interventions. *The Lancet Psychiatry*, 3(9), 871-881. DOI: 10.1016/S2215-0366(16)30142-0.
- Foster J. (2006). Media presentation of the Mental Health Bill and representations of mental health problems. *Journal of Community and Applied Social Psychology*, 16, 285-300.
- "France bans skinny models in crackdown on anorexia" (3 Apr 2015), @guardian
- "From teenage anorexic to fashion editor" (Aug 2018), @Telegraph 11
- Geerling, D. M., & Saunders, S. M. (2015). College students' perceptions of individuals with anorexia nervosa: Irritation and admiration. *Journal of Mental Health*, 24(2), 83-87. doi:10.3109/09638237.2014.998807
- "Gifted Cambridge-bound student who died after two-year anorexia battle 'was let down by NHS'" (26 Nov 2009), @MailOnline
- Goffman E. (1974). *Frame Analysis: An Essay on the Organization of Experience*. New York, USA: Harper & Row.
- Goulden, R., Corker, E., Evans-Locko, S., Rose, D., Thornicroft, G., & Henderson, C. (2011). Newspaper coverage of mental illness in the UK, 1992-2008. *BMC Public Health*, 11, 796. DOI: 10.1186/1471-2458-11-796
- Griffiths, S., Mond, J. M., Murray, S. B., & Touyz, S. (2015). The prevalence and adverse associations of stigmatization in people with eating disorders. *International Journal of Eating Disorders*, 48(6), 767-774. doi:10.1002/eat.22353
- Hamilton, S., Pinfold, V., Cotney, J., Couperthwaite, L., Matthews, J., Barret, K., ... & Henderson, C. (2016). Qualitative analysis of mental health service users' reported experiences of discrimination. *Acta Psychiatrica Scandinavica*, 134(S446), 14-22. DOI: 10.1111/acps.12611.
- "Having my ear bitten off in a vile takeaway attack made me anorexic" (7 Jul 2015), @DailyMirror
- "Heartbroken dad blasts health service and says 'cleaner who called 999 did more for my anorexic daughter than NHS'" (9 Dec 2017), @TheSun
- Hipes, C., Lucas, J., Phelan, J. C., & White, R. C. (2016). The stigma of mental illness in the labor market. *Social Science Research*, 56, 16-25. DOI: 10.1016/j.ssresearch.2015.12.001.
- Hoffner, C. A., Fujioka, Y., Cohen, E. L., & Seate, A. A. (2017). Perceived media influence, mental illness, and responses to news coverage of a mass shooting. *Psychology of Popular Media Culture*, 6(2), 159. DOI: 10.1037/ppm0000093.
- Holmes, S., Drake, S., Odgers, K., & Wilson, J. (2017). Feminist approaches to anorexia nervosa: A qualitative study of a treatment group. *Journal of Eating Disorders*, 5(1), 36-15. doi:10.1186/s40337-017-0166-y
- Holmes, S. (2016). 'Blindness to the obvious'? Treatment experiences and feminist approaches to eating disorders. *Feminism & Psychology*, 26(4), 464-486.
- "How one girl beat anorexia - thanks to finding love in her job at McDonald's" (22 Nov 2013), @DailyMirror
- "How teenager who weighed less than six stone beat anorexia to reach beauty contest final" (30 Jul 2010), @MailOnline

“I was turned anorexic by Instagram fad diets - now I'm exposing all their lies” (25 Jan 2019), @TheSun

“Instagram has agreed to remove content promoting eating disorders such as bulimia and anorexia after being challenged by the Health Secretary” (29 April 2019), @Telegraph

Jackson, T., & Chen, H. (2015). Features of objectified body consciousness and sociocultural perspectives as risk factors for disordered eating among late-adolescent women and men. *Journal of Counseling Psychology, 62*(4), 741-752. doi:10.1037/cou0000096

Kim, H., Jang, S. M., Kim, S., & Wan, A. (2018). Evaluating sampling methods for content analysis of twitter data. *Social Media + Society, 4*(2), 205630511877283. doi:10.1177/2056305118772836

Levinson, C. A., Zerwas, S. C., Brosf, L. C., Thornton, L. M., Strober, M., Pivarunas, B., . . . Bulik, C. M. (2019). Associations between dimensions of anorexia nervosa and obsessive–compulsive disorder: An examination of personality and psychological factors in patients with anorexia nervosa. *European Eating Disorders Review, 27*(2), 161-172. doi:10.1002/erv.2635

Li, X., Chang, X., Connolly, J. J., Tian, L., Liu, Y., Bhoj, E. J., . . . Price Foundation Collaborative Group. (2017). A genome-wide association study of anorexia nervosa suggests a risk locus implicated in dysregulated leptin signaling. *Scientific Reports, 7*(1), 1-8. doi:10.1038/s41598-017-01674-8

Link, B. G., & Phelan, J. C. (2013). Labelling and stigma. In C. S. Aneshensel *et al.* (eds.), *Handbook of the Sociology of Mental Health*, (2nd ed.), (pp. 522-540). Dordrecht, Netherlands: Springer Science+Business Media

Link, B. G., & Phelan, J. C. (2014). Stigma power. *Social Science & Medicine, 103*, 24-32. DOI: 10.1016/j.socscimed.2013.07.035.

Livingston, J. D. (2014). *Mental Illness-Related Structural Stigma: The Downward Spiral of Systemic Exclusion Final Report*. Mental Health Commission of Canada.

McGinty, E. E., Webster, D. W., & Barry, C. L. (2013). Effects of news media messages about mass shootings on attitudes towards persons with serious mental illness and public support for gun control policies. *American Journal of Psychiatry, 170*, 494-501. DOI: 10.1176/appi.ajp.2013.13010014.

Micali, N., Hagberg, K. W., Petersen, I., & Treasure, J. L. (2013). The incidence of eating disorders in the UK in 2000–2009: Findings from the general practice research database. *BMJ Open, 3*(5), e002646. doi:10.1136/bmjopen-2013-002646

Mishra, A., Anand, M., & Shreekantiah, U. (2016;2017;). Neurobiology of eating disorders - an overview. *Asian Journal of Psychiatry, 25*, 91-100. doi:10.1016/j.ajp.2016.10.009

Morris, G. (2006). *Mental health issues and the media: An introduction for health professionals*. London, United Kingdom: Routledge.

Moskowitz, L., & Weiselberg, E. (2017). Anorexia Nervosa/Atypical anorexia nervosa. *Current Problems in Pediatric and Adolescent Health Care, 47*(4), 70-84. doi:10.1016/j.cppeds.2017.02.003

“MP with anorexic past gives DNA to establish genetic links in sufferers” (20 Jul 2014), @Independent

Munro, C., Randell, L., & Lawrie, S. M. (2017). An integrative Bio-Psycho-Social theory of anorexia nervosa. *Clinical Psychology & Psychotherapy, 24*(1), 1-21. doi:10.1002/cpp.2047

- Murray, S. B., Quintana, D. S., Loeb, K. L., Griffiths, S., & Le Grange, D. (2019). Treatment outcomes for anorexia nervosa: A systematic review and meta-analysis of randomized-controlled trials - CORRIGENDUM. *Psychological Medicine*, 49(4), 701-704. doi:10.1017/S0033291718003185
- Mustelin, L., Silén, Y., Raevuori, Anu, MD, PhD, Hoek, H. W., Kaprio, Jaakko, MD, PhD, & Keski-Rahkonen, A. (2016). The DSM-5 diagnostic criteria for anorexia nervosa may change its population prevalence and prognostic value. *Journal of Psychiatric Research*, 77, 85-91. doi:10.1016/j.jpsychires.2016.03.003
- National Institute for Health and Care Excellence (2017). Eating disorders: recognition and treatment.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 160940691773384. doi:10.1177/1609406917733847
- Olstead, R. (2002). Contesting the text: Canadian media depictions of the conflation of mental illness and criminality. *Sociology of Health and Illness*, 24(5), 621-643.
- Park, M., Sun, Y., & McLaughlin, M. L. (2017). Social media propagation of content promoting risky health behavior. *Cyberpsychology, Behavior and Social Networking*, 20(5), 278.
- Parrott, S., Albright, D., Dyche, C., & Steele, H. (2019). Hero, charity case, and victim: How US news media frame military veterans on twitter. *Armed Forces & Society*, 45(4), 702-722. doi:10.1177/0095327X18784238
- "Phil Collins' daughter Lily blames dad's divorce for anorexia battle in moving open letter" (7 Mar 2017), @Daily_Express
- Powell, T. E., Boomgaarden, H. G., De Swert, K., & de Vreese, C. H. (2015). A clearer picture: The contribution of visuals and text to framing effects. *Journal of communication*, 65(6), 997-1017.
- Powell, T. E., van der Meer, T. G., & Peralta, C. B. (2019). Picture power? The contribution of visuals and text to partisan selective exposure. *Media and Communication*, 7(3), 12-31.
- Publishers Audience Measurement Company (2019). Total News Brand, Jan 2017 – Dec 2017. Retrieved from: <https://pamco.co.uk/pamco-data/data-archive/>. (Accessed February, 23, 2020)
- Rhydderch, D., Krooupa, A. M., Shefer, G., Goulden, R., Williams, P., Thornicroft, A., ... & Henderson, C. (2016). Changes in newspaper coverage of mental illness from 2008 to 2014 in England. *Acta Psychiatrica Scandinavica*, 134(S446), 45-52. DOI: 10.1111/acps.12606.
- Roehrig, J. P., & McLean, C. P. (2010). A comparison of stigma toward eating disorders versus depression. *International Journal of Eating Disorders*, 43(7), 671-674. doi:10.1002/eat.20760
- "Russian modelling school accused of pressuring anorexic twin sisters, 14, to lose weight" (6 Dec 2018), @MailOnline
- Schaefer, L. M., & Thompson, J. K. (2018). Self-objectification and disordered eating: A meta-analysis. *International Journal of Eating Disorders*, 51(6), 483-502. doi:10.1002/eat.22854
- Scourfield, J., Colombo, G., Burnap, P., Evans, R., Jacob, N., Williams, M., & Caul, S. (2018). The number and characteristics of newspaper and twitter reports on suicides and road traffic deaths in young people. *Archives of Suicide Research : Official Journal of the International Academy for Suicide Research*, , 1-16. doi:10.1080/13811118.2018.1479321
- "Selfies showing off weight loss are driving rise in anorexia" (3 Feb 2015), @thetimes

- Schmidt, U., Ryan, E. G., Bartholdy, S., Renwick, B., Keyes, A., O'Hara, C., . . . Treasure, J. (2016). Two-year follow-up of the MOSAIC trial: A multicenter randomized controlled trial comparing two psychological treatments in adult outpatients with broadly defined anorexia nervosa. *International Journal of Eating Disorders, 49*(8), 793-800. doi:10.1002/eat.22523
- Stewart, M., Keel, P. K., & Schiavo, R. S. (2006). Stigmatization of anorexia nervosa. *International Journal of Eating Disorders, 39*(4), 320-325. doi:10.1002/eat.20262
- "Student records her recovery from anorexia on Instagram to inspire body confidence" (5 Feb 2018), @Independent
- "Student left traumatised by sexual abuse reveals her transformation after conquering anorexia" (4 Apr 2017), @Daily_Star
- Team Up (2014). Social media guidelines for mental health promotion and suicide prevention.
- Thornicroft, G. (2006). *Shunned: Discrimination against people with mental illness*. Oxford, United Kingdom: Oxford University Press.
- "Three anorexic girls tell how friendship saved each of them from their illness" (29 May 2018), @DailyMirror
- Time to Change (ND). Let's end mental health discrimination. Media guidelines.
- Van Gorp, B. (2007). The constructionist approach to framing: Bringing culture back in. *Journal of Communication, 57*, 60-78. DOI: 10.1111/j.1460-2466.2006.00329.x.
- Van Gorp, B., & Vercruyse, T. (2012). Frames and counter-frames giving meaning to dementia: A framing analysis of media content. *Social Science and Medicine, 74*, 1274-1281. DOI: 10.1016/j.socscimed.2011.12.045.
- Vossen, M., Van Gorp, B., & Schulpen, L. (2016). In search of the pitiful victim: A frame analysis of Dutch, Flemish and British newspapers and NGO-advertisements. *Journal of International Development*. [Online publication]. DOI: 10.1002/jid.3235.
- "Why fads for juice diets could lead to anorexia" (25 May 2014) @thetimes
- Wild, B., Friederich, H. C., Zipfel, S., Resmark, G., Giel, K., Teufel, M., ... & Herpertz, S. (2016). Predictors of outcomes in outpatients with anorexia nervosa—Results from the ANTOP study. *Psychiatry research, 244*, 45-50.
- Wilson, L. C., Ballman, A. D., & Buczek, T. J. (2016). News content about mass shootings and attitudes toward mental illness. *Journalism & Mass Communication Quarterly, 93*(3), 644-658. DOI: 10.1177/1077699015610064.
- "Woman cured of severe anorexia after doctors 'rewire' her brain to switch off negative thoughts about food" (26 Mar 2013), @MailOnline
- "Worrying increase in promotion of anorexia on social media sites" (15 Oct 2017), @Independent
- Wykes, T., Sweeney, A., & Guha, M. (2019). Can we trust observational data? keeping bias in mind. *Journal of Mental Health, 28*(6), 579-582. doi:10.1080/09638237.2019.1685083
- Xie, L. (2015). The story of two big chimneys: A frame analysis of climate change in US and Chinese newspapers. *Journal of Intercultural Communication Research, 44*(2), 151-177. DOI: 10.1080/17475759.2015.1011593.

