

Faceless: The visual representation of overweight people in Flemish and Dutch online newspapers

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Abstract

We conducted a quantitative visual content analysis to examine how overweight and obese people are portrayed in online newspaper photos in the Netherlands and Flanders compared to non-overweight individuals. Overall, we found that 68% of the obese/overweight people were depicted in a stigmatizing way. Their heads were more likely to be cut out of the image, they were more often dressed sloppily and more frequently portrayed with only their lower body in comparison with non-overweight people. Furthermore, overweight people were more often associated with passive behavior and portrayed as patients in a medical environment. Tabloids were found less likely to publish stigmatizing images than broadsheets as they used more often photos supplied by the subjects themselves.

Keywords

Content analysis, Dutch-language newspapers, obesity, overweight, stigmatization, visual representation.

Introduction

The worldwide prevalence of obesity has increased significantly throughout the past decades. According to The World Health Organization obesity-rates tripled between 1975 and 2016 (WHO, 2018). The so-called ‘obesity epidemic’ resulted in a rise of media coverage on the subject as well. In the USA, for example, media attention for obesity has quintupled between 1985 and 2003 (Lawrence, 2004). In Australian newspapers, an even sharper increase in attention was

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observed between 1996 and 2006 (Bonfiglioli et al., 2007). UK newspapers follow the trend, as researched from 1996 to 2010 (Hilton et al., 2012). Statistic data regarding media coverage of obesity in the Netherlands and Flanders are currently lacking.

Previous research shows that media mainly explain obesity in terms of individual responsibility with gaining weight as the result of eating too much and exercising too little (Bonfiglioli et al., 2007; Flint et al., 2016; Kim & Willis, 2007; Lawrence, 2004) while in reality there is a complicated relationship between genetics and (obesogenic) environments that both have an influence on gaining weight (Barsh et al., 2000; Caballero, 2007; Hill et al., 2005; Townshend & Lake, 2009). In virtually all forms of media from commercials, films and drama series over children's television to news reports and newspapers, biological and social factors are often neglected (Puhl & Heuer, 2009). In television comedies (Fouts & Burggraf, 1999), animated cartoons (Klein & Shiffman, 2006) and television shows and movies (Himes & Thompson, 2007) the thin ideal is persistent. The media's primary focus on the thin ideal and its negative stereotypes about overweight is commonly referred to as the 'weight bias of the media'.

Studies on newspaper articles show that there is some progress in media reporting on obesity. The frame of individual responsibility, however, remains dominant. Nathalie Boero (2007), for example, examined 751 *New York Times*' articles between 1990 and 2001. She demonstrates that obesity is mainly explained in line with the prevailing cultural ideas. Therefore, having overweight is described as an individual problem with weight gain the result of a person's own behavioral decisions. Helena Sandberg (2007) drew similar conclusions. She analysed 1925 articles published in four Swedish newspapers and found that overweight individuals were often described as lazy, greedy and irresponsible. Weight stigmatization and portrayal of overweight as a moral digression was found in the British press by Flint et al. (2016). The longitudinal study of Lawrence (2004) shows that though the personal responsibility for one's health remains dominant from 1985 till 2003, a gradual reframing takes place in the past two decades with a growing interest in the environmental factors. A similar finding was made by Hilton et al. (2012) in their study on the UK newspapers from 1996 to 2010. They observed a growing interest in societal (instead of individual) solutions to the problem of obesity. This trend is also recognized in media framing of childhood obesity over time, both in UK (Nimegeer et al., 2019) and – to a lesser degree – in Sweden (van Hooft et al., 2017). Other recent studies confirm that there is room for alternative

explanations. Armentia & Marin (2018) show that the Spanish press is paying attention to structural causal factors and scientific and political solutions to the problem of obesity. Atanasova & Koteyko (2017) detected in the German and British online press counter frames such as ‘acceptation’ and ‘coming-out’ next to the still dominant frame of ‘self-control’.

Media representation is important as it influences the public opinions about social problems such as obesity (Frederick et al., 2016). By explaining the causes, effects and solutions to obesity, the media establish the framework within which the topic is discussed. Several studies have shown that the weight bias of the media contributes to anti-fat attitudes, causing a rise in weight-based discrimination experiences which, in turn, work counterproductive when it comes to successfully losing weight (McClure et al., 2011; Puhl & Heuer, 2009; Puhl & Heuer, 2010). Next to the text, weight stigma can be influenced by the published images as well (Hinman et al., 2015; Johnstone & Grant, 2019; McClure et al., 2011). Stereotypical portrayals of (obese) people can have a stigmatizing effect even if the accompanying text is neutral or positive (Abraham & Appiah, 2006; Messaris & Abraham, 2001) as readers are less aware of – and therefore less prepared for – the bias that underlies an image (Messaris & Abraham, 2001). Moreover, readers are more likely to remember the non-verbal meanings as opposed to the openly concrete textual ones (Zillman & Brosius, 2000). McClure et al. (2011) observed that people who read a neutral text with a stigmatizing photograph reported a higher weight bias (‘fat phobia’) score compared to those participants who saw only a text or text with a neutral or positive photograph. Seeing a more flattering photo is linked to lower weight bias scores, bringing Pearl et al. (2012) to the conclusion that positive media portrayals of obese people may help reduce weight stigma and even its associated negative health outcomes. Pearl et al. (2015) confirm this conclusion as they observed a null effect of stigmatizing images on motivation to engage in healthy behavior.

To date, just a handful of studies, mainly situated in the United States, examined the *visual* aspect of news coverage of obesity. On the basis of a visual quantitative content analysis Heuer et al., (2011) came to the conclusion that in the American online news media 72% of overweight people are depicted in a stigmatizing way. The focus is on the excessive weight by focusing on scantily clad buttocks and bellies, even leaving the head out of the photo. Obese people are portrayed with inappropriately fitting clothing, or no clothes at all, in a setting where they eat junk food or display passive behavior (Heuer et al., 2011). Patterson & Hilton (2013) made a similar observation in the British press. In

addition to the American study they noticed a mismatch between the portrayed people and the text. With the use of a figure rating scale they concluded that people in the photos were often bigger/fatter than the reader would expect on the basis of the text. Puhl et al. (2013) analysed video content from five US news websites and found that 65% of overweight adults and 77% of overweight youth were portrayed in a negative, stigmatizing manner. Gollust et al. (2012), on the other hand, found that stigmatization in *Time* and *Newsweek* was relatively rare and that stigmatizing depictions were used less over time (from 1984 to 2009). Varava (2016), who also studied portrayal in television news stories, came to a nuanced finding. Overweight people are often shown as an isolated body part, but their portrayal is not entirely stigmatizing (e.g. shown exercising).

In reviewing the literature on media coverage of obesity, a few observations can be made. First, the visual aspect of news coverage of obesity remains largely neglected. This is all even more surprising since studies show the greater impact of visuals on the public compared to texts. Second, framing studies focus mainly on the Anglo-Saxon countries with less attention to European countries. This study wants to contribute to the ‘knowledge gap’ about the situation in the Dutch-speaking part of Europe by examining online newspaper photos of the Flemish and Dutch press. Research questions are: How are overweight people portrayed in the Dutch and Flemish online newspaper stories on obesity (2016-2017) compared to non-overweight people? Can the portrayal of overweight individuals be considered as stigmatizing, and why? What are the differences between the Dutch-language and the American newspapers with regard to the portrayal of overweight people?

Methods

Sample

Three newspapers from the Netherlands (*De Volkskrant*, *Het NRC-Handelsblad*, *De Telegraaf*) and three newspapers from Flanders, the Dutch-speaking part of Belgium (*De Morgen*, *De Standaard*, *Het Nieuwsblad*) were selected for this study. *De Telegraaf* and *Het Nieuwsblad* are considered popular driven newspapers (hereafter referred to as the ‘tabloids’), the remaining four newspapers (*De Volkskrant*, *Het NRC-Handelsblad*, *De Morgen*, *De Standaard*) are mainly information driven (hereafter referred to as the ‘broadsheets’). We used the newspapers’ online databases to search for images that were published with articles about obesity by using keywords such as *obesitas* (obesity), *BMI* (body mass index), *overgewicht* (overweight), *afvallen* (losing weight), *dik* (fat), and

diabetes. Only the articles that had obesity as their main topic (that is, more than half of the paragraphs were about obesity, or the word ‘obesity’ was mentioned in the headline) and that were published with a photo of one or more persons on it were selected. We excluded recurring columns as they were systematically published with the writers’ portraits as the only image attached. Both web-only articles and online versions of the actual newspapers were included. The six newspaper websites hardly make any distinctions between the two versions. Moreover, people increasingly read their news on online platforms instead of reading the actual paper. By including both web-only photos and the online published newspaper articles, we were able to examine photos from both the online- and offline newsrooms. We selected publications from the two-year period between January 1, 2016 and December 31, 2017. We collected in total 272 articles (*NRC-Handelsblad*: 36, *De Standaard*: 39, *De Volkskrant*: 21, *De Morgen*: 56, *De Telegraaf*: 44, *Het Nieuwsblad*: 76). As some articles had more than one image, this yielded a total of 283 photos with 442 persons depicted (*NRC-Handelsblad*: 44, *De Standaard*: 59, *De Volkskrant*: 31, *De Morgen*: 67, *De Telegraaf*: 75, *Het Nieuwsblad*: 166).

Measurement

To investigate how overweight people are portrayed in the Dutch and Flemish newspapers we coded all the individuals that were clearly depicted in the photos. By including both overweight and non-overweight persons we were able to make a comparison between the two different size categories. When the size of a person could not be determined, the portrait was excluded for further analysis. The 283 images contained in total 442 individuals. Twelve persons were excluded because we were not able to determine their body size. This brings the total number of examined portraits to 430.

For the codebook we relied on the work of Heuer et al. (2011). In their publication they discussed 23 variables ranging from metadata and demographic characteristics to how the body was portrayed, the clothing style and the main roles of activities. We used this list as a basis for our research. The variables in our codebook included:

1. Date of publication
2. Newspaper
3. Genre (news articles, human-interest, science, economy, culture, opinion, interviews)
4. Image credit (press agency, stock photo, social media, journalist, photographer, supplied by subject)

5. Sex (man, woman)
6. Age (child < 18, adult > 18)
7. Body size (determined by the 'figure rating scale' from Pulvers et al., 2004)
8. How the body was portrayed in the image (full body, head/face only, upper body, lower body)
9. Isolated body parts (focus on belly, buttocks, legs, feet, mouth, etc.)
10. Visibility of the face, or not
11. Whether the person in the image was clothed, or not
12. Fit of clothes (appropriate clothing, too wide, too tight)
13. Clothing style (professional, casual, sporty, sloppy)
14. Food consumption (eating food, cooking food, buying food)
15. Whether the consumed food was healthy, or not
16. Level of activity (passive, neutral, active)
17. Profession (expert, scientist, lawyer, medical staff, politician, etc.)
18. Being portrayed as a patient, or not
19. Being the feature of a weight loss story, or not

We tested intercoder reliability by having two coders independently code all the images from the *NRC-Handelsblad* corpus ($n = 44$, or 16 % of the total amount of pictures) and calculate the Cohen's kappa and Krippendorff's Alpha. Initially, three variables did not get the minimum score of 0.66 ('whether the person in the image was clothed', 'profession' and 'isolated body parts'). Before coding the remaining 239 images, the coders resolved the inconsistencies by reconsidering the variables' values after which Krippendorff's Alpha was 0.741 to 1 for all variables.

Results

Metadata and demographics

Table 1 shows the distribution of the depicted figures among the newspapers. From the total of 442 figures, 54.5 % were published on the websites of the two tabloids (*De Telegraaf*, *Het Nieuwsblad*). The four broadsheets (*NRC-Handelsblad*, *De Volkskrant*, *De Standaard*, *De Morgen*) provided the remaining 45,5 %. The Flemish papers (*De Standaard*, *De Morgen*, *Het Nieuwsblad*) (66 %) provided more visuals on the topic of obesity than their colleagues from the Netherlands (*NRC-Handelsblad*, *De Volkskrant*, *De Telegraaf*) (34 %).

Table 1

Distribution of the depicted figures among the newspapers (N = 442)

Newspaper	Frequency	Percent
NRC-Handelsblad	44	10
De Volkskrant	31	7
De Standaard	59	13.3
De Morgen	67	15.2
De Telegraaf	75	17
Het Nieuwsblad	166	37.6
Total	442	100

Most of the images accompanied news articles (34%), human-interest stories (30%) and science articles (27%). The other genres (opinion, culture and interviews) were together responsible for the remaining 9 percent. Most of the images were credited to press agencies (26%) and social media (24%). Stock photography companies (20%) and photographers (16%) are also for a large part responsible for the published photos. The remaining images were credited to the depicted persons themselves (5%) or were not credited at all.

In this study we did not make a difference between obese and overweight. Both were coded as ‘overweight’. The same goes for being underweight or having a normal weight. They were both coded under the value ‘non-overweight’. 252 (59%) of the 430 coded individuals were overweight. 35 % of the individuals were male, 53 % were female. The vast majority (75%) of the portrayed persons were adults. 19% were clearly younger than 18 years old and therefore coded as ‘child’.

Portrayals of overweight individuals

To observe how overweight individuals are portrayed, we compared them to the non-overweight persons by executing chi-square tests. First, we compared the demographic data with the body size. There is no significant relation between body size and sex ($\chi^2=0.13$, $df=1$, $p>0.05$). However, there is a significant relation between age and size ($\chi^2=11,67$, $df=1$, $p=0.001$). Children are 2,6 times more likely to be obese in the images than adults. 76% of the portrayed children are overweight against 55% of the adults.

We found several significant differences between how the bodies were depicted and the body size (see Table 2). This was the case with both ‘how the body was portrayed’ ($\chi^2=20,14$, $df=4$, $p<0.001$) and the ‘isolated body parts’ ($\chi^2=33,9$, $df=4$, $p<0.001$). Non-overweights (55%) were more likely to be

portrayed with their whole body than overweights (39%). Overweight/obese people were more often portrayed by their abdomens or lower bodies (23% against 16% of the non-overweights). For the obese individuals, their bellies were more often isolated (23% against 6%). Non-overweights were more likely to be portrayed without any isolated body parts (83% versus 62%). We also found a correlation between the visibility of the face and body size ($\chi^2=8,76$, $df=1$, $p=0.003$). 44% of the obese people were depicted without their faces. This was the case for 30% of the people without overweight.

Table 2

Comparison of portrayals for overweight persons versus non-overweight persons in online news reports about obesity (N = 430)

		Non-overweight (N=178)	Overweight/ obese (N=252)
Body portrayal	Pictured with whole body	55%	39%
	Only abdomen or lower body	16%	23%
	Focus on isolated belly	6%	23%
	No isolated body parts	83%	62%
Head/face	No visible head/face	30%	44%
Clothes	Not fully dressed	21%	33%
	Too tightly dressed	0%	7.4%
	Professional clothes	23%	6%
	Sports clothes	22%	10%
	Sloppy clothes	0%	6%
Activity	Passive/sedentary behavior	3%	11%
	Practicing sports	19%	8%
Profession	Prestigious profession	18%	7%

Overweight individuals are more likely to be scantily dressed ($\chi^2=6,75$, $df=1$, $p=0.009$). 33% of them were not fully clothed against 21% of the non-overweights. 7,4% of obese people were depicted in too tight clothes. None of the people with average bodies were depicted that way ($\chi^2=13,29$, $df=1$, $p<0.001$). There is also a significant difference between the two size groups with regard to clothing style ($\chi^2=47,34$, $df=4$, $p<0.001$). Non overweight people were more often portrayed in professional (23% versus 6%) and sporty (22% versus 10%) clothes. 6% percent of the obese individuals were dressed in shabby clothes. Not-overweights were never portrayed like that.

The original food categories ('eating food', 'cooking food', and 'buying food') were merged into one not consuming food/consuming food category because of

the small percentages. We did not find any relation between body size and food ($\chi^2=0,39$, $df=1$, $p>0.05$) and between body size and whether the food was (un)healthy ($\chi^2=3,71$, $df=1$, $p=0.054$). A significant relation has been found, however, between size and the level of activity ($\chi^2=17,48$, $df=2$, $p<0.001$). Overweight people are more likely to be showing sedentary behavior (11% against 3%) while non-overweight people were more often practicing sports (19% against 8%). Also, when it came to professions, we observed a significant difference ($\chi^2=11,92$, $df=1$, $p=0.001$). Non-overweight people were 2,8 times more likely to be depicted in a prestigious profession such as a doctor, a lawyer or a scientist (18% versus 7%). This could be linked to a healthcare setting where non-overweights are more often portrayed as a health care professional ($\chi^2=20,22$, $df=1$, $p<0.001$) while overweights are more often depicted as patients ($\chi^2=10,04$, $df=1$, $p=0.002$). Non-obese individuals have 27,8 percent more chance to be depicted as a doctor or a nurse while obese men and women are 3 times more likely to be portrayed as patients.

Stigmatizing images

Like Heuer et al. (2011), we used the significant results to conclude whether or not a portrayal can be viewed as stigmatizing. We considered a portrait to be stigmatizing when it met one of the following criteria:

- Depicted with his/her head cut off
- Depicted with an exceptional focus on the belly
- Depicted by only the lower body or abdomen
- Scantily dressed
- Shabby dressed
- Depicted while wearing too tight clothes
- Showing sedentary behavior
- Portrayed as a patient

We merged these variables into the variable 'stigmatizing' with values 'yes' and 'no'. When we compared this new variable with 'body size' we got a significant result ($\chi^2=15,50$, $df=1$, $p<0.001$). Overall, 68% of the depictions of overweight people can be considered as stigmatizing because they meet one or more of the eight criteria. For non-overweight people, around 50% of the images was coded as stigmatizing.

Both children (70% against 50% of the adults with $\chi^2=5,41$, $df=1$, $p<0.05$) and women (60% against 49% of the men with $\chi^2=4,02$, $df=1$, $p=0.045$) have a higher chance to be depicted in a stigmatizing way. In addition, for the image credit we found a significant relation ($\chi^2=67,06$, $df=5$, $p<0.001$). Especially

photos from stock photo companies (88%) and press agencies (76%) were found to be stigmatizing. Roughly half of the pictures from photographers (57%) and social media (50%) can be considered that way. Photos that are made by the portrayed peoples themselves were the least likely to be stigmatizing (19%).

Tabloids versus broadsheets

We did not find any relation between the number of stigmatizing portraits and the national background (Belgium or The Netherlands) of the newspapers' websites ($\chi^2=0,12$, $df=1$, $p>0.05$). However, we did find a significant difference between the tabloids and the broadsheets ($\chi^2=31,50$, $df=1$, $p<0.001$). Broadsheets (75%) are more likely to publish stigmatizing images than tabloids (49%). The newspaper with the highest score is *De Standaard* with 83% of the images considered to be stigmatizing. *Het Nieuwsblad* publishes with 47% the least number of stigmatizing photos. A possible explanation is that tabloids publish significantly more weight loss stories ($\chi^2=56,33$, $df=1$, $p<0.001$) than their more news driven competitors. These personal stories are less likely to be published with stigmatizing images ($\chi^2=24,02$, $df=1$, $p<0.001$). 59% of these articles were published with a non-stigmatizing photo compared to 33% of the other genres (news articles, science, economy, culture, opinion, interviews).

Discussion and conclusion

Our results show that 68% of the overweight individuals in the Dutch and Flemish online press are portrayed in a stigmatizing way. This percentage is in line with the relative number of stigmatizing images in the United States (72%) found by Heuer et al. (2011). Compared to non-overweight individuals, overweight ones in the Dutch-language press are more often portrayed scantily or shabby dressed, without their faces and with a focus on lower-abdomens. Furthermore, obese people often show sedentary behavior, are portrayed as a medical patient and/or wear clothes that do not fit. These results are in line with the publications by Heuer et al. (2011) and Patterson & Hilton (2013). However, there are a few differences. In contrast to Heuer et al. (2011), we found a relationship between body size and being portrayed as a patient, and between body size and showing sedentary behavior. In addition, and opposed to Heuer et al. (2011), we did not find a relationship between body size and consuming food. When it came to the demographic data, the results for the Dutch press differed from the American study too. In our study, we found that women in pictures are more often stigmatized than men. This was the other way around in the American study (Heuer et al., 2011). We also concluded that children

are more often stigmatized than adults whereas the American scholars did not find a relationship between stigmatizing portrayals and age. More research on the topic of visual representation of overweight people is needed to give more insight in these demographical aspects.

Broadsheet newspapers publish more stigmatizing images than tabloids. Because broadsheets are more 'information driven' than tabloids, they are more likely to use images that are credited to stock photo bureaus or press agencies. On the other hand, the popular driven tabloids often discuss the topic of obesity in human interest articles and personal weight loss stories. To illustrate these articles, the tabloids make use of pictures from social media or pictures that are supplied by the subjects themselves. Our analysis shows that these two photo sources are less likely to contain stigmatizing images. To our knowledge, there are no other publications that examined the differences between tabloid and broadsheet newspapers when it comes to the visual representation of overweight people. The findings, however, roughly correspond with the differences between tabloids and broadsheets in the UK as found by Flint et al. (2016) in their study of newspaper articles. They observed that broadsheets made more reference to the moralizing of obesity than tabloids and thus were more likely to perceive obese people as morally deficient. Tabloids, in contrast, showed more interest in weight loss stories and in reporting the negative consequences of obesity as experienced by the people themselves.

Besides the stigmatizing aspects of images, we made some observations on the positive portrayals such as showing a healthy lifestyle (doing sports, eating fruits and vegetables), wearing formal clothing or being portrayed in a prestigious profession. We found a relationship between body size and three of these positive aspects. Non-overweights are more likely to be depicted while doing sports, wearing formal clothes and having a prestigious profession. No relationship between consuming healthy food and body size was found. The absence of positive portrayals in connection with overweight people does not help to reduce the prejudices towards overweight people (Heuer et al, 2011).

Our study has a few limitations. We only examined online articles on the topic of obesity. It remains unclear whether or not readers of the actual newspaper copies saw the same photographs. In addition, we did not analyse portrayals of overweight individuals that accompany articles on other topics than obesity. Furthermore, our sample included merely six national newspapers. A bigger sample that also contains other news corporations could provide more information on the demographical aspects. Above all, the textual aspects of the newspaper articles were not included with the exception of personal weight

loss stories. To get a complete picture of the relationship between the visual and textual aspect of news coverage on the topic of obesity, a more integrated study is needed. We also did not examine the reasons or motivations to publish stigmatizing images. Depicting overweight people without their heads could be considered a measure to protect the privacy of the portrayed individuals. But we agree with Heuer et al. (2011) that this does not entirely answer the question because ‘images that place unnecessary emphasis on particular body parts seem to intentionally evoke a sense of disgust, rather than merely portray a obese person with their identity concealed’. It is likely that the consistent publication of stigmatizing images relates to the daily routines of newspaper companies. Bissel (2000a; 2000b), for example, explains that media companies are not democratic spaces where editors consciously strive for an equal representation of races, sexes and ages. It could be that also (latent) prejudices towards body size play a role in the image selection processes. Future research into the routines of image editors can give more insight in this matter.

It is important to consider the results in the broader context of policies regarding the worldwide rise of prevalence of obesity. Media do influence the opinions about and attitudes towards overweight people. In the news, obesity is too often solely described in terms of individual responsibility where gaining weight is a result of a lack of discipline. By visually portraying obese people as lazy and unsuccessful while evoking a sense of disgust, these prejudices are reinforced. Research shows that stigmatization works counterproductive towards successful weight loss because it raises the threshold for seeking professional help. Instead of reinforcing stereotypes in news articles, the media could try to correct the weight bias. In that way, media could play a more positive role in reducing the prevalence of obesity.

References

- ABRAHAM, L. & APPIAH, O. (2006). Framing news stories: The role of visual imagery in priming racial stereotypes. *Howard Journal of Communications*, 17, pp. 183–203.
- ARMENTIA, J. I. & MARIN, F. (2018). How the Spanish press frames obesity: A study of content published by El Pa s, La Vanguardia, and El Correo in 2015. *Journalism*, 00(0), pp. 1–19.
- ATANASOVA, D. & KOTEYKO, N. (2017). Obesity frames and counter-frames in British and German online newspapers. *Health*, 21(6), pp. 650–669.
- BARSH, G. S., FAROOQI, I. S., & O’RAHILLY, S. (2000). Genetics of body-weight regulation. *Nature*, 404, pp. 644–651.

BISSEL, K. L. (2000a). Culture and gender as factors in photojournalism gatekeeping. *Visual Communication Quarterly*, 7 (2), pp. 9–12.

BISSEL, K. L. (2000b). A return to 'Mr. Gates': Photography and objectivity. *Newspaper Research Journal*, 21(3), pp. 81–93.

BOERO, N. (2007). All the news that's fat to print: The American 'obesity epidemic' and the media. *Qual Sociol*, 30, pp. 41–60.

BONFIGLIOLI, C. M. F., SMITH, B. J., KING, L. A., CHAPMAN, S. F., & HOLDING, S. J. (2007). Choice and voice: Obesity debates in television news. *Medical Journal of Australia*, 187(8), pp. 442–445.

CABALLERO, B. (2007). The global epidemic of obesity: An overview. *Epidemiologic Reviews*, 29, pp. 1–5.

FLINT, S. W., HUDSON, J., & LAVALLEE, D. (2016). The portrayal of obesity in UK national newspapers. *Stigma and Health*, 1 (1), p. 16–28.

FOUTS, G. & BURGGRAF, K. (1999). Television situation comedies: Female body images and verbal reinforcements. *Sex Roles*, 40, pp. 473–481.

FREDERICK, D. A., SAGUY, A. C., & MANN, T. (2016). Effects of competing news frames of weight on antifat stigma, beliefs about weight and support for obesity-related public policies. *International Journal of Obesity*, 40, pp. 543–549.

GOLLUST, S. E., EBOH, I., & BARRY, C. L. (2012). Picturing obesity. *Social Science & Medicine*, 74, pp. 1544–1551.

HEUER, C. A., MCCLURE, K. J., & PUHL, R. M. (2011). Obesity stigma in online news: A visual content analysis. *Journal of Health Communication*, 16, pp. 976–987.

HILL, J. O., CATENACCI, V., & WYATT, H. R. (2005). Obesity: Overview of an epidemic. *Psychiatric Clinics of North America*, 28, pp. 1–23.

HILTON, S., PATTERSON, C., & TEYHAN, A. (2012). Escalating coverage of obesity in UK newspapers: The evolution and framing of the 'Obesity epidemic' from 1996 to 2010. *Obesity*, 20, pp. 1688–1695.

HIMES, S. M. & THOMPSON, J. K. (2007). Fat stigmatization in television shows and movies: A content analysis. *Obesity*, 15, pp. 712–718.

HINMAN, N. G., BURMEISTER, J. M., KIEFNER, A. E., BORUSHOK, J., & CARELS, R. A. (2015). Stereotypical portrayals of obesity and the expression of implicit weight bias. *Body Image*, 12, pp. 35–35.

JOHNSTONE, G. & GRANT, S. L. (2019). Weight stigmatisation in antiobesity campaigns: The role of images. *Health Promotion Journal of Australia*, 30, pp. 37–46.

KIM, S.-H. & WILLIS, L. A. (2007). Talking about obesity: News framing of who is responsible for causing and fixing the problem. *Journal of Health Communication*, 12(4), pp. 359–376.

KLEIN, H. & SHIFFMAN, K. S. (2006). Messages about physical attractiveness in animated cartoons. *Body Image*, 3, pp. 353–363.

LAWRENCE, R. G. (2004). Framing obesity the evolution of news discourse on a public health issue. *Press/Politics*, 9(3), pp. 56–75.

MCCLURE, K. J., PUHL, R. M., & HEUER, C. A. (2011). Obesity in the news: Do photographic images of obese persons influence antifat attitudes? *Journal of Health Communication*, 16, pp. 359–371.

MESSARIS, P. & ABRAHAM, L. (2001). The role of images in framing news stories. In: Reese, S., Gandy, O. & Grant, A., *Framing public life*. Mahwah, NJ, Erlbaum.

NIMEGEER, A., PATTERSON, C., & HILTON, S. (2019). Media framing of childhood obesity: A content analysis of UK newspapers from 1996 to 2014. *BMJ Open*, 9. DOI:10.1136/bmjopen-2018-025646

PATTERSON, C. & HILTON, S. (2013). Normalisation and stigmatisation of obesity in UK newspapers: A visual content analysis. *The Open Obesity Journal*, 5, pp. 82–91.

PEARL, R. L., PUHL, R. M., & BROWNELL, K. D. (2012). Positive media portrayals of obese persons: Impact on attitudes and image preferences. *Health Psychology*, 31(6), pp. 821–829.

PEARL, R. L., DOVIDIO, J. F., & PUHL, R. M. (2015). Visual portrayals of obesity in health media: Promoting exercise without perpetuating weight bias. *Health Education Research*, 30(4), pp. 580–590.

PUHL, R. M. & HEUER, C. A. (2009). The stigma of obesity: A review and update. *Obesity*, 17, pp. 941–964.

PUHL, R. M. & HEUER, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health*, 100(6), pp. 1019–1028.

PUHL, R. M., PETERSON, J. L., DEPIERRE, J. A., & LUEDICKE, J. (2013). Headless, hungry, and unhealthy: A video content analysis of obese persons portrayed in online news. *Journal of Health Communication*, 18, pp. 686–703.

PULVERS, K. M., LEE, R. E., KAUR, H., MAYO, M. S., FITZGIBBON, M. L., JEFFRIES, S. K., BUTLER, J., HOU, Q., & AHLUWALIA, J. S. (2004). Development of a culturally relevant body image instrument among urban African Americans. *Obesity Research*, 12(10), pp. 1641–1651.

SANDBERG, H. (2007). A matter of looks: The framing of obesity in four Swedish daily newspapers. *Communications*, 32, pp. 447–472.

TOWNSHEND, T. & LAKE, A. A. (2009). Obesogenic urban form: Theory, policy and practice. *Health Place*, 15(4), pp. 909–916.

VAN HOOFT, J., PATTERSON, C., L F, M., ALEXANDROU, C., HILTON, S., & NIMEGEER, A. (2017). Media framing and construction of childhood obesity: A content analysis of Swedish newspapers. *Obesity Science & Practice*. DOI: 10.1002/osp4.150

VARAVA, K. (2016). Visual framing, stigmatization, race, and obesity: Examining television news presentation of stories about obesity and stories about health. *Communication Studies*, 67(5), pp. 509–529.

WHO (2018). *Obesity and overweight*. Available from: <http://www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight> [Accessed 6th May 2018].

ZILLMANN, D. & BROSIUS, H. B. (2000). *Exemplification in communication: The influence of case reports on the perception of issues*. New York, Routledge.