

Newsprint representation of the alcohol sales bans during the Covid-19 pandemic in South Africa: A mixed methods analysis

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Abstract

Aims: Content analysis of newspapers covering the alcohol sales bans during Covid-19 in South Africa.

Methods: Mixed method content analysis of the highest circulated, paid for, English language newspapers published by four newspaper outlets in South Africa, between 26 February to 26 September 2020 (seven months).

Setting: South African Bibliographic Information Network (Sabinet) and Arena Holdings Media databases were used.

Participants: 317 newspaper articles were identified for analysis from four newspapers: *Sunday Times* (Arena Holdings), *Daily Sun* (Naspers), *The Star* (Independent Media) and the *Mail and Guardian* (Media Development Investment Fund).

Measures: Qualitative data: a structured coding frame was used to identify themes. Quantitative data: date, agency, placement/page number in the newspaper, number of graphics, words in heading and in article and whether the article was based on opinion or fact. The media vectors: framing, responsibility and newspaper media exposure were calculated.

Findings: Articles were predominantly unfavourable toward the alcohol sales bans, indicated that government should take responsibility for prevention of harmful alcohol use, and focused mainly on the negative economic impact of the alcohol sales bans.

Conclusions: News agencies should make a concerted effort to ensure balanced reporting on matters of health and put measures in place to prevent undue influence on journalists by large corporations, such as the alcohol industry.

Introduction

Harmful alcohol use contributes to 3 million deaths every year and is the causal factor for over 200 diseases and injuries (World Health Organisation [WHO], 2022). People between 20–39 years of age, with the lowest income, are particularly negatively affected by alcohol attributed harms (Probst et al., 2018). In low-to-middle-income-countries (LMICs) like South Africa (SA), harmful alcohol consumption attributes a higher burden of disease and cost to the economy (Morojele et al., 2021).

During the Covid-19 pandemic the magnitude of the alcohol problem in SA was revealed when the President banned all alcohol sales to ensure hospitals were not overrun by alcohol-related emergencies (Chu et al., 2022; Harker et al.,

2022). The alcohol sales bans occurred on-and-off for a total of 98 days between February and September of 2020 (Zuma, 2020a, 2020b).

Research has shown that the coverage of the harmful effects of alcohol in the news has the potential to influence politicians' and the general public's perceptions of the need for stricter laws and regulations regarding alcohol (Hilton et al., 2014; Slater et al., 2012). On the other hand, the absence of reporting the harmful effects linked to alcohol, and placing the blame of all alcohol harms on individuals only, decreases the probability of proven alcohol regulations, such as pricing and marketing, being implemented (Hawkins et al., 2021; WHO, 2019b).

South Africa boasts one of the highest 'Freedom Index' scores, a measure of freedom of speech and media, in Africa – on par with Ghana (Freedom House, 2023). However,

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these freedoms have recently come under strain, with intimidation of journalists through court action (Singh, 2023). Additionally, growing corruption necessitates stronger checks and balances, to expose the undue influence that those with financial means may have on what is communicated, and the frequency thereof in the press (Hadland, 2012).

According to researchers in mass media and journalism, there are five canine analogies to the role that media may have, namely: (a) the *guide dog* where media guides and leads their readers; (b) the *rabid dog* that is only interested in a profit; (c) the *lap dog* is easily manipulated by the government or the dominant social class; (d) the *guard dog* that supports the capitalist system; and lastly, (e) the *watch dog* that provides surveillance and checks the government and is independent from powerful institutions (Donohue et al., 1995; McLeod, 1989).

Large corporations such as the alcohol industry, protect their sales through ‘sophisticated campaigns to undermine public health interventions’ (Moodie et al., 2013, p. 2), which ensure that stricter policies are not put in place. These campaigns may take the form of hidden, visible or invisible methods of power that influence the narrative (explained below), and are known as commercial determinants of health (CDoH; Gaventa, 2006; Mialon et al., 2020). CDoH is defined as ‘strategies and approaches used by the private sector to promote products and choices that are detrimental to health’ (Kickbusch et al., 2016, p. e895).

Some examples of **hidden power** of corporations are lobbying politicians to protect their product sales, donating or removing funds, framing the narrative in the news coverage, and using litigation to protect product sales (Wood et al., 2021). **Invisible power** is when corporations infiltrate health or non-profit organisations, with the intention to send out misinformation, which undermines scientific facts by manipulating evidence (Bryden et al., 2012; Petticrew et al., 2020). **Visible power** of corporations manifests when industry or corporation-friendly modes of governance are allowed by regulations, like self-regulation or public-private partnerships (Carriedo et al., 2020; Wood et al., 2021).

In this content analysis of newspaper articles, we search for evidence of hidden, visible and invisible forms of power. However, we can only analyse what is reported on by the journalists, and thus we refer to these instances as *indirect* evidence of CDoH.

Methods

A mixed method (quantitative-qualitative) newspaper content analysis was done using the highest circulated newspaper of four newspaper outlets in SA (Pollock, 2014). To prevent duplication of articles only the highest circulation title from each outlet was chosen. According to the Audit Bureau of Circulations of SA, Quarter One Report of 2020, the highest circulation for English language newspapers with a cover price, were the *Sunday Times* (Arena Holdings; broadsheet, weekly, 150 972 sold), *Daily Sun* (Naspers; tabloid, daily, 94 506 sold), *The Star* (Independent Media, broadsheet, daily, 33 128 sold) and the *Mail and Guardian* (Media Development Investment Fund [MDIF], broadsheet,

weekly, 13 830 sold) in the first quarter of 2020 (Africa, 2020; Manson, 2020). Broadsheets are newspapers with longer, more in-depth articles on topics of a serious nature. Tabloid newspapers have a lower word count and typically cover celebrity stories or scandalous crimes (Carvalho & Burgess, 2005).

Qualitative Analysis

Search Terms

A pilot search was done on a sub-sample of 20 newspaper articles in 12 newspapers, covering the alcohol sales bans between 26 February to 26 September 2020 in SA, using the terms *alcohol, liquor, drinking, sale, ban, Covid, corona and virus*. Subsequent to the pilot search additional search terms were added to avoid irrelevant articles: ‘*NOT sanitizer*’ and ‘*NOT sewage*’, additionally only the highest circulated newspapers from four newspaper agencies were included in the final search to avoid duplicates.

The Sabinet media database (Sabinet, 2020) was used to search for all articles relevant to the search terms, resulting in 2738 articles over a seven-month period from 26 February to 26 September. When including only the target newspaper titles, namely, the *Daily Sun, The Star, Mail and Guardian (M&G; Sabinet, 2020)*, and the *Sunday Times* from the Arena Holdings Database (Arena Holdings, 2022), 317 articles were identified for analysis.

Identification of Themes

Overarching and main themes were identified iteratively and agreed upon by two researchers after reading a sub-sample of 20 articles and creating a word map in Atlas Ti 8 (Atlas Ti, 2020; [Supplementary Material Figure 1](#) and [Supplementary Material Table 1](#)).

Thematic Analysis of Articles

A theme was considered to be the main theme if it was mentioned in the heading of the article or if it was mentioned most frequently throughout the article (Dalglish et al., 2020). Themes were coded in Atlas Ti (Atlas Ti, 2020) to perform the thematic analysis on all newspaper articles, and imported into an Excel spreadsheet for final analysis in the Statistical Package for the Social Sciences (SPSS; IBM Corporation, 2020).

Quantitative analysis

A quantitative media content analysis was conducted by extracting relevant data from the articles, namely: date, outlet, placement/page number in the newspaper, number of graphics present, number of words per article and number of words in heading. Four variables were used to calculate a prominence score for each article (Kiernicki et al., 2013), which was used to calculate two *Media Vectors* described below, namely: framing and responsibility and a new formula developed by the authors for *Newspaper Media Exposure* (Bronfenbrenner & Evans, 2000; Pollock, 2014).

Articles were categorised as either ‘opinion piece or specific event/statistic’, the overall framing of the article was categorised as ‘positive, negative or neutral toward the

alcohol sales bans’, and whom the article reported as being ‘responsible for preventing alcohol misuse’, either government, society/individuals or neutral (Abdelmutti & Hoffman-Goetz, 2009; Dalglis et al., 2020; Elliott-Green et al., 2016). Additionally the researchers coded each article for indirect evidence of three types of CDoH namely: (a) alcohol industry infiltrating media- or health-industry and information management by alcohol industry (**invisible power**); (b) litigation or threat of legal action by alcohol industry, lobbying, funding and framing the narrative (**hidden power**); and (c) industry-friendly modes of governance, self-regulation or public-private partnerships (**visible power**); see [Supplementary Material Table 2](#) for examples (Mialon et al., 2020).

Table 1

Calculating the Prominence Score¹

Dimension	Score 4	Score 3	Score 2	Score 1
Placement/page number	Page one	Page 2–4	Page 5–7	≥ Page 8
Headline number of words	≥ 10 words	8–9 words	6–7 words	≤ 5 words
Article number of words	≥ 1000	750–999	500–749	≤ 499
Photos/graphics	≥ Two graphics	One graphic or picture present	None	None

¹ using the Pollock method (Kiernicki et al., 2013)

Newspaper Direction

Newspaper direction includes media vectors for framing (favourable/unfavourable/neutral) and responsibility (government/society/neutral). The media vector for framing per newspaper was either favourable or unfavourable toward the alcohol sales bans being implemented and is calculated using a formula ([Supplementary Material Figure 3](#)). A separate media vector indicating who the newspaper suggested should take responsibility for preventing alcohol misuse, was identified; namely government or society/individuals by using a formula ([Supplementary Material Figure 4](#)).

Newspaper Media Exposure

The *newspaper media exposure* was developed by the ecological theory of human development, as well as the prominence score developed by Pollock (2014) to determine a score for the exposure to the environment (newspaper articles), which influences what people think and do over time. The researchers measured exposure of each newspaper per month for seven months by calculating the *frequency* (number of articles from a newspaper per month), *timing* (number of editions from a newspaper per month) and *intensity* (average of the prominence score from a newspaper per month). The formula below demonstrates the exposure calculation developed by the researchers (Formula A).

Article Prominence or Attention Score

When analysing newspaper articles the Pollock (2014) method of classifying the articles by prominence score, from 3 to 16 was implemented (Table 1; [Supplementary Material Figure 2](#)). The Pollock method is based on a distinguished and empirical base of scholarship over many years (Demers, 2009). Articles with a higher prominence score are those that receive more attention due to the placement in the newspaper, number of words in article and words in heading. The prominence score was used within formulas, to calculate media vectors for newspaper direction and exposure.

Monthly Newspaper

$$\text{Media Exposure} = \frac{\text{Frequency}}{\text{Timing}} \times \text{Intensity}$$

Frequency= Number of articles from a newspaper per month

Timing= Number of editions from a newspaper per month

Intensity= Average of the Prominence score from a newspaper per month

Interrater Agreement

A second reviewer coded a SPSS randomly selected sub-sample of 55 newspaper articles (IBM Corporation, 2020). The following variables were coded and tested for interrater agreement using Cohen’s *kappa*: main theme, event/opinion, framing, responsibility and indirect evidence of CDoH.

According to Gisev et al. (2013), the appropriate interrater agreement index to use is the Cohen’s *kappa* where <0.41 indicates fair agreement, 0.41–0.6 moderate agreement, 0.61–0.80 substantial agreement and 0.81–1 almost perfect agreement (Landis & Koch, 1977).

Results

Based on the search strategy and search terms a total of 317 newspaper articles were identified. After removing 56 newspaper articles which were not relevant, the working sample came to a total of 261 newspaper articles (Table 2).

Table 2

<i>Descriptive Comparison between Newspapers</i>				
Descriptors of Newspapers	Star	Mail & Guardian	Daily Sun	Sunday Times
Total number of articles extracted <i>n</i> (%)	179 (56.5)	33 (10.4)	47 (14.8)	58 (18.3)
Articles excluded as not alcohol sales bans related <i>n</i> (%)	34 (19)	8 (24.2)	6 (12.8)	8 (13.8)
Daily or weekly publication	Daily	Weekly	Daily	Weekly
Broadsheet or Tabloid	Broadsheet	Broadsheet	Tabloid	Broadsheet
Distribution within South Africa	Gauteng, Mpumalanga, Limpopo	National	Gauteng, Mpumalanga, Limpopo, North West	National
Number of graphics:				
None <i>n</i> (%)	86 (59.3)	7 (28.0)	11 (26.8)	24 (48.0)
One graphic <i>n</i> (%)	52 (35.9)	15 (60.0)	23 (56.1)	19 (38.0)
Two or more graphics <i>n</i> (%)	7 (4.8)	3 (12.0)	7 (17.1)	7 (14.0)
Reporting on:				
Specific event <i>n</i> (%)	81 (55.9)	5 (20)	20 (48.8)	24 (48.0)
Opinion <i>n</i> (%)	64 (44.1)	20 (80.0)	21 (51.2)	26 (52.0)

Descriptive Analysis of Newspaper Articles

In our sample the greater majority of papers (71.3%) were published daily. The *Daily Sun* had the lowest median word count of 51 (Table 2). The *M&G* and the *Sunday Times* newspapers were distributed nationally. In our sample, compared to the other newspapers the *M&G* had the highest use of graphics at 60%, and the greater majority of the articles published by the *M&G* (80%) were opinion pieces, $kappa = 0.88$ ($p < 0.001$), 95% *CI* (0.757, 1.011).

Thematic Analysis of Newspaper Articles

In our sample the three most prominent main themes found, when combining all the newspapers, from highest frequency to lowest were:

New alcohol laws (46.7%; Figure 1), e.g. *Daily Sun*, 27 March 2020, p.1:

When ministers responsible for state security laid out on Wednesday night how the lock down will be implemented, it sounded as if the country was at war.

Economic effects of the alcohol sales ban (27.6%), e.g. *The Star*, 27 March 2020, p. 13:

The industry yesterday held talks with various government departments to reverse the lockdown regulations that will result in the shutting down of cellars and ban on wine exports. Vinpro, which represents 500 South African wine grape producers, and

cellars, said that switching off cellars would have catastrophic economic and socio-economic implications.

Short term health impacts related to alcohol (12.6%), e.g. *Sunday Times*, 19 July 2020, p. 8:

Prior to the lockdown and alcohol ban, trauma cases were 50% higher than in the following few weeks.

The themes that were found to be least mentioned in all four newspapers, were those themes related to family dynamics, socio-economic outcomes, long term health outcomes, alcohol laws and religious influences. These themes are described in more detail in the discussion.

Comparison of Main Theme Frequency per Newspaper

Each newspaper differed greatly regarding the frequency with which main themes were reported (Figure 2). In our sample the *Sunday Times* had the highest frequency (58%) of reports about new alcohol related laws compared to the other newspapers (43.4%-46%); $kappa = 0.595$ ($p < 0.001$), 95% *CI* (0.425, 0.765). While the *M&G* had the highest frequency of reports about the negative economic effects that the new alcohol related laws were causing (36%) compared to the other newspapers (14%–32.4%), the *Sunday Times* had the highest frequency of reports on short term health benefits of the alcohol sales bans (16%), compared to other newspapers (4%–13.1%). See [Supplementary Material Table 2](#) for quotes related to the thematic analysis.

Figure 1

Frequency of 11 Main Themes that mentioned Alcohol Sales Bans in All Four Newspapers

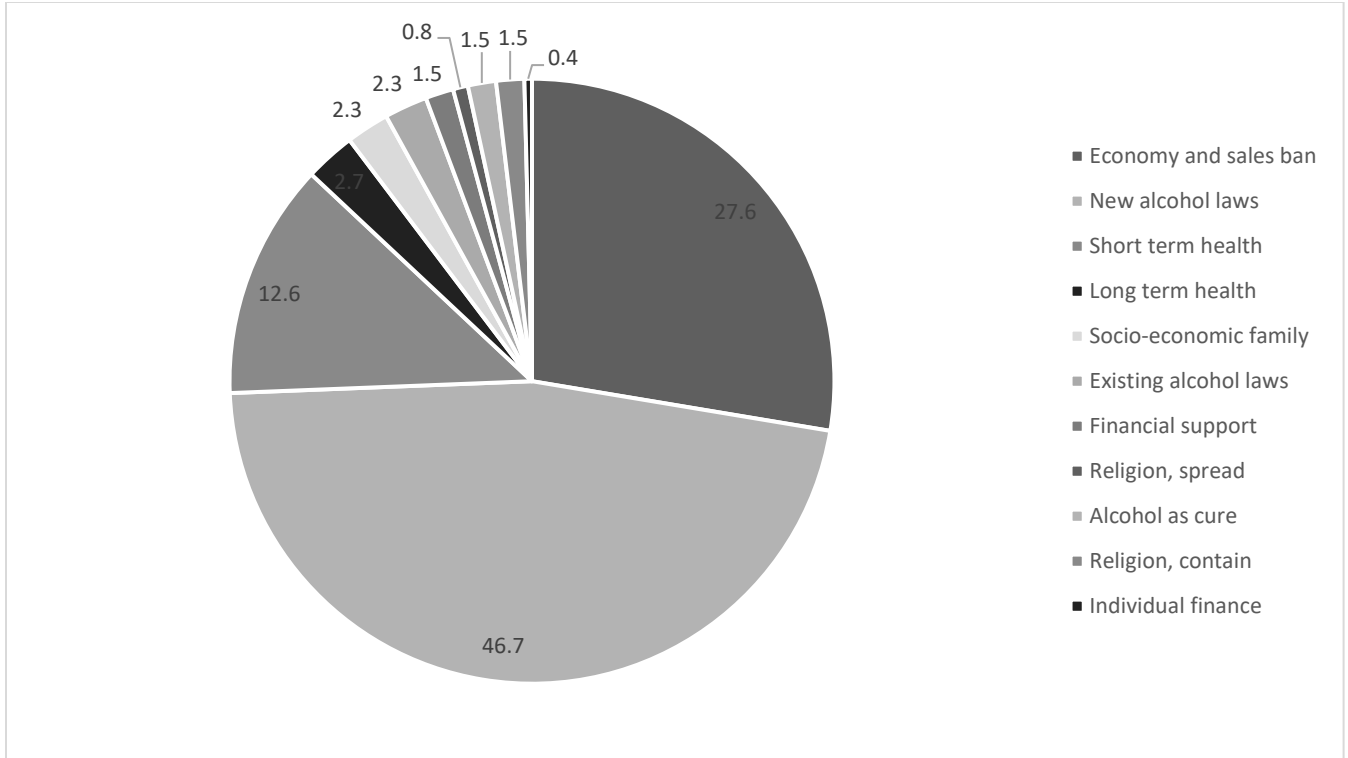
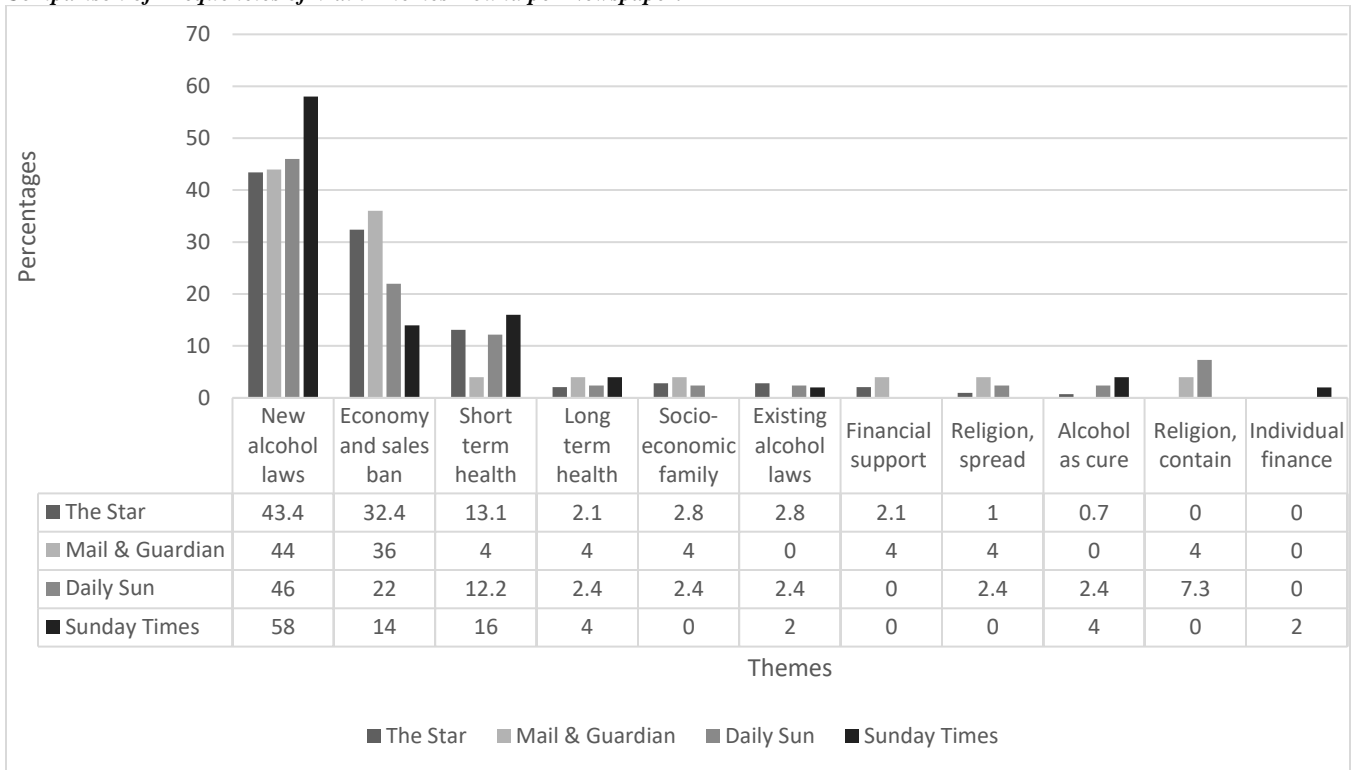


Figure 2
Comparison of Frequencies of Main Themes Found per Newspaper.



Commercial Determinants of Health, Prominence Score, Framing, Responsibility and Exposure

In our sample nearly 30% of all articles were found to have indirect evidence of CDoH (27.2%; not shown in table)

$kappa = 0.861$ ($p < 0.001$), 95% *CI* (0.671, 1.051). Litigation and lobbying (hidden power) was the highest type of CDoH reported on in newspapers (Table 3), e.g. *The Star*, 14 April 2020, p. 1: 'Parties unite against liquor forum's threat to fight ban in court', with industry-friendly modes of governance (visible power) coming second, e.g. *M&G*, 24 July 2020, p. 18:

The letter, which was also signed by the National Liquor Traders Council..., is calling for a partnership with the government to address problems linked to irresponsible alcohol consumption....

Very few articles showed evidence of industry infiltrating the media (invisible power), e.g. *The Star*, 27 July 2020: 'A million jobs at risk due to alcohol ban', written by Lucky

Ntimane, the spokesperson for the National Liquor Traders Council.

The Star, *M&G*, as well as the *Sunday Times*, had similar frequencies reporting on litigation/lobbying actions taken by the alcohol industry against the government imposed alcohol sales bans (22–24%), while the *Daily Sun* had the lowest frequency of reports on any of the CDoH. *The Star* newspaper had the highest frequency of articles that reported on industry-friendly modes of governance at nine percent.

The *Sunday Times* had the highest prominence score for articles reporting on the alcohol sales bans, indicating that a higher importance was placed on these articles, even though they were not publishing as many articles about the alcohol sales bans as *The Star*, which had a high newspaper media exposure for alcohol sales bans related articles (Table 3).

Table 3

Commercial Determinants of Health, Prominence Score, Media Vectors and Newspaper Media Exposure

	The Star	Mail & Guardian	Daily Sun	Sunday Times	Interrater agreement (Cohen's Kappa)
Indirect Commercial Determinants of Health found in articles n(%)	98 (67.6)	17 (68.0)	39 (95.1)	36 (72.0)	Substantial agreement
No evidence/reporting of CDoH	2 (1.4)	0 (0)	0 (0)	1 (2.0)	(0.612***)
Invisible CDoH: Reporting on media-or-health-industry infiltration	32 (22.1)	6 (24.0)	1 (2.4)	11(22.0)	
Hidden CDoH: Reporting on litigation/lobbying by alcohol industry	13 (9.0)	2 (8.0)	1(2.4)	2 (4.0)	
Visible CDoH: Reporting on industry friendly modes of governance					
Prominence score	Median (IQR) 7 (6-9)	Mean ± SD 7.8 ± 2.3	Median (IQR) 8 (7-9)	Mean ± SD 8.24 ± 8	N/A
Framing toward the alcohol sales ban ^a (vector total)	Unfavourable (-0,13959)	Unfavourable (-0,33368)	Balanced/ Neutral (-0,06187)	Balanced/ Neutral (0,009155)	Substantial agreement (0.602***)
Who the article states should take responsibility to prevent alcohol misuse ^b (vector total)	Government (0,43572)	Government (1.00000)	Balanced/ Neutral (0,06994)	Balanced/ Neutral (0,04602)	Almost perfect agreement (0.927***)
Newspaper Media Exposure (average over seven months)	Medium (5)	Medium (6)	Low (1)	High (14)	N/A

Commercial Determinants of Health (CDoH), Inter quartile range (IQR), Standard deviation (SD), Not applicable (NA)

^aFavourable/ unfavourable toward the alcohol sales bans

^b Government/society should be responsible for alcohol misuse and harm

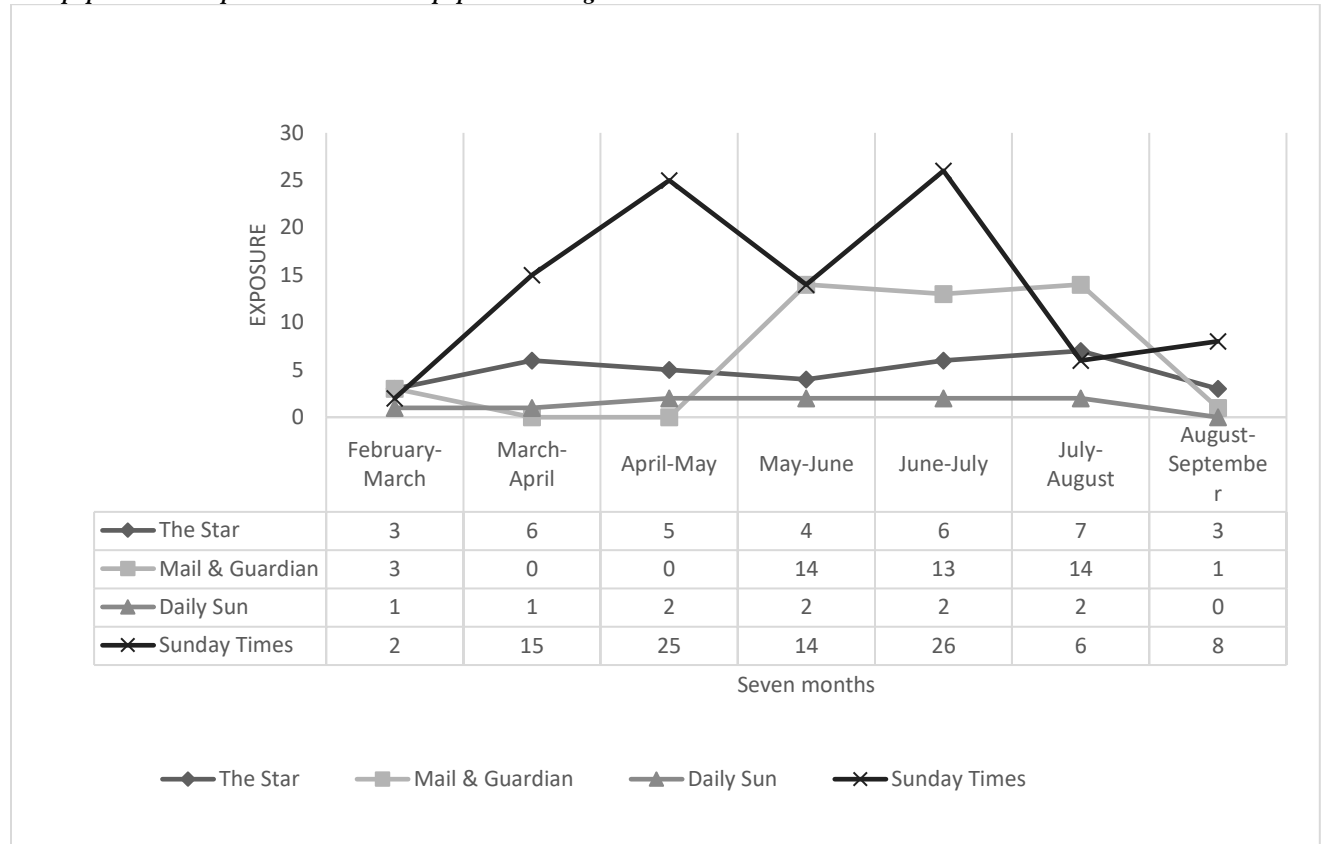
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The Star and the *M&G* had a framing/slant that was predominantly unfavourable toward the alcohol sales bans (Table 3), while the *Sunday Times* and the *Daily Sun* had an overall framing/slant that was balanced/neutral toward the alcohol sales bans; $kappa = 0.602$ ($p < 0.001$), 95% *CI* (0.42, 0.62). The *M&G* had the highest media vector score for 'who should take responsibility for preventing alcohol misuse', with *The Star* second highest, indicating that the government should take responsibility for harmful drinking by implementing alcohol-related policies and regulations to protect the public; $kappa = 0.927$ ($p < 0.001$), 95% *CI* (0.83, 1.03). The *Daily Sun* and the *Sunday Times* had a more balanced/neutral score, indicating lower support of government preventing alcohol misuse.

The first alcohol sales bans took place between 27 March 2020, until 01 June, lasting for 63 days, and the second alcohol sales bans ran from 12 July until 17 August, lasting for 35 days. When the first alcohol sales ban started, the newspaper media exposure of the *Sunday Times* jumped up to 25, while the other newspapers like the *M&G* were lagging behind (Figure 3). During the second alcohol sales ban the *M&G* suddenly improved their newspaper media exposure to 14, while the *Sunday Times* showed an even higher newspaper media exposure during the second alcohol sales ban than the first. Both the *Daily Sun* and *The Star* showed consistent newspaper media exposures throughout the seven months of alcohol sales bans.

Figure 3

Newspaper Media Exposure between Newspapers Covering Alcohol Sales Bans



Discussion

The aim of this research was to explore and compare how newspapers in this sample portrayed the alcohol sales bans during the 2020 Covid-19 pandemic in South Africa. Four newspapers were analysed, each published by a different news agency. The content analysis of these newspapers found indirect evidence of CDoH benefitting the alcohol industry by using litigation, lobbying or funding to frame the narrative in the news, which is referred to as a hidden form of power (Gaventa, 2006).

Researchers have shown that peoples’ perceptions regarding stricter alcohol regulations and policies may be influenced by what is reported upon, and how often these articles appear in the news (Slater et al., 2012). The fact that journalists reported on legal actions taken by the alcohol industry can be a double-edged sword in the fight against the alcohol industry’s influence on public perception. On the one hand, journalists have the mandate to point out that the industry is trying to influence the government, by using legal tactics or lobbying for their own cause acting as a watch dog (McLeod, 1989). On the other hand, by over-reporting on these legal tactics by the alcohol industry the narrative is guided by the alcohol industry, leading the journalists to becoming a guard dog (Donohue et al., 1995). An interesting finding in our research was that the tabloid newspaper, namely the *Daily Sun*, had barely any (5%) indirect evidence of CDoH,

indicating that journalists from this newspaper were not reporting on the lobbying, legal intimidation or other forms of power that the alcohol industry were using to influence the reporting about the alcohol sales bans.

Thematic analysis of these newspapers showed that there were three themes that were reported on the most, from highest to lowest frequency, (a) the new alcohol laws, (b) the negative effect that these laws had on the economy and (c) how the alcohol sales bans could improve the short-term health of the population (terms included per theme can be seen in [Supplementary Material Table 1](#)). However, the themes that were reported on the least were those themes that were important for addressing public health, such as the far-reaching negative health and fiscal effects of harmful alcohol use.

The themes that were barely reported on, with between zero and four articles per newspaper, were, (a) long term alcohol related health issues, such as non-communicable diseases (NCDs) like cancer, diabetes, cardiovascular disease and hypertension, as well as communicable diseases like HIV and TB, and other illnesses like mental health, foetal alcohol spectrum disorders and addiction; (b) individual socio-economic abilities related to alcohol misuse, such as dropping out of school, being unemployed and lower socio-economic status due to alcohol misuse; (c) family socio-economic outcomes related to alcohol misuse, such as

emotional and psychological impact on the family due to alcohol misuse, financial burden on the family, being ostracised from family and socio-economic issues like overcrowding due to alcohol abuse; and lastly, (d) existing alcohol related laws and regulations, such as legal blood alcohol concentration when driving, legal alcohol consumption age limit, marketing of alcohol, labelling of alcohol, illegal alcohol sales, shebeens and the liquor amendment bill (Degenhardt et al., 2018; Ferreira-Borges et al., 2017; Shield et al., 2014; WHO, 2022).

When negative health outcomes of alcohol misuse are not thoroughly reported upon, the public is left with a skewed perception and not given the opportunity to interrogate the whole truth of the matter. This research found that the majority of journalists wrote articles magnifying the theme of how the alcohol sales bans would negatively influence the economy and therefore the likelihood of job losses. While *The Star* and the *M&G* had an unfavourable/negative framing media vector toward the alcohol sales ban, the *Daily Sun* and the *Sunday Times* were found to have a balanced or neutral framing toward this Covid-19 law. This finding indicated a higher acceptance of temporary laws than was found in the United States of America, where federal policies that were implemented during Covid-19 were found to have an unfavourable framing in 83% of the newspapers analysed (Pollock et al., 2020).

This research found that the *M&G* and *The Star* indicated strong support for the government to take responsibility for preventing harmful alcohol use, by implementing stricter alcohol regulations and stronger enforcement thereof e.g., *The Star*, 22 April 2020, p. 1, 'The government has rehashed a bill intended to set to 0% the level of alcohol that motorists should have in their blood when behind the wheel'. Minister of Transport, Fikile Mbalula.

Research has shown that stricter alcohol regulations significantly reduce alcohol related harm, whereas education on an individual basis does not (WHO, 2019a). The *Daily Sun* and the *Sunday Times* had a more balanced/neutral view of who should take responsibility to prevent alcohol misuse, and one could interpret that these newspapers may have a readership that leans toward both individuals and government taking responsibility for preventing alcohol misuse.

The *Sunday Times*, with the highest readership of 150 972 papers sold quarterly at the time (Audit Bureau of Circulations of South Africa, 2020, May 26; Manson, 2020), boasted the highest frequency of articles reporting on the positive short-term health aspects related to the alcohol sales bans (16%) and the lowest frequency of reporting on the negative economic effects of the alcohol sales bans (14%). The research also found that the *Sunday Times* and the *Daily Sun* had a balanced/neutral framing media vector regarding the alcohol sales bans, indicating that they were neither for nor against the alcohol sales bans. Interestingly, the *Daily Sun* reflected the least influence for CDoH with the *Sunday Times* second least, indicating a possible association between framing and CDoH.

The *Sunday Times* had the highest frequency of articles reporting on short term health, and the lowest reporting on

the economic effects of the alcohol sales bans, which may point to the fact that the editors may be targeting the readership of this broadsheet, who are typically well educated, higher income earning members of society, who would expect news with hard scientific facts and possibly lean toward higher individual freedoms.

The newspaper media exposure of alcohol sales bans related articles, were found to be the highest in the *Sunday Times*, and the lowest in the *Daily Sun*, with *The Star* and *M&G* falling in the middle. This novel newspaper media exposure formula can be used to postulate that the *Sunday Times* has a higher likelihood of leading their readers towards interpreting the alcohol sales bans as the *Sunday Times* has portrayed them.

In summary, the media can be a place for public health officials, civil society and NGOs to voice the negative consequences of harmful alcohol use, however this analysis found that the alcohol industry's interests took the limelight when taking into consideration that the economic impact of the alcohol sales bans was the second most reported theme in all the newspapers except for the *Sunday Times*. This finding reflects a guard dog role being played by the majority of the newspapers, guarding the alcohol industries' interests. Research in community structure and media studies have found that it is possible for newspapers to mirror the interests of the public and vulnerable people, and in effect play the watch dog role (McLeod, 1989; Pollock, 2014). However, they have also found that newspapers can be biased by only reporting on the interests of political and economic elites with privileged interests, such as the alcohol industry, which is seen as the guard dog role (Donohue et al., 1995; Mercille, 2017; Pollock, 2014). Research such as ours is one way of highlighting the biases found in the reporting of news, and assist in the fight to invest in the health of South Africans above the alcohol industry's profits (Milsom et al., 2022).

Strengths and Limitations

This research included a variety of newspapers from four different agencies, including both tabloid and broadsheet type newspapers. The research did not include other forms of media such as television, radio or social media. Additionally, one must always keep in mind that qualitative data analysis involves subjective decision making. However, the researchers tried to mitigate this by using two additional reviewers to rate subjective variables of a subsample of newspaper articles. This iterative process involved conceptual alignment and annotation guidelines to guide reviewer decisions.

Conclusion

Our research suggests the need for policies or guidelines to assist news agencies when reporting on issues that are important for public health, such as the harmful effects of alcohol. News agencies should make a concerted effort to ensure balanced reporting on matters of health, and put measures in place to prevent undue influence by large corporations, especially taking into consideration the hidden forms of power used by the alcohol industry that influence the framing of health policies. Newspapers have the potential to influence opinions, not only during emergency

situations such as Covid-19, but also on an ongoing basis in all health related matters, and should in effect act as the watch dog.

Ethics Approval for the Study

This research was approved as part of a PhD public health thesis by the Biomedical Science Research Ethics Committee of the University of the Western Cape reference number BM21/5/11.

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