~not more than 8,500 words including all material [appl lings]

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**Weight stigma and weight bias: towards a language-informed analytical framework**

Content warning: This article includes examples of confronting language in relation to people living with obesity.

1. **Introduction** – 500 words (Gavin/Tara)

‘Today nearly 70% of Australians have overweight or obesity; and yet most of us will opt to remain silent on the topic and how it affects us, because of shame and embarrassment.’ (Weight Issues Network 2020: 4)

The *Weight Issues Network* (WIN) is an Australian Health Promotion Charity and ‘an emerging network of people whose lives are affected by overweight or obesity, our families, our friends, and people who care’ (Weight Issues Network 2020: 4). Their recommendations on how to improve the lives of people with obesity are as follows:

1. Weight stigma needs to stop,
2. Improve clarity and reduce barriers to better health
3. We need more supportive environments in society.

Under point 1, the network specifically recommends: ‘Portrayal of people with obesity in the media to be respectful. Framing and images with stereotypes perpetuate and reinforce stigma’ (Weight Issues Network 2020: 6). Australia’s National Obesity Strategy 2022–2032 (see Commonwealth of Australia 2022) also recognises the need for using appropriate language and messages to avoid weight stigma, for example in relation to social marketing and health promotion messages. Indeed, weight stigma is clearly harmful: Potential consequences of such stigma on individual wellbeing range from increased likelihood of anxiety, depression, substance abuse and suicidal thoughts and behaviours, to reduced motivation to engage in weight-related health behaviours (see Bellew et al 2020, Weight Issues Network 2020).

…

[+ when writing the intro: Gavin/Tara to edit/incorporate this section below, moved here from lit review draft:]

The news media framings identified by these studies, and their associated lexico-grammatical patterns, have thus been interpreted as offering negatively valanced (i.e. blame-loading and shaming) representations of people with obesity. This, in turn, has been viewed as a product of the neoliberal doxa which underpins the governance of societies such as the UK, on which much of this recent research is based. Evidence of news media representations affecting the manner in which people with obesity are viewed by members of the public, and indeed, themselves can be found in multiple studies (see Couch et al. 2015; Frederick et al. 2016; Kersbergen and Robinson 2019). When people with obesity are represented as burdensome, lazy, unintelligent and unattractive, the evidence suggests that this can be internalised by those living with obesity and these ideological standpoints adopted by members of the public. Therefore, while of course news media representations will not be the only contributing factor to public perceptions of obesity and people with obesity, previous research suggests they are influential. The result of such shaming and stigmatising portrayals of people with obesity is the propagation of weight bias – whereby obesity is viewed as a moral failing and people with obesity, accordingly, viewed as morally deviant and irresponsible. This in turn can legitimise the types of stigmatising acts and social sanctioning that they are likely to experience (e.g. bullying, physical violence, jocular humiliation, and limited employment opportunities).

For further content for intro, see article plan

In this article, …

1. **Weight stigma in media guidelines for obesity news coverage**

In the last 15 years, English-language media guides for obesity news coverage have been published by various organisations in Australia, the UK and the US, which are working to reduce weight stigma in the media. In general, these guides aim to raise awareness of journalistic practices which perpetuate weight stigma and suggest alternatives, sometimes providing lists of practices to be avoided and adopted. While certain guides make recommendations targeting the organisational and editorial domains of journalistic practice (regarding training programs and image selection, for example), this brief review of six guidelines focusses on practices most closely related to language use, i.e. themes and lexis (for a list of the reviewed guidelines and the full review see Bray & Bednarek 2021).

The most commonly-cited problematic theme is personal blame and shame. Stories emphasising individual behaviours (e.g. eating or exercise) either as causes or solutions for obesity “perpetuate the personal failure narrative” (Law & Pulker, 2020, p. 4). Stereotypes of people with obesity which reproduce themes such as laziness and lack of productivity, intelligence, character or capability are also stigmatising and receive criticism. Instead, the guidelines recommend that the complexity of obesity be foregrounded and that a balanced range of causative factors and solutions be discussed, especially societal factors such as public policy, infrastructure and industry responsibility. Moreover, several guidelines recommend that themes of science and public health, of solutions and help-seeking and of social diversity be prioritised.

At the level of lexis, support for people-first language such as *people with obesity* is universal. All guides problematise condition-first terms like *obese people* and some draw comparisons with equivalent references to other conditions – such as *cancerous people*, for example – which would be regarded as inappropriate (Obesity Australia, 2015; Rudd Centre for Food Policy and Obesity, n.d.). The practice of using scientific descriptors such as BMI scores or obesity classes instead of pejorative adjectives such as *fat* and *obese* is also widely supported, although the limitations of the BMI metric have also been noted (Obesity Australia, 2015; Bonfiglioli, 2007). The negative adverbs *severely* and *morbidly* which denote outdated classification labels also receive criticism, as do pejorative nominal items such as *fatty* and *chubster*. Negative references to obesity itself are similarly discouraged. These include negative verbs and nouns such as *suffer*, *epidemic* or *strain*; combative metaphorical language including *war on obesity* or *fight obesity*; and prohibitive language regarding public health efforts such as *police*, *banning,* or *nanny state*. In section 4, we will draw on these suggestions as a partial basis for developing a systematic framework for language analysis of obesity news coverage. This framework is also informed by the academic literature on weight stigma research, which we review in the next section.

1. **Weight stigma in research on obesity news coverage**

Outside Australia, multiple studies have been undertaken on weight stigma and associated language practices in how newspapers cover obesity, including some linguistic research. The majority of existing research of news representations of obesity has tended to focus on the sociological concept of ‘frames’ (e.g. Goffman 1974). However, more recent research has brought increased linguistic focus to analyses of obesity media framings, identifying the specific lexical and grammatical structures which constitute these frames and the representations they provide. Within this research, much of which has focused on UK news media, the economic cost of obesity has consistently been found to be an issue that is foregrounded in news depictions, with people with obesity being described as a ‘burden on the healthcare system’ (Atanasova and Koteyko 2017: 659; see also Boero 2007; Coltman-Patel 2020). Another frequent area of focus relates to how the causes of obesity are framed. Causes are often portrayed as multifaceted with behavioural, personal blame, biological and environmental frames all identified in the coverage (Lawrence 2004; Malterud and Ulriken 2010; Atanasova and Koteyko 2017; Brookes and Baker 2021a). Research has also found frames which foreground and advocate personal responsibility in the causes of and solutions to obesity to have increased in prominence in UK coverage over time, while those which focus on the role of more powerful institutions, such as the government and food marketers and manufacturers, have decreased (Baker et al. 2020). In the Chinese context, media discourse around obesity was found to be motivated by a sense of collective responsibility to national development (rather than a focus on individual failure to self-control as seen in the British press), although reported measures similarly amounted to personal behavioural changes like eating more healthily and exercising (Huang and Bisiada 2021). In addition to its causes, English-speaking media have also been found to focus on the prevalence of obesity, which is often articulated through the metaphor of ‘the obesity epidemic’ (Boero 2007; Coltman-Patel 2020). Specifically, through this metaphor, obesity is portrayed as a chaotic phenomenon and described as a widely spreading disease.

Previous studies have also demonstrated how notions of fear are intertwined with messaging relating to obesity prevalence (Boero 2007: 46), while fear has also been found to be a frame in and of itself, specifically a ‘fear of fat’, propagated by highlighting that ‘anyone could be at risk’ and that ‘being fat is as bad as smoking’ (Boero 2007: 46; Atanasova and Koteyko 2017: 658; Brookes and Baker 2021b). The fear frame is sometimes operationalised via war metaphors, both in the UK (Coltman-Patel, 2020; Atanasova and Koteyko 2017) and in China (Huang and Bisiada 2021). Finally, unattractiveness is also a frame which has featured in news reports about obesity. For example, Brookes and Baker (2021a) demonstrate how the British tabloids are particularly likely to shame people with obesity in the ways they label them and describe their actions. This is achieved, for example, through the use of animalistic metaphors which equate people with obesity and their consumption practices to animals that are perceived as greedy and as having undiscerning food preferences, employing labels such as ‘hog’ and ‘pig’, as well as describing their eating practices as ‘wolfing’ and ‘swilling’. Other forms of dehumanising language reduce people with obesity to a shape: ‘blob’, ‘blimp’, ‘gutbucket’. Yet other labels describe larger bodies and body parts in unflattering terms, such as ‘moobs’, ‘blubber’, ‘muffin-top’ and ‘bingo-wings’. Thinness, meanwhile, is projected as an attribute which is beautiful, honourable and a result of self-control and discipline (Malterud and Ulriken 2010; Coltman-Patel 2020; Brookes and Baker 2021a). This difference in news representations of thinness and obesity thus ties into the prominent ‘personal responsibility’ frame mentioned earlier; indeed, personal blame has also been widely reported to permeate discussions of obesity and health in news media, with individuals being blamed for their medical conditions and their ‘lack of perseverance’ blamed for their weight (Atanasova and Koteyko 2017; Coltman-Patel 2020; Brookes and Baker 2021a,b).

In contrast to this international context, there are no corpus linguistic studies of Australian newspaper coverage of obesity (but see Bednarek and Carr 2020, 2021 on diabetes), meaning that a systematic linguistic analysis of stigmatising language is yet to be conducted. Relevant non-linguistic studies identify stigmatising blame framing and detect a general paucity of media interest in discrimination and fat voices (e.g. Bonfiglioli 2020). In general, such research associates individual frames with blame (e.g. linking obesity to individual choice), while other frames (e.g. structural frames) focus on environmental drivers of weight gain. Such studies focus on the prevalence of particular frames, rather than language use. For example, Cain, Donaghue et al. (2017)‘s study of Australian and US online news in 2013 and 2015 showed that while blame was often focused on individual choice, the “obesogenic environment”, food industry, and medical conditions also featured, with some articles highlighting the need to reduce stigmatisation of people of size and contained direct criticism of fat shaming. Islam and Fitzgerald (2016) found that Australian obesity news mentioning Indigenous people was dominated by structural causes, while solutions were divided equally between individual and structural frames. Australian newspapers’ framing of childhood obesity was dominated by parental and individual responsibility, followed by government responsibility (Bastian 2011).

Regarding the framing of obesity itself, this appears to be associated with the language of crisis/threat/danger or the use of ‘epidemic’ and ‘battle’ metaphors. Thus, obesity was problematised as a “crisis” in Australian newspaper coverage from 2002 with a peak in such coverage in 2006 (Bonfiglioli 2020). Australian and US online news in 2013 and 2015 warned against glossing over the “dangers of obesity” and framed it as an epidemic (Cain, Donaghue et al. 2017). In newspaper coverage of the 2008 Baker Heart Research Institute report *Australia’s Future ‘Fat Bomb’* (Holland, Blood et al. 2011), language was found to highlight the “disgrace” of high prevalence of obesity and its “threat” to the Australian nation. In research on newspaper coverage of childhood obesity and food advertising (Udell and Mehta 2008), language identified the risks of obesity as a “death sentence”, and discussed weight loss as a “battle” against an “epidemic”. Obesity was also branded as child abuse (Bastian 2011).

For blame frames, a variety of different targets (parents, health professionals, people with obesity) and language practices have been mentioned. Several studies focussed on childhood obesity, where parents are typically blamed, for example through their being too busy to cook or allowing children to eat poorly and move too little (Udell and Mehta 2008). Bastian’s (2011) analysis demonstrated that newspaper coverage carried parent-blaming and derogatory remarks about lower class people’s capacity to care for their children. Parents of obese children were represented as fat, stupid, lazy and bad parents. Australian obesity research news was found by Warin, Zivkovic et al. (2012) to construct obesity as a parental responsibility with metaphors such as “smoking gun” and “trigger” used to report links between maternal and child excess weight, neglecting socioeconomic drivers of weight gain. Udell and Mehta (2008) also showed that newspapers presented children as “vulnerable”, bewitched, innocents and “easy targets” in need of defence. In contrast, health professionals were labelled “food fascists” and “fat police”. Newspaper rhetoric in this study also blamed children for being slothful, lazy, stuffing themselves with ‘sludge” and chugging back sugary drinks and people for not being able to control their appetites (Udell and Mehta 2008).

People with obesity were also found to be the target of negative language in the Baker report study by Holland, Blood et al. (2011), including language such as “fat-arsed”, “flabby flesh”, “burgeoning bellies”, “fat, lazy Australian arse” and “world’s biggest bum”. Holland et al. suggested that language fuelled an ‘us’ and ‘them’ divide between people of size and others, and framed people with obesity as “less intelligent” and a risk to others including as competitors for hospital beds. The authors concluded that blaming fat people for health costs may create an “obesophobic” environment, perpetuating stigma and discrimination against people of size.

As section 2 and 3 have demonstrated, both media guidelines and the academic literature on obesity news coverage suggest that weight stigma can be perpetuated by problematic language practices, including those that negatively label, dehumanise, and blame the individual. For applied linguistics, it is important to be able to systematically analyse such language practices, whether through corpus linguistic analysis (the approach used in this article) or ‘manual’, ‘close-reading’ discourse analysis. In the next section, we introduce the language-informed analytical framework that we have newly developed for this purpose.

1. **Towards a framework for linguistic analysis of weight stigma** – 1000 words

Although a range of linguistic studies have been undertaken on obesity news coverage, to our knowledge a systematic framework for linguistic analysis of weight stigma does not exist.

Tables 1 and 2 present our first step towards such a framework, with resources and categories developed and systematised on the basis of the materials and literature reviewed in sections 2 and 3. We distinguish between *Stigmatising representations of* ***individuals*** *with obesity* (Table 1) and *Stigmatising representations of* ***obesity*** (Table 2). There are obvious connections between these tables – for example, by characterising weight loss as easy or simple (Table 2) it is possible to stigmatise people with obesity as unable to take control (Table 1). Nevertheless, the distinction between the two categories is worthwhile making in order to draw out different aspects of textual representation. The examples provided in both tables are authentic (taken from previous research), but are only presented as a selection of possible language practices, rather than as an exhaustive list.

|  |  |  |
| --- | --- | --- |
| **Table 1.** Stigmatising representations of **individuals with obesity** | | |
| **Constructing an obese ‘Other’ (who is distanced/different from others due to their weight)** | | |
|  | | **Examples** |
| Distancing people with obesity from author and audience | Making obesity central to a person’s identity | *obese/fat/overweight* + [human noun]  be + *obese/fat/overweight*  *the obese* |
| Using pejorative weight-emphasising labels for people and their bodies (except for ‘reclaimed’ usages) | *fatty, fatties, fatsos, fat*, *lardies,*  *flab, bulk, blubber, flobber, flubber, fleshy, meaty, lardy, flabby* |
| Positive or euphemistic weight-emphasising labels for people and their bodies | *cuddly, curvy, roly-poly, big-boned, solid, full-figured, plus-sized, voluptuous, portly, tubby, chubby, chubster* |
| Focusing on people’s (typically negatively evaluated) weight gain | Emphasising size or extent of overweight | *gargantuan, supersized, mammoth, expansive*  *morbidly, severely* |
| Focussing on reporting weight gain | *gain, become (obese* etc*), get, piling on, balloon, weigh* |
| **Stereotyping and negative evaluation of individuals with obesity** | | |
| Ascribing people with obesity with negative or stereotypical characteristics and behaviours | **Characterising people with obesity as:** | **Examples** |
| Unattractive or unkempt | *ugly, unattractive, frumpy, disgusting, bald, slob* |
| In poor health | *sick, ill, unfit, unhealthy, tired, unwell, bloated* |
| Inactive, immobile or incapable | *lazy, sedentary, couch potato, unable, too heavy to X* |
| Unintelligent or lower class | *stupid, thick, illiterate, peasantish, oafs, louts* |
| Experiencing negative emotions (e.g. feeling bad, terrible, desperate, dreadful, ashamed, stressed) | *bad, sad, terrible, worse, unhappy, miserable, depressed, desperate, angry, awful, wretched, dreadful, hopeless, down, suicidal, deprived, helpless, uncomfortable*  *ashamed, guilty, embarrassed, foolish*  *anxious, nervous, stressed*  *suffer* |
| Over-eating or eating too fast | *guzzle, gorge, scoff, feast, devour, cram, shovel, shove, stuff, fill face, gobble, gulp, swig, bolt, diet* |
| Unable to self-regulate or take control | *sloth, gluttony, greed, greedy*  *personal responsibility, personal choice, will power, eat less, move more, exercise* |
| Engaging in criminal, socially deviant, or unacceptable social behaviour | *TUBBY tyrant Kim Jong-un*  *FAT ripper*  *Forty-STONE fraudster*  *The 23 stone fanatic*  *Obese woman … caught stealing cakes* |
| Constructing and comparing a past, ‘bad’, overweight identity with a present, ‘good’, thin identity | *“Having the gastric band operation is one of the best things I’ve ever done. I am healthy, slim, I feel ten years younger and more confident and everyone says I have my sparkle back.”* |
| **Dehumanising** | | |
| Minimising the personhood of people with obesity |  | **Examples** |
| Comparison of people to animals; including animal metaphors for their behaviour | *whale*  *pigs, porkers, porky, porkies, hogs*  *wolf down, pig out* |
| Labelling people by reference to a part of their body (e.g. using body part labels) | *lard-arse, gut-bucket, lard-bucket* |
| Comparison of people to inanimate objects or entities | *blob, blobby* |
| **Ridiculing** | | |
| Positioning people with obesity as a source of amusement |  | **Examples** |
| Noting awkward movement | *waddle, haul, heave, lumber, shift, wobble, jiggle* |
| Commenting on effort | *sweat, wheeze, pant, puff* |
| Reference to not fitting into environment/space | *fit, squeeze, wedge, cram, cramp, clog* |
| Puns | *moobs* (man + boobs), *cankles* (calves + ankles) |
| Alliteration, rhyme | *beer belly, thunder thighs, bingo wings, ballooning bums* |
| **Excluding** |  | **Examples** |
| Excluding or marginalising people with lived experience | Over-reliance on or foregrounding of institutionalised or expert opinion or academic research, especially if reported in a reductive or overly-simplistic way | *“CLOTHES for fat children should have health warnings urging them to lose weight, an obesity* ***expert said*** *yesterday.”*  *“SEAWEED could hold the key to conquering obesity,* ***experts believe****.”* |
| Not including or backgrounding the voices of people with lived experience | N/A [an absence of such voices in a relevant news item where they could appropriately be included] |

|  |  |  |
| --- | --- | --- |
| **Table 2.** Stigmatising representations of **obesity** | | |
| Using problematic negative metaphors | | **Examples** |
|  | War/conflict/combat | *battle, fight, fight back, wage battle/war (on obesity), combat, conquer, explode, sound the alarm, tackle, coerce, beat, enlist, force, grapple, kill, lose, loose off, target, win, surrender, battle of the bulge, destroy cellulite, timebomb, weapon, frontline* |
| Infectious disease | *epidemic, pandemic, plague, catching, contagious* |
| Physical exertion | *strain, burden, load* |
| Mysticism | *curse* |
| Natural disaster | *tsunami* |
| Characterising obesity as a problem | | *crisis, problem, weight problem, lifestyle issue, risk* |
| Centring medical aspects of obesity – causal factors, comorbidities and solutions | | *diabetes, disease, cancer, illness, heart disease, arthritis*  *surgery, operation, strategy, drug* |
| Focussing only on related costs (including the cost associated with obesity and with people with obesity who engage in certain behaviour) | | *cost, budget, $* [dollar amounts], *economic burden, strain on the economy, the public purse, taxing fat people, pay more for* X(e.g. *airline seats*)*, dock benefits, crushing the NHS* [National Health Service] |
| Characterising weight loss as easy or simple or made possible by simple fix, new or secret, miracle or controversial diet | | *easy, simple, trick to losing weight, “discover your weight loss type”; “miracle diet”, skinny pill, holy grail of weight loss, secret* |
| Emphasising the severity and prevalence of obesity or constructing it as a problem that is getting worse | | *morbid, severe*  *high, prevalent, common*  *rapid, rapidly*  *rise, double, increase* |

Both tables contain multiple (sub-)categories which should be fairly self-explanatory given our review in sections 2 and 3. However, some elements of the framework do require additional elaboration. Starting with the sub-category *Constructing an obese ‘Other’* (Table 1), we define ‘Othering’ broadly here, and include examples that distance or differentiate people from others due to their weight, such as reporting or emphasising the size and extent of weight gain. This arguably implies that they are different to ‘us’ or that they are outside the ‘norm’. We have also included positive or euphemistic weight-emphasising labels (e.g. *chubster*) in this category, as such language can arguably reinforce the taboo surrounding obesity, even though it is less Othering than overtly pejorative language. The category also comprises identity/condition-first language (e.g. *obese people* rather than *people with obesity*). While such language is generally reported to be preferred by disabled people (Collier 2012), blind and visually impaired people (Bickford 2004) and autistic people (Botha et al 2021, Brown 2011), the media guides universally cite condition-first language as dispreferred by people living with obesity. This is also supported by the language recommendation from the Weight Issues Network (2020):

Please don’t […] [c]all us obese. People may prefer other terms like ‘larger bodies’ or ‘above a healthy weight’. If you are going to use the term obesity please use person first language ‘living with obesity’, not obese. Obesity is a health term that should not be a label. (p. 24)

It is sometimes noted that person-first language is standard for referring to people with (chronic) illness (Obesity Action Coalition, n.d.; Botha et al. 2021, Brown 2011), and adjective labels such as *diabetic* and *tetraplegic* also received criticism (Speight et al. 2021, Bednarek & Carr 2021: 135, Dunn and Andrews 2015, p. 258). However, there is a diversity of views on this matter, with some preferring adjectival labels (see, for example, Dunn and Andrews 2015 for a discussion in relation to disability, and Shakes and Cashin 2020 in relation to autism). This is likely also the case in relation to obesity – as the report by the Weight Issues Network (2020) points out, ‘people have different preferences around terminology’ (p. 9). The degree of variation among people with obesity regarding how stigmatising they find the language practices in Tables 1 and 2 needs to be explored through a systematic large-scale survey. This is a matter for future research and beyond the scope of this article.

In addition, we should emphasise that pejorative weight-emphasising labels such as *fat* can be reclaimed by people with obesity and used non-pejoratively (Coltman-Patel 2020, p. 20-22, Wann 2009, p. xii; Lupton 2018, pp. 81-103). Such reclaimed usages would not be considered stigmatising in our framework. Among the ‘de-humanising’ language practices, the subcategory *Labelling people by reference to a part of their body* refers to a ‘form of objectivation in which social actors are represented by means of reference to a part of their body’ (Brookes and Baker 2021a: 114), e.g. referring to a person as a *lard-arse* or *gut-bucket.* In contrast, other references to people’s bodies or body parts (e.g. *lardy lags*; *flab*, *bulk*, *flabby*, *lardy*) are included in the sub-category of pejorative weight-emphasising labels for people and their bodies. It would be possible to distinguish further between pejorative labels for people (e.g. *fat* + HUMAN NOUN) and for their bodies (e.g. *fat* + HUMAN BODY PART), but we have avoided adding such sub-categorisations.

In Table 2, the sub-category *Using problematic negative metaphors* includes war/conflict/combat metaphors (e.g. *wage battle/war* *on obesity*). In addition to being inherently negative, combat metaphors position people with obesity as adversaries of other groups, including businesses, the government, the medical sciences and society in general (Coltman-Patel 2020, p. 160-164). The list of other negative metaphors is not necessarily exhaustive, but is rather based on what we have encountered in the existing literature.

Both tables imply the possibility of double-classifications, as some language practices could be seen as falling in more than one sub-category. In such cases, the analyst can either choose to double-classify or to consistently prioritise one category over the other. Moreover, the practices in both tables can co-occur within the same text, paragraph or even sentence and can then work for reinforcement or intensification (e.g. adjectival chains such as *hopeless, defeated, ashamed and embarrassed*; see Coltman-Patel, 2020, p. 235). Further, most of these practices can occur in content that is either based in the institutional voice of the newspaper or attributed to quoted voices via direct or indirect speech. In the case of internalised weight bias, problematic practices can even occur in personal accounts from people with obesity which may reproduce and legitimise stigmatising ideas and narratives from an insider’s perspective (Coltman-Patel, 2020).

Finally, further extensions and refinements of this framework are welcome, as more texts and corpora are investigated. For example, it is possible that additional negative metaphors are identified if further data are analysed, and other refinements are also expected once the framework is applied by different researchers. We thus present these tables here as a first step towards a systematic language-informed analytical framework for analysis of weight stigma and weight bias. To illustrate its potential application, we analyse selected aspects of the framework in an Australian dataset using corpus linguistic methods, as introduced in the next section.

1. **Data and methods** – 1000 words

This study is based on a corpus of newspaper articles which mention obesity, published by Australian national and metropolitan newspapers over a period of ten years (2008 to 2019). This corpus – the Australian obesity corpus – was built according to the same criteria and parameters as a similar corpus of news articles about obesity in the UK (see Brookes and Baker 2021). Articles were downloaded from twelve Australian newspapers (see Table 3), using the *LexisNexis* online news repository.[[1]](#footnote-1) For most newspapers, *LexisNexis* archives both online and print editions. Where available, the online and print editions were included in our search, along with the ‘sister’/Sunday editions. To be included in the corpus, articles had to contain at least one mention of *obese* or *obesity* anywhere in the text. We excluded newswires and grouped results by ‘high similarity’ (an option within the interface). We also excluded duplicate and near-duplicate articles from the same newspaper (as per Vanichkina & Bednarek 2022). Table 3 shows the newspapers represented in the corpus, along with the number of articles and words contributed by each. The corpus was analysed using the CQPweb interface (Hardie 2012), which counts the total number of tokens in the corpus as 18,921,726.

Table 3. Breakdown of newspapers in the corpus

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Publication** | **Constituent newspapers** | **Current Owner** | **Type** | **Orientation** | **Number of articles** | **Words** |
| The Advertiser (Adelaide) | The Advertiser  The Advertiser Online  Sunday Mail | News Corp | Tabloid | Right-leaning | 3,349 | 2,016,435 |
| The Age (Melbourne) | The Age  The Age Online  The Sunday Age | Nine | Broadsheet | Left-leaning | 2,826 | 2,778,984 |
| The Australian (National) | The Australian | News Corp | Broadsheet | Right-leaning | 1,960 | 1,984,711 |
| Canberra Times (Canberra) | Canberra Times  Canberra Times Online | Nine | Broadsheet | Left-leaning | 2,044 | 1,643,855 |
| Courier Mail (Brisbane) | Courier Mail  The Sunday Mail | News Corp | Tabloid | Right-leaning | 3,131 | 1,929,131 |
| Brisbane Times (Brisbane) | Brisbane Times | Nine | Broadsheet | Left-leaning | 228 | 241,753 |
| Daily Telegraph (Sydney) | Daily Telegraph  Sunday Telegraph | News Corp | Tabloid | Right-leaning | 1,089 | 672,887 |
| Herald-Sun (Melbourne) | Herald-Sun  Sunday Herald Sun | News Corp | Tabloid | Right-leaning | 3,722 | 2,152,584 |
| Hobart Mercury (Hobart) | Hobart Mercury  The Sunday Tasmanian | News Corp | Tabloid | Right-leaning | 1,465 | 780,866 |
| Northern Territory News (Darwin) | Northern Territory News  Sunday Territorian | News Corp | Tabloid | Right-leaning | 822 | 345,914 |
| Sydney Morning Herald (Sydney) | Sydney Morning Herald  The Sun-Herald Online | Nine | Broadsheet | Left-leaning | 3,636 | 3,364,836 |
| The West Australian (Perth) | The West Australian  The Sunday Times | Seven West | Tabloid | Right-leaning | 1,891 | 1,009,770 |

In our analysis of the Australian obesity corpus, we focus on selected aspects of the framework introduced in Tables 1 and 2:

1. Making obesity central to a person’s identity, e.g. using condition-first language (*the obese woman*, *obese Australians*)
2. Using pejorative weight-emphasising labels for people and their bodies (e.g. *fat*, *fatso*, *fattie*, *flabby*)
3. Characterising people with obesity negatively (e.g. as unattractive, in poor health, inactive, immobile, unintelligent, lower class, socially deviant)

These aspects were selected after consulting with our research partner, the Obesity Collective. They elicited feedback from the Weight Issues Network (WIN), which was presented with a simplified version of the framework in tables 1 and 2 and asked which aspects of the framework they were most interested in. The Obesity Collective director also gave feedback. We then developed corpus linguistic methods to analyse those aspects that most people were interested in. We introduce our methods alongside the results in the Analyses section below.

1. **Analyses** – 2000 words
   1. Making obesity central to a person’s identity

For the first issue, we compared condition-first language (*obese* + human noun) with people-first language (human noun + *with obesity*). Unlike Brookes & Baker (2020) we did not limit the search to the phrase *person/people with obesity*, as a previous study of Australian diabetes coverage (Bednarek & Carr 2021) had shown a range of possible human nouns in (dis)preferred structures. To identify a broad and relevant range of human nouns for our search syntax, we triangulated three corpus linguistic techniques:

1. A collocation analysis of *obese* (right-hand collocates: R1-R5) and of *with obesity* (left-hand collocates L5-L1) to retrieve co-occurring human nouns (Log Ratio [filtered], minimum frequency 10 for both relevant settings), with follow-up qualitative concordance analysis (randomly ‘thinned’ to 100 instances where necessary) to exclude fully-irrelevant human nouns (e.g. *researchers*).
2. A concordance analysis of *obese* (used as adjective, analysis of 500 random concordance lines) and *with obesity* (exact phrase), identifying additional relevant human nouns that occur at position R1 for *obese* and at position L1 for *with obesity*
3. A SketchEngine Wordsketch of *obese* (used as adjective; ‘nouns modified by’ *obese*) and for *obesity* (used as noun; then examining *with obesity*)

Results from this triangulation fed into our search syntax (see online appendix), where for each of the identified human nouns, both singular and plural word forms were typically included (except for *peoples*).[[2]](#footnote-2) The forms *those* and *many* were only included in the search for *with obesity*. The search syntax retrieves (exact) alternative phrases such as *obese people*, *obese children*, etc and *people with obesity*, *children with obesity*, etc. Note that this search also retrieves cases where the relevant word form might be used as adjective, such as *obese* ***Australian*** *adults*. We used this search syntax rather than collocation analysis to maximise precision and recall (based on insights from the prior collocation analysis during the triangulation steps explained above). Table 4 clearly demonstrates that dispreferred condition-first language vastly outnumbers person-first language in the corpus. Report statistical significance measure/effect size measure?

|  |  |  |  |
| --- | --- | --- | --- |
| **Condition-first language (dispreferred)** | | **Person-first language (preferred)** | |
| Raw frequency/normalized frequency | No of texts | Raw frequency/normalized frequency | No of texts |
| 4,677/247.176 | 3,208 | 136/7.188 | 106 |

Table 4 Condition- vs person-first language in the Australian obesity corpus

Statistical analysis here (figures)

exclude some newspapers for comparison over time/across newspapers?

Any change over time?

Any newspaper stand out?

Tabloids vs broadsheets?

* 1. Using pejorative weight-emphasising labels for people and their bodies

For the second issue of interest, we needed to identify important weight-emphasising labels for people and their bodies in the corpus. To do so, two research assistants/RAs independently from each other surveyed a list of the most frequent adjective and noun lemmas in the corpus (starting point: CQPweb’s tagged lemma list) and retrieved any that they judged to be potentially pejorative weight-emphasising labels. The words retrieved by both RAs in this step were *obese, big, overweight, fat, large, heavy, fatty, massive, enormous, giant*. For each of these adjectives, a qualitative analysis was undertaken of 100 random concordance lines to test whether these adjectives do indeed function in the corpus as weight-emphasizing labels for people or their bodies. Table 5 shows that only *obese* and *overweight* are overwhelmingly used as such labels (over 90%), although 41% of analysed instances of *fat* are also examples of such use. Therefore, our large-scale analysis will focus on these three adjectives.

|  |  |  |
| --- | --- | --- |
| **Tagged lemma** | **Raw frequency** | **Use as weight-emphasising label (based on 100 analysed lines)** |
| obese\_ADJ | 17735 | 94% |
| overweight\_ADJ | 13237 | 91% |
| fat\_ADJ | 9619 | 41% |
| large\_ADJ | 5871 | 10% |
| heavy\_ADJ | 2099 | 9% |
| big\_ADJ | 15350 | 7% |
| giant\_ADJ | 439 | 3% |
| massive\_ADJ | 1310 | 2% |
| enormous\_ADJ | 808 | 2% |
| fatty\_ADJ | 1588 | 0% |

Table 5 Adjective lemmas and their use as weight-emphasising label

Given that *obese* and *overweight* are overwhelmingly used as weight-emphasising label for people/their bodies, we will be comparing all instances of these two adjectives (i.e. using form-based comparison, no qualitative concordance analysis).

Search syntax:

[taglemma=“obese\_ADJ”]

[taglemma=“overweight\_ADJ”]

Figure – statistical analyses here, as above

For the adjective *fat*, where 60% of instances may not be relevant, we cannot rely on form-based comparison. We (CB) therefore analysed all concordance lines per newspaper for each year (a total of x instances). We excluded any occurrences from *The Daily Telegraph* and *The Brisbane Times*, given their incomplete coverage over time. The question for the qualitative analysis was: Is *fat* used as weight-emphasising adjectival label for a person? Given the large amount of instances, the categorisation scheme used in CQPweb’s ‘Categorise’ function was simple: yes, no, unclear. [explain when we categorized as ‘no’ and as ‘unclear’]

Carly’s new analysis

Figure – statistical analysis here, as above

* 1. Characterising people with obesity negatively

The third issue of interest concerns negative characterisations of people with obesity (e.g. as unattractive, in poor health, inactive, immobile, unintelligent, lower class, socially deviant). Such negative characterisations can be very hurtful, as the Weight Issues Network (2020: 11) emphasises:

It hurts that people think:  
• We are lazy and lack intelligence  
• We are made from a different moral fabric  
• We are weak, lack self-control or have ‘let ourselves go’  
• We have taken the easy path in life  
• We lack determination, or are simply not trying hard enough in life

Our aim was to identify instances of potential negative evaluation of people with obesity in the corpus. First, we (KL) undertook a collocation analysis of the right-hand collocates of the three adjectival labels identified above (*obese, overweight, fat* tagged as adjectives*;* R1 to R5, observed collocate frequency at least 2) and identified whether any of the retrieved right-hand collocates are instances of negative evaluative nouns (e.g. *criminal*, f*raudster*…) or negatively evaluative adjectives (e.g. *lazy*, *boring* – excluding negative emotions such as *unhappy*). Then we (KL) analysed all relevant concordance lines to identify if the identified evaluative nouns/adjectives are indeed used to negatively characterise people with obesity.

In fact, our analysis suggests that such negative collocates are rare in the corpus (details in online appendix). However, some collocates are regularly (at least 60% of analysed instances) used to characterise people with obesity negatively or, alternatively, to associate them with qualities that are negatively evaluated in our society:

* in poor mental or physical health: *smoker* (c of *obese* 11/18, 61%), *unfit* (c of *obese* 16/17, 94%; c of *overweight* 19/22, 86%),
* unintelligent or lower class: *illiterate* (c of *obese* 15/15*,* 100%)
* inactive, immobile or incapable: *inactive* (c of *obese* 13/21, 62%), *lazy* (c of *obese*, 14/16, 88%; c of *overweight*, 10/11, 91%; c of *fat* 24/33, 73%)
* unattractive or unkempt: *disgusting* (c of *fat*, 9/10, 90%)

These negative associations are partially reinforced through negative collocates that are only sometimes (fewer than 60% of analysed instances) used in this way, namely:

* in poor mental or physical health: *smokers* (c of *obese* 11/47, 23%); *depressed* (c of *obese* 10/19, 53%); *unfit* (c of *fat*, 4/11, 36%)
* inactive, immobile or incapable: *inactive* (c of *overweight*, 15/30, 50%)

Interestingly, the word *disabled* is a collocate of *obese*, but only 6 of its 13 collocate occurrences refer to people with obesity who are also referred to as *disabled*.

Explicit and strong negative judgment of people can be seen in the collocates *bastard* and *pig: Bastard* as collocate of *fat* is used as person reference in all 38 observed collocate occurrences, across 20 texts. *Pig* as collocate of *fat* features 80% (12/15) usage as person reference, across 15 texts. The relevant concordances (Figures x, y, z) shows how these are used in the corpus. 12 instances of *fat bastard* are in fact reproductions of the same quote across different articles, and a further 9 instances are repeated occurrences of the title *Memoirs of a Fat Bastard*, which could be considered a ‘reclaimed’ usage. Other occurrences are also self-references (e.g. lines 19, 30, 37, 38). This leaves only few instances of negative other-evaluation. Of the 12 instances of *fat pig*, the overwhelming majority occur in direct or indirect quotations by self (lines 1, 2? 4?) or other (lines 5-12), rather than the institutional voice of the newspaper, and again some repetition of quotes across different articles is apparent.

![Table

Description automatically generated]()

Figure x Negative evaluation for *bastard* as collocate of *fat* 1

![A picture containing text

Description automatically generated]()

Figure x Negative evaluation for *bastard* as collocate of *fat* 2

Text, application

Description automatically generated

Figure x Negative evaluation for *pig* as collocate of *fat*

In addition to the collocate analysis of *obese, overweight, fat*, we inspected the most frequent lemmas in the corpus for any negative characterisation. Specifically, two research assistants (KL/CB) independently surveyed a list of the most frequent adjective, verb, and noun lemmas (starting point: CQPweb’s tagged lemma list) and retrieved any that they judged to be potentially negative in terms of a diversity of categories from Table 1 (unattractive, in poor health, inactive, immobile, unintelligent, lower class, socially deviant). We (KL) then undertook a qualitative analysis of the lemmas identified by both RAs (26 adjectives, 19 nouns, 11 verbs) to check whether these lemmas do indeed function to characterise people with obesity negatively – again using a random selection of 100 concordance lines where appropriate. The qualitative analysis indicated that negative characterisations using these lemmas occur, but are infrequent and often indirect. Excluding the weight labels *obese*, *overweight* and *fat*, only 8 of 26 adjectives (31%), 3 of 11 verbs (27%) and 4 of 19 nouns (21%) were annotated as indicating a weak or strong, direct or indirect negative association in at least 5 of 100 random instances. Relevant words are listed in Table 6, together with the number of occurrences identified as negative.

|  |  |
| --- | --- |
| Adjectives | *cardiovascular* (9), *fatty* (5), *inactive* (8), *lazy* (34), *sick* (8), *ugly* (13), *unhealthy* (7), *violent* (7) |
| Verbs | *cheat* (7), *murder* (12), *threaten* (6) |
| Nouns | *diabetes* (7), *liver* (12), *medication* (7), *patient* (29) |

Table 6 Use of frequent lemmas in negative characterisations

The nouns in Table 6 are mainly concerned with a negative association between obesity and poor health (for instance, people with obesity being referenced as having diabetes or liver problems, taking medication, being patients), the verbs feature individuals with obesity as the actors of negative social behaviour (for instance, various types of cheating, murdering someone or making threats), while the adjectives cut across three different categories (poor health; inactive; negative social behaviour). For purposes of illustration, figures x-z show the concordances for the adjective, verb and noun with the highest number of instances analysed as negative: *lazy* (34), *murder* (12) and *patient* (29). There is again evidence of repetition across different newspaper articles as well as use in direct or indirect quoted speech as opposed to the institutional voice of the newspaper. Regardless of these caveats, Table 6 suggests that the negative categories of poor health and being inactive occur across different contexts of use. It must be emphasised that these analyses cannot identify any/all negative associations or evaluations in the corpus, as we have focussed only on the most frequent lemmas.

![Text

Description automatically generated with medium confidence]()

Figure Lines for *lazy* 1 (34/100)

![A picture containing text

Description automatically generated]()

Figure Lines for *lazy* 2 (34/100)

![Calendar

Description automatically generated with low confidence]()

Figure Lines for *murder* (12/100), including one metaphorical use (line 7)

A picture containing text

Description automatically generated

Figure Lines for *patient* 1 (29/100)

Graphical user interface, application

Description automatically generated

Figure Lines for *patient* 2 (29/100)

1. **Conclusion** – approx. 500 words [Paul]

Repetition we identified – link to dominant discourses in retweets? (Bednarek et al 2022)

Re quoted speech – ref to eg voices/values in the news?

Not examined – eg variation in different news genres

Framework illustrated through a corpus linguistic study but does not mean we think it should only be applied in corpus ilnguistics. Rather we offer it here to others for use in discourse analysis, wether CL or not.

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**References [check that complete and consistently formatted]**

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1. We could not include all newspapers in our corpus because of LexisNexis availability issues (see Vanichkina & Bednarek 2022). Further, *LexisNexis*’s coverage of *The Daily Telegraph* starts from 2010, while the coverage of *The Brisbane Times* starts from 2013 and is not complete from that point. [↑](#footnote-ref-1)
2. Not included: group-based human nouns such as *personnel, police, population, nation, country, family, state, generation, group, troop* as well as *human*, *male*, *female* (potential for use with animals). [↑](#footnote-ref-2)