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A Corpus-Assisted Discourse Study on the Construction of ‘Obesity’ in Indonesian News Media

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Abstract

Obesity is one of the health issues that is susceptible to discursive contestation and negotiation. The way it is portrayed in news media can affect public opinions and policymakers. This study aims to investigate the construction of ‘obesity’ in Indonesian online news media over a five-year period (2017-2021). The analysis was based on a corpus consisting of 1.418 news articles that mentioned the word ‘obesitas’ (obesity) by drawing upon corpus-assisted discourse study framework and legitimation theory. The findings showed that ‘obesity’ was predominantly constructed as a problem of personal responsibility, where individuals were viewed as solely responsible for minimising the risk of obesity and its associated health issues by losing or regulating their weight. This was frequently legitimised through expert authority by referring to medical experts’ interviews, or through impersonal authority by referring to scientific research. Meanwhile, the societal responsibility discourse which focused on the role of government and the food industry in creating conditions that led to obesity was very scarce. It is argued that this may reflect the presence of prevailing neoliberal ideology in Indonesian society. More balanced reporting, therefore, is recommended to lessen the stigmatisation of people with obesity and to recognise the variety of determinants of and solutions to obesity, reflecting its complexity more accurately.

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1. INTRODUCTION

Obesity is considered a worldwide public health problem whose rates have surged steadily in most countries (Blüher, 2019). The prevalence of obesity is connected to other illnesses, such as diabetes, heart disease, and cancer (Brookes & Baker, 2021). It also has been linked to various mental health problems, social isolation, unemployment, and decreased socioeconomic productivity (Blüher, 2019). Obesity is typically defined by using the body mass index (BMI) in which a BMI score that is equal to or more than 30 is classified as obese (“Obesity and overweight,” 2021). Although BMI has been questioned whether it is the most accurate diagnostic measure (Chooi et al., 2019), it is still employed to assess obesity prevalence and has become the standard measure of ideal body weight (Raisborough, 2016). Like the concept of BMI, determinants of and solutions to obesity are also contested. Obesity is regarded as a complicated health issue with multidimensional causes (Jenkin et al., 2011) and no simple solution (Puhl & Heuer, 2009). The discussions on the causes of and answers to obesity are commonly depicted in the news media, framed differently according to the competing interests of various stakeholder groups (Kwan, 2009). This indicates that the obesity issue is susceptible to discursive contestation and negotiation, making it worthy of analysis from the standpoint of discourse analysts (Brookes & Baker, 2021).

The rising obesity rates and the prevalence of competing obesity constructions in the press bring about a significant increase in the news coverage of obesity globally (Hilton et al., 2012). The news media play an essential role in defining a social problem including a health issue (Jarlenski & Barry, 2013). News coverage also affects policymakers, government, and the policy process (Happer & Philo, 2013) in the sense that issues that attract a great deal of media attention are typically prioritised in public and policy agendas and how they are constructed in the news can influence public opinions (McCombs & Valenzuela, 2020). In the context of health or obesity news, media can shape people’s perception of who is seen in society as responsible for causing and solving the problem (Gounder & Ameer, 2018). It can depict attributions of responsibility in individuals or it can emphasise structural factors, thus generating public support for societal-level reforms (Niederdeppe et al., 2013). In light of this, it is important to investigate how news media construct ‘obesity’ in order to acquire a better understanding of the issue, identifying popular discourses of obesity in society (Hilton et al., 2012).

There has been a growing body of research on how ‘obesity’ is represented or framed in the news (Atanasova et al., 2012). Most of these studies have focussed on the USA (Chiang et al., 2020) and the UK (Cotter et al., 2021). Other studies have also been conducted in Australia (Islam & Fitzgerald, 2016), Ireland (de Brún et al., 2013), and China (Sun et al., 2021). These studies used content and framing analyses, except Brookes and Baker’s (2021) and Cotter et al.’s (2021) research which applied conceptual metaphor and corpus-assisted discourse analysis (CADS) framework respectively.

In Southeast Asian countries, particularly Indonesia, despite an alarming rise in obesity in the last two decades, research has been scarce. According to the latest National Basic Health Research survey in 2018, the prevalence of overweight and obesity (classified based on BMI) in Indonesian reached 13.6% and 21.8% respectively (Sangaji et al., 2022) and compared to other Southeast Asian countries, Indonesia has the highest obesity rates in children aged below five (Hendarto, 2019). Obesity research in Indonesia generally focuses on its prevalence, risk factors, determinants, and policies, but little is known about the Indonesian media construction of ‘obesity’. To date, there has been no research that examines how Indonesian news media portray ‘obesity’. To fill this gap in the literature, the present study thus endeavours to answer the research question of how the Indonesian online news media represent ‘obesity’ over a 5-year period, from 2017 to 2021, by using CADS and van Leeuwen’s (2007) legitimation framework. Most studies on media depiction of ‘obesity’ adopt content and frame analysis paradigms. Unlike these studies, the current study follows Brookes and Baker (2021) who applied CADS approaches (Partington et al., 2013) combined with van Leeuwen’s (2007) legitimation theory.

The methodology adopted in the current research is expected to provide a foundation for future studies on the media construction of ‘obesity’ in Indonesian contexts and offers a methodological option for future research that examines portrayals of ‘obesity’ in news texts other than English. The findings of this research contribute to a better understanding of Indonesian news media frames of ‘obesity’ that can be utilised to improve practices of Indonesian news media coverage of ‘obesity’ issues. In particular, by bringing attention to the media’s role in shaping public perceptions of obesity, this study can contribute to a broader societal shift in viewpoints. It has the potential to raise awareness about the way obesity is portrayed in the media, highlighting any biases, stereotypes, or stigmatisation associated with it. Shedding light on these issues can encourage individuals to critically examine the messages conveyed through media representations, and it may also prompt news media institutions to reevaluate their reporting practices and adopt more responsible and inclusive approaches in their coverage of obesity-related topics.

2. LITERATURE REVIEW

2.1 Representations of ‘Obesity’ in the News Media

Media framing of ‘obesity’ has been studied in various ways. Much research has focused on identifying discourses of ‘obesity’ in the news media published in a certain country and in a particular period of time. Sun et al. (2021), for instance, analysed how Chinese newspapers depicted ‘obesity’ from 1999 to 2018 and de Brún et al. (2013) examined ‘obesity’ portrayals in the *Irish Times* from 1997 to 2009. These studies largely identified three main representations of obesity (Atanasova & Koteyko, 2017). Firstly, obesity was portrayed as a biological disorder or genetic treatment that was beyond individual control and most effectively solved with medical or scientific solutions (Saguy, 2021). The next frame represented obesity as “a matter of societal responsibility” (Atanasova & Koteyko, 2017, p. 663), which emphasised the involvement of government and industry in generating conditions that led to obesity (Lawrence, 2004). Solutions in this frame require changes that must be legislated or

mandated, including regulations on food manufacturers and their advertising (Kim & Anne Willis, 2007). Thirdly, obesity was constructed as a problem of personal responsibility which foregrounded individuals' lifestyle choices as the cause of obesity and therefore they were entirely responsible for tackling it by making changes in their food consumption and physical activity (Shugart, 2013).

The last frame is identified as the most dominant in Western countries despite the increase in the societal responsibility frame (Atanasova & Koteyko, 2017). The dominance of personal responsibility discourse is associated with neoliberalism, which plays an increasingly significant role in the governance of Western society (Brookes & Baker, 2021). Neoliberalism is a modern political ideology that favours economic liberalisation, free trade, and open markets (Harvey, 2005), which gives individuals entrepreneurial freedom and competence (Kwan & Graves, 2013) and urges them to take responsibility for their lives and communities (Brookes & Baker, 2021). In the context of health issues, it sees people as health consumers responsible for keeping and improving their own health and economic productivity (Brookes & Baker, 2021), which provides governments with little drive to acknowledge health factors beyond people's behaviour and allows for treatments that burden individuals (Atanasova & Koteyko, 2017).

Several studies have also compared and contrasted media constructions of 'obesity' in different countries. Ries et al. (2011), for instance, conducted content analysis to compare newspaper coverage of obesity policy in the United States, Canada, and the United Kingdom. They revealed that news articles in all three countries predominantly constructed obesity as a lifestyle problem, adopting a personal responsibility frame, but they differed in attitudes toward obesity and legal and policy efforts to combat the rising prevalence of obesity due to differences in structures of the economy and healthcare system. Similarly, a study of 'obesity' framing in news published in the United Kingdom and Germany conducted by Atanasova and Koteyko (2017) found the dominance of the 'self-control' frame in both countries, but there were also few occurrences of counter-frames of 'acceptance' and 'coming-out' (Atanasova & Koteyko, 2017). Bączkowska's (2020) recent study demonstrated marked differences in the way 'obesity' was represented in online British and Chinese newspapers. The former mostly blamed the cause of obesity on individuals, while Chinese news tended to inculcate external factors such as foreign companies, Chinese tradition, and the influx of foreign cultures. These comparative studies show that media constructions of 'obesity' may not be uniform in all countries, affected by differences in cultures and public health policies, which is one of the reasons why the present research is worth conducting.

2.2 Corpus-Assisted Discourse Studies (CADS)

This study adopts a corpus-assisted approach to discourse analysis or CADS (Baker & McEnery, 2015) to investigate Indonesian media representations of 'obesity'. Discourse is viewed as a "set of meanings, metaphors, representations, images, stories, statements and so on that in some way together produce a particular version of events" (Burr, 1995, p. 48). CADS integrates corpus linguistic techniques which are more quantitative with qualitative discourse analysis (Baker, 2006). It aims to unearth non-obvious meanings in a text that may be difficult to identify by the naked eye (Partington et al., 2013). The synergy has been considered powerful and fruitful

(Baker et al., 2008) with each method able to derive benefits from one another and reinforce some of the limitations of the other (Chałupnik & Brookes, 2021). Corpus linguistics offers techniques for examining linguistic patterns in a large collection of language data or corpora, while (critical) discourse analysis can provide methods that consider features beyond texts such as historical, social, and political contexts. In the context of media discourse, Fairclough (1989, p. 54) pointed out that “a single text on its own is quite insignificant; the effects of media power are cumulative, working through the repetition of particular ways of handling causality and agency, particular ways of positioning the reader, and so forth”. Hence, corpus linguistics that can show quantitative linguistic patterns may assist (critical) discourse analysts to reveal that repetition or what Baker (2006, p. 13) called “the incremental effect of discourse”.

CADS has been effectively used to investigate discourses of several contested health problems. Baker et al. (2020) employed it to investigate changes in ‘obesity’ frames in the British press based on a corpus of news published from 2008 to 2017. They found that there was a rise in the personal responsibility frame while the emphasis on social or environmental determinants reduced over time. In a study on the portrayals of ‘obesity’ in news coverage of COVID-19, Brookes (2021) found that the pandemic setting has led to a variety of ‘obesity’ discourses that were more stigmatising than usual in both British tabloids and broadsheets. People with obesity, for instance, were often seen in a fatalistic manner and held accountable for the difficulties facing the UK National Health Service. He argued that the corpus linguistic technique, keywords, could enable the researcher to focus the analysis on the terms and discourses which were the characteristics of the news corpus. The present study differs from the previous research in that it examines ‘obesity’ discourses in news texts in a language other than English and published in a developing country, Indonesia, thus providing different contexts to this body of research.

3. METHODS

This research used mixed methods to analyse the way Indonesian news media portrayed the ‘obesity’ discourse from 2017 to 2021. The quantitative part refers to the use of corpus linguistic techniques which involves statistics and frequency of language patterns, while the qualitative refers to the application of analytical discourse methods entailing a closer critical analysis by taking into account various contexts. Data collection and data analysis procedures are described in the following sections.

3.1 Data Source and Data Collection

The data of this study was a corpus of Indonesian online news articles containing at least one mention of *obesitas* ‘obesity’, published in Kompas.com and Detik.com in a 5-year period, 2017-2021. The online version of the news media is selected since it is still under-researched (Atanasova et al., 2012). More importantly, Kompas.com and Detik.com are the two most frequently accessed Indonesian news websites with more than 150 million monthly average visits (“Top websites ranking,” 2023). Both news sites are owned by the Indonesia major media groups which may represent the dominant Indonesian press reportage. The Kompas newspaper is also considered “Indonesia’s most prestigious and largest-selling daily newspaper” and renowned for

its analytical depth and refined manner (Sen & Hill, 2007. p. 57), while Detik.com is regarded as a standard for Indonesian digital news media due to its credibility and speedy news updates (Nugroho et al., 2012).

To build the corpus, BootCat software (Baroni & Bernardini, 2004), which is “a suite of perl programs implementing an iterative procedure to bootstrap specialized corpora and terms from the web” (Baroni & Bernardini, 2004, p. 1313) was employed. It automatically extracted news texts in reference to obesity from news URLs in both news sites from January 2017 to December 2021. The duplicated URLs were removed before the texts were mined to ensure that the replicated articles were not included in the corpus. This resulted in 1,418 news articles with 599,152 words (see Table 1 for the details).

Table 1. Breakdown of the corpus by online news media.

News media	Articles	Words
Kompas.com	682	336,437
Detik.com	736	262,715
Total	1,418	599,152

3.2 Data Analysis

The current study drew on Baker and McEnery's (2015) CADS framework that divides the methods of analysis into four stages. The first step involves identifying and describing linguistic patterns by utilising a corpus linguistic technique. In this phase, the keyword analysis was employed. Keywords are terms that appear more frequently in one corpus than in another corpus (Bączkowska, 2020). Keywords are important in (critical) discourse analysis because they can serve as entry points for analysing discourses (Love & Baker, 2015). Keyword analysis was carried out by comparing the 'obesity' corpus against the Leipzig Corpora Collection (LCC) of Indonesian corpus, which is a general reference corpus available in CQPweb (Hardie, 2012) consisting of 232.853.664 words taken from a wide variety of genres of Indonesian written texts (Goldhahn et al., 2012). The keyword analysis therefore was conducted by using the CQPweb corpus tool with the log-likelihood significance metric. The frequency threshold was set at 3 and only the top 100 keywords (excluding grammatical words, descending order by their keyness score) that occurred at least in 5% of the total number of news articles were considered to avoid focusing on keywords simply used densely by few articles (Brookes, 2021). Then, quick analyses of 100 random concordances (a list of the occurrences) of each keyword were employed to classify them thematically in order to determine which category they belonged to.

The second stage of analysis involved interpreting the identified language patterns. Collocation analysis of frequent keywords (with more than 100 occurrences) was applied to understand their context-specific usage and how they supported particular discursive constructions. Collocates are co-occurring words in close proximity to one another in the texts (Brookes & Baker, 2022). They were calculated through CQPweb (Hardie, 2012) using the Dice Coefficient statistical metric. The collocation window was set at 5 on either side of the node word and collocates occurring fewer than five times were omitted. In addition, keywords and their collocates were also examined through concordance analysis which allowed more qualitative forms of study and to acquire better interpretation of the keyword list. A close reading of concordances was also used to identify how news writers legitimated

their claims based on van Leeuwen's (2007) legitimation categories. van Leeuwen (2008, p. 20) defines legitimation as the "reasons that either the whole of a social practice or some part of it must take place, or must take place in the way that it does". He distinguishes legitimation into four main groups, namely "authorisation (legitimation by reference to the authority), moral evaluation (by (often very oblique) reference to value systems), rationalisation (by reference to the goals and uses of institutionalized social action), and mythopoesis (conveyed through narratives whose outcomes reward legitimate actions and punish non-legitimate actions)" (van Leeuwen, 2007, p. 92).

The third phase of the analysis was explanation. It included situating the descriptive and interpretive findings in a broader social and political context in Indonesia. The last stage was critical evaluation, "pointing out the consequences of such uses of language (asking 'who benefits?' or 'who is potentially disempowered?'), perhaps making recommendations for good practice" (Baker & McEnery, 2015, p. 3).

4. RESULTS

On the basis of the parameters of keyword analysis described in the previous section, 91 keywords were generated. Table 2 presents keyword lists generated from the analysis after being thematically classified, signifying the first stage of analysis.

Table 2. Keyword lists.

Category	Keywords
Food	<i>lemak</i> 'fat', <i>makan</i> 'eat', 'diet', <i>makanan</i> 'food', <i>gula</i> 'sugar', <i>kalori</i> 'calorie', <i>mengonsumsi</i> 'consume', <i>asupan</i> 'intake', <i>tinggi</i> 'high', referring to high protein/calorie, <i>rendah</i> 'low', <i>kadar</i> 'rate', <i>minuman</i> 'drinks', <i>konsumsi</i> 'consumption', <i>karbohidrat</i> 'carbohydrate', <i>pola</i> 'patterns', 'protein', <i>gizi</i> 'nutrition', <i>manis</i> 'sweet', <i>minum</i> 'drink', <i>nutrisi</i> 'nutrition', <i>serat</i> 'fibre', <i>mengandung</i> 'contain', <i>susu</i> 'milk', <i>kenyang</i> 'full', <i>lapar</i> 'hungry', <i>dikonsumsi</i> 'consumed'
Lifestyle	<i>tidur</i> 'sleep', <i>olahraga</i> 'exercise' (as a noun), <i>berolahraga</i> 'exercise' (as a verb), <i>sarapan</i> 'breakfast', <i>kebiasaan</i> 'habit', <i>aktivitas</i> 'activity', <i>berlebihan</i> 'excessive'
Medical	<i>obesitas</i> 'obesity', <i>sehat</i> 'healthy', <i>kesehatan</i> 'health', <i>gemuk</i> 'overweight', <i>kegemukan</i> 'overweight', <i>dr</i> 'doctor', 'insulin', <i>dokter</i> 'doctor', 'BMI', 'ideal'
Illness	<i>diabetes</i> 'diabetes', <i>jantung</i> 'heart', <i>penyakit</i> 'disease', <i>kolesterol</i> 'cholesterol', 'stroke', <i>hipertensi</i> 'hypertension', <i>stress</i> 'stressful', <i>tekanan</i> 'blood pressure', <i>kanker</i> 'cancer'
Body	<i>tubuh</i> 'body', <i>darah</i> 'blood', <i>perut</i> 'belly', 'hormone', <i>metabolisme</i> 'metabolism', <i>otot</i> 'nerve', <i>usia</i> 'age', <i>lingkar</i> 'size', <i>pembuluh</i> 'artery', <i>pinggang</i> 'waist', <i>fisik</i> 'physique'
Research	<i>studi</i> 'study', <i>peneliti</i> 'researcher', <i>penelitian</i> 'research', <i>persen</i> 'percentage'
Weight	<i>berat</i> 'weight', <i>badan</i> 'body, referring to body weight', <i>menurunkan</i> 'decrease', <i>kg</i> 'kilogram', <i>badannya</i> 'body, referring to body weight', <i>gram</i> 'gram'
Other	<i>risiko</i> 'risk', <i>anak</i> 'child', <i>berlebih</i> 'over/too much', <i>menyebabkan</i> 'cause', <i>meningkatkan</i> 'increase', <i>mengurangi</i> 'reduce', <i>mengalami</i> 'experience', <i>rata</i> 'average', <i>kelebihan</i> 'excess', <i>berisiko</i> 'risk', <i>bisa</i> 'can', <i>faktor</i> 'factor', <i>penurunan</i> 'reduction', <i>Karawang</i> 'a city in West Java, Indonesia', <i>orang</i> 'person/people', <i>membantu</i> 'help', <i>memicu</i> 'trigger'

The following subsections describe three wide themes of recurring constructions of obesity found in the corpus.

4.1 Obesity as Personal Responsibility

The first set of keywords scrutinised revealed a discourse that constructed 'obesity' as the repercussion of an individual's consumption of unhealthy or nutrient-poor foods or practice of an unhealthy lifestyle. Such representation was evident in the uses of keywords related to food or drinks (including substances inside them, such as carbohydrates and fibre) and eating and exercise habits (lifestyle) which accounted for more than 36% of the keywords. Concordance analysis of keywords like *makanan* 'food', *makan* 'eat', *karbohidrat* 'carbohydrates', *kalori* 'calories', *serat* 'fibre', 'protein', *gula* 'sugar', *minuman* 'drinks' showed that they were exercised in news articles discussing food or eating practices that could raise or reduce levels or risks of 'obesity', as exemplified in the following excerpt.

- (1) *Mengonsumsi makanan tinggi gula dapat menyebabkan obesitas, peradangan dan kadar trigliserida, gula darah dan tekanan darah tinggi, yang merupakan faktor risiko penyakit jantung.* [Eating a high-sugar food can lead to obesity, inflammation and high levels of triglycerides, blood sugar and blood pressure, which are risk factors for heart disease] (Kompas.com, 2020)

Other keywords, *tidur* 'sleep', *olahraga/berolahraga* 'exercise', and *sarapan* 'breakfast', indicated individual choices pertaining to 'lifestyle' that led to 'obesity'. The keyword *sleep*, for instance, predominantly demonstrated that people who lacked sleep were likely to be overweight, while the keyword *exercise* also suggested that lack of exercise tended to make people obese. These articles also frequently featured findings from a scientific study to assign credibility to the discussion, obtaining legitimation by referring to impersonal authority (authorisation) (van Leeuwen, 2007), which is *Riset yang dipublikasikan dalam Science Advances* 'Research published in Science Advances'.

- (2) *Riset yang dipublikasikan dalam Science Advances juga membuktikan kurang tidur bisa meningkatkan risiko obesitas dan diabetes tipe 2.* [Research published in Science Advances also showed that sleep deprivation can increase the risk of obesity and type 2 diabetes] (Kompas.com, 2020)

Another keyword that contributed to the discourse of personal responsibility was 'diet', which also appeared among the top ten keywords in both media. Since 'obesity' was mostly portrayed as the effect of unhealthy eating habits, 'diet' seemed essential to be investigated in order to know the way news media presented the efforts to lose weight. The analysis started by considering the top 100 collocates of 'diet' that were relevant to its representation. The finding suggested that the majority of the collocates referred to types of diet, such as *keto/ketogenik* 'ketogenic' which occurred 99 times, *sehat* 'healthy' (88 times), *Mediterrania* 'Mediterranean' (68 times), *rendah karbohidrat* 'low-carbohydrate' (45 times), and *plaeo* 'paleo' (22 times). All types of 'diet' were depicted positively, which was also evidenced by the collocate *efektif* 'effective', and they frequently featured in news describing a particular 'diet' or how to do it successfully. Concordance analysis also showed that 'diets' were frequently legitimised through the use of the voices of experts such as a doctor, which is called by van Leeuwen (2007) as *expert authority*. 'Diet' was sometimes evaluated negatively when the news reported on *Cinderella*, *tinggi gula* 'high-sugar', and *ekstrim* 'extreme' diets, which were also collocates, but it was a tiny minority.

Another crucial collocate was *olahraga* ‘exercise’, occurring 73 times. The presence of the word may be expected as it is also related to the way to lose weight or avoid ‘obesity’. The collocate mostly occurred in the phrase *diet dan olahraga* ‘diet and exercise’, which may suggest that it takes a secondary role in the personal responsibility discourse (Brookes & Baker, 2021). Its concordances suggested that the combination of ‘diet and exercise’ to lose weight was constructed positively as a successful strategy. In a few cases, ‘diet and exercise’ was depicted as the preferred or first-choice method to lose weight, compared to *Bariatrik* surgery. The word *Batriarik* was, however, only mentioned 152 times in 63 articles in the whole corpus. Additionally, a closer reading analysis indicated that although the surgery or people after having the *Bariatrik* surgery were portrayed positively such as being able to significantly decrease death risks caused by obesity and diabetes, the news articles also presented that the surgery must be given cautiously to people with extreme obesity only or those that failed to lose weight after performing healthy diets and regular exercises.

The last keyword that belonged to the personal responsibility discourse was *risiko* ‘risk’, occurring in 1998 times. The keyword ‘risk’ can be cultural and significant to the way we understand health and illness (Brookes & Baker, 2021). As Lupton (2013, p. 15) pointed out, “news and lifestyle media reports of risk, as well as citizen activist literature and social marketing campaigns, represent it as something to be avoided in the interests of preserving good health and well-being”. Concordance analysis of ‘risk’, when collocated with ‘obesity’ (occurring 433 times), suggested that around 55% of instances depicted the risk factors connected with the development of obesity and/or other health problems, rather than obesity heightening risks of other diseases, which echoes the finding of Brookes and Baker (2022) in the British broadsheets. It also demonstrated that the determinants of obesity risks were focused on an individual’s eating patterns and exercise habits, propagating individual responsibility discourses related to obesity risk.

4.2 Obesity as a Medical Problem

A number of keywords indicated that ‘obesity’ was portrayed as a medical problem. The keywords included *obesitas* ‘obesity’, *kegemukan* ‘overweight’, and ‘BMI’, as well as the names of specific diseases like *hipertensi* ‘hypertension’, ‘cancer’, and ‘diabetes’. The terms *obesitas* ‘obesity’ and *kegemukan* ‘overweight’ are the medical terminologies resulting from the calculation of the BMI. *Kegemukan* ‘overweight’ frequently collocated with *obesitas* ‘obesity’ and they were mostly linked with connectors *atau* ‘or’ and *dan* ‘and’. However, *atau* ‘or’ was largely used in both news media which suggested that the press predominantly considered that overweight and obesity meant the same.

The keyword ‘BMI’ (*Indeks Masa Tubuh* (IMT) in Indonesian) was employed to explain a measure to determine whether a person’s weight was considered ‘normal’, ‘healthy’, or ‘ideal’. Ideal weight was represented as weight that was viewed as ‘normal’ according to BMI scores. BMI scores were also constructed as one of the indicators of the vulnerability of people to certain diseases connected to obesity. IMT and ‘BMI’ were largely employed in an uncritical way in the whole corpus. Of 134 articles that mentioned IMT and/or ‘BMI’, only 6 articles acknowledged the criticism of BMI/IMT. These articles depicted that the BMI/IMT score was not really accurate,

particularly for athletes or people carrying a lot of muscle and it also could not signal the cause of health problems.

'Obesity' was also portrayed as a medical problem by discursively associating it with other diseases such as diabetes, cancer, stroke, and heart disease, which Brookes and Baker (2021, p. 44) defined as "more established and less contested diseases". Collocation analysis of each disease suggested that when they collocated with 'obesity', they were mostly grammatically linked together through the use of coordinated nominal groups, which may suggest that they were equivalent or shared the same value (Ledin & Machin, 2015; van Leeuwen, 2008). However, concordance analysis of the co-occurrences showed two types of representations. The most frequent pattern was that the grouping of obesity with other diseases was constructed as the potential implication of (over) consumption of certain types of food and the lack of physical activities, while the second pattern constructed obesity as increased susceptibility to other health problems (particularly diabetes, cancer, and hypertension).

The next keyword that contributed to the portrayal of 'obesity' as a medical problem was *penyakit* 'disease'. The investigation of right collocates of 'disease' showed that it was more frequently used to refer to health problems other than 'obesity' such as *jantung* 'heart' which occurred 775 times, 'diabetes' (320 times), and *kardiovaskular* 'cardiovascular' (116 times), which corresponds to Brookes and Baker's (2021) finding. Nevertheless, while their research demonstrated that when 'disease' was used in reference to 'obesity', which was unlikely and it tended to feature in articles contending that 'obesity' was not a disease, the present study indicated that there was no news article arguing obesity's disease status. Of the 72 uses of *penyakit* 'disease' that referred to 'obesity' in both news media, all construed 'obesity' as a disease, indicating that the societal debates about obesity disease status were not reflected in the discourses of 'obesity' in the Indonesian online news texts. The concordance analysis revealed that the constructions of 'obesity' as a disease were predominantly presented in the form of lists.

- (3) *Makanan yang tinggi indeks glikemik mampu menambah nafsu makan dan telah dikaitkan dengan peningkatan risiko banyak penyakit seperti obesitas, jantung, diabetes tipe 2.* [Foods that have a high glycaemic index can raise appetite and have been linked to an increased risk of many diseases such as obesity, heart disease, diabetes type 2] (Kompas.com, 2019)

Hence, the presence of this medicalising discourse of 'obesity' may not necessarily mean that the press framed people with obesity as being exonerated from responsibility for their obesity as it was a disease and they had no control over it. Nevertheless, it was likely used to portray 'obesity' as threatening human health by being equivalent to other (more severe) health problems or heightening risks of other diseases. Moreover, framing 'obesity' as a medical progress or a biomedical disorder entails endorsing solutions from the medical domain such as consuming drugs or conducting surgery (Atanasova & Koteyko, 2017). However, no keyword in the top 100 referred to remedies for obesity in that frame. Hence, to examine this further, we conducted investigations into other words that may contribute to the medicalisation of obesity, as found by previous research (Atanasova & Koteyko, 2017). The words included *obat* 'drugs/medicines', *operasi* 'surgery', and *genetik* 'genetic'. However, the analysis focused on *obat* and 'genetic' since *operasi* which referred to *Bariatrik* surgery had been discussed in the previous section. Collocation analysis of *obat*

showed that it mostly referred to medicines for other health problems, with collocates like *kolestrol* ‘cholesterol’ and ‘steroid’. When it collocated with words in reference to obesity drugs, which was scarce, such as *pelangsing* ‘slimming’ which occurred 12 times in 6 articles, and *penurun* ‘weight-loss’ (11 times in 4 articles), the majority of articles, 8 of 10, constructed obesity drugs negatively including as the cause of death.

- (4) *Kejadian tragis dialami oleh seorang wanita yang berprofesi sebagai guru di Thailand sehari setelah mengonsumsi obat pelangsing.* [A tragic incident was experienced by a woman who worked as a teacher in Thailand after taking slimming drugs the day before] (Detik.com, 2019)

The next word *genetik* ‘genetic’ occurred 160 times in 95 articles, but only 38 articles associated obesity with genetics or acknowledged that genetics was one of the causes of obesity. These articles generally reported that genetics could influence the body’s metabolic rate which affects an individual’s eating habits. However, it was frequently constructed as not the main factor and the solutions to obesity were still a change in dietary, not mentioning drugs or surgery. Obesity therefore seemed to be portrayed in somewhat contradictory terms as, on the one hand, it was a medical or genetic problem but, on the other hand, its remedy was individual willpower to diet or exercise.

4.3 People with Obesity

Keywords related to people with obesity such as *orang* ‘person/people’ and *anak* ‘child/children’ were also crucial in the current study. Unlike English which has nouns for referencing obese people that can reduce people’s identity into a single trait, such as ‘the obese’, ‘the overweight’, ‘fatties’, and ‘lardies’, the Indonesian language does not have such nouns. It requires words like *orang* to refer to persons with obesity, which may explain why *orang* became a keyword. The most frequent phrase used to refer to people with obesity was *orang dengan obesitas* ‘person/people with obesity’ which occurred 66 times. It is the preferred term suggested by professional, scientific, and medical groups (Wittert et al., 2015), compared to *orang obesitas* ‘obese person/people’ (occurring 53 times) and *orang yang obesitas* ‘person/people who are/are obese’ (40 times). Concordance analysis of these phrases suggested that the Indonesian news media recurrently represented them negatively. The most frequent pattern found was the representation of obese people as having higher risks of suffering from other health problems, especially diabetes (32% of concordances), and being more likely to receive advanced levels of treatment or die from COVID-19 (16%), which corroborates Brookes’ (2021) research. Several instances showed that they were passivated, depicted as ‘recipients’ of a healthy diet and exercise, and as ‘receivers’ of suggestions about what to do to decrease their weight. However, in terms of doing exercise and losing weight, few concordances indicated that people with disabilities were presented as lazy and ashamed to start exercise and unable to maintain their weight after losing it respectively, which may perpetuate weight stigma and demotivate them to lose weight. This representation was also legitimised through ‘expert authority’ (van Leeuwen, 2007).

In regard to the keyword *anak* ‘child’, unlike *orang* ‘people’, the most common phrase employed was *anak obesitas* ‘obese child/children’ which occurred 59 times, compared with *anak yang obesitas* ‘child/children who is/are obese’ (9 times) and *anak dengan obesitas* ‘child/children with obesity’ (7 times). Their concordances generally

demonstrated similar portrayals of people with obesity. The difference was that children with obesity were represented as facing increased risks of being obese in their adolescence. Also, of 44 articles that mentioned those phrases, 23 (52%) constructed *orangtua* 'parents' as responsible for managing the health and risk of obesity of their children, which is congruent with Bastian's (2011) and Brookes et al.'s (2016) research. Collocation analysis of 'parents' also showed that it frequently collocated with the word *harus* 'must', referring to the parent's obligation to manage their children's health and parents were represented as 'bad' when they failed to control their child's risk of obesity.

- (5) "*Kelas 2 SD aja dia udah nggak sekolah karena udah 90 kilo dan udah malu ke sekolah. Dan menurut ibunya itu nggak papa. Padahal kalau memang orang tua yang bener justru bisa mengontrol anaknya*". ... kata dr Diana. ["When he was in the second grade of elementary school, he already did not go to school as his weight was 90 kg and ashamed to go to school. And according to his mother, it is okay. In fact, if parents were good, they could actually control their children". ... said dr. Diana] (Detik.com, 2019)

Additionally, two news reports that mentioned children with obesity acknowledged the societal responsibilities of obesity such as the lack of education about healthy nutrition at home and school, and the dearth of areas with space for exercise, which was absent in the discourse of people with obesity. This, therefore, may indicate the scarcity of the societal responsibility frame in Indonesian news articles. Indeed, the keyword lists did not contain any word that refers to societal aspects of 'obesity'. To investigate it further, the analysis of several words that may reveal societal representations, as identified by Brookes and Baker (2021), was carried out. The words included *pemerintah* 'government' which occurred 78 times, *industri* 'industries' (45 times), *ekonomi* 'economic' (43 times), and *kebijakan* 'policy' (28 times). The words *pemerintah* 'government' and *kebijakan* 'policy' mostly occurred in news reporting government initiatives, programs, and policies to prevent obesity including the proposal by the Indonesian Ministry of Finance to impose a tax on sugary drinks or soft drinks. They were generally evaluated positively, but two articles, one of each news media institution, featured a view that the proposed tax imposition would increase the burden and potentially reduce the company's sales.

This was similar to the analysis of the word *industri* 'industry'. Eight of eleven articles that contained 'industry' in relation to 'obesity' foregrounded the contribution of food and drink industries towards 'obesity', while three articles represented soft drink industries as victims of a number of negative accusations about soda and sweetened drinks, which caused the decrease of their sales. These contrastive stories may reflect the debates in society that may affect the policymakers. To date, at the time of writing this article in 2022, the regulation of tax on sugary soft drinks has not been enacted.

In the case of the word *ekonomi* 'economic', 33% of articles that mentioned it recognised that the socio-economic status of a person was one of the risk factors of obesity, in that, people who lived in a low-income family were more likely to undergo obesity. What should be noted from the investigation of these words, nevertheless, was that the majority of the articles did not take a critical stance on the role of the policymakers or government in addressing the societal factors of obesity, such as the lack of policies on food and drink industries and advertising, and on urban planning that allows more physical activities including exercise, walking, or cycling.

5. DISCUSSION

The findings of the study showed the dominance of the personal responsibility discourse of ‘obesity’ in Indonesian news articles, whereby individuals were constructed as fully responsible for reducing risks of obesity and other health problems connected with it by losing or controlling their weight. Such discourse is associated with the neoliberal approach to obesity and health in general (Baker et al., 2020). This may suggest that the pronounced emphasis on personal responsibility discourse of ‘obesity’ is not necessarily confined to Western societies, but is also prevalent in a developing country governed by neoliberalism such as Indonesia. The Indonesian government has been considered as supporting and preferring neoliberalism (Al-Fadhat, 2022), which can be seen in a variety of indicators, such as deregulation, privatisation, eradication of the notion of public goods, the enactment of omnibus law on job creation, decreased public spending (Saputra & Emovwodo, 2022) as well as recent policies on COVID-19 pandemic (Mietzner, 2021). The ubiquity of personal responsibility in the Indonesian news, thus, may reflect the present prevailing neoliberal ideology in Indonesian society, in which people are accounted responsible for ensuring that they are healthy and economically productive so as not to impose a financial burden on the state. Also, this construction was recurrently legitimised through ‘expert authority’ (van Leeuwen, 2007) by referring to experts’ interviews and impersonal authority by reference to scientific research, which is congruent with Sun et al.’s (2021) findings that medical professionals’ quotes and statistics were the most cited types of evidence in obesity news.

Keywords denoting medical concepts were also identified and these serve to depict obesity as a threat to human health by equating it to other health issues or by increasing the risk of other diseases, instead of constructing it as a disease beyond an individual’s control. Within this frame, we also found several cases where one article contains different constructions, which corroborates Boero’s (2007) and Baker et al.’s (2020) findings. Obesity is presented as a medical or genetic problem, but its solution still relies on changes in an individual’s lifestyle, while taking medical remedies, such as drugs and surgery, are discouraged.

Unlike Brookes and Baker’s (2021) study which revealed several societal responsibility frames in the British press, the findings of the current study reveal that Indonesian news articles hardly represent ‘obesity’ as a societal responsibility. Articles that do acknowledge the societal determinants tend to take an uncritical stance on the role of government, food manufacturers, and advertising in contributing to obesity. These articles generally give a cursory amount of attention to socioeconomic variables when discussing obesity solutions. For example, while some articles report that the economic status of people can be a risk factor for extreme obesity, no article is critical about the role of government in reducing socioeconomic disadvantage. There is also no discussion about the effectiveness of Indonesia’s obesity-related policy which puts emphasis on individual responsibility, although it has been considered ineffective in reducing obesity rates in Indonesia (Dewi et al., 2020).

The prevalence of personal responsibility discourse and the less engagement with societal responsibility may also be influenced by newsworthiness. News informing food or eating practices and physical activity including diet that can raise or decrease levels or risks of obesity may be more newsworthy. The online news media, thus, tend to publish it to increase visits, earning more advertising revenue. However,

they should be aware of the implications of such a predominantly individualised portrayal of 'obesity'. Research on people with obesity's perceptions of and responses to personal responsibility framing points out that such representation contributes to a culture of weight bias and stigma (Couch et al., 2015). In addition, the success of public health policies emphasising individual behaviour and responsibility is typically limited because of their disregard for the societal causes of individual's health (Atanasova & Koteyko, 2017), which is also evident in Indonesian contexts (Dewi et al., 2020). Given this, news media must strive for greater balance in its coverage of the possible determinants of and solutions to obesity, incorporating both individual and societal responsibility discourses more equally. This in turn will help improve public awareness and understanding of obesity and encourage more discussions of societal responsibility-related policy, mirroring more clearly the complexity of obesity.

6. CONCLUSION

This study examined how Indonesian online news media represent 'obesity' in a 5-year period, from 2017 to 2021. The findings reveal that the personal responsibility discourse of 'obesity' is predominant in Indonesian news articles, while the societal responsibility discourse is the least frequent, which may reflect the prevalence of neoliberal ideology in Indonesian society. More balanced reporting, therefore, is suggested to alleviate the stigmatisation of people with obesity and to recognise the variety of conceptualisations and approaches to obesity, reflecting its complexity more accurately.

The limitation of this current research is that it only utilised news texts from the two most frequently accessed news sites and focused on the textual aspect of news articles only. Hence, future studies may consider widening the scope of the data by including different online news websites and employing multimodal analysis. A diachronic analysis that tracks changes in obesity representations in the Indonesian press, and a comparative analysis on the construction of obesity and other contested health problems are also possible areas of research that can contribute significantly to the discourse of 'obesity' in Indonesia.

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