

Beyond laughter and smiles: analytical paradigms in social media COVID-19 humour studies

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Abstract

Amid the deluge of serious social media posts regarding the COVID-19 pandemic, humorous posts brought users much-needed respite. This article reviews studies on social media-based COVID-19 humour in 42 research articles that were selected from four databases, viz. Science Direct, Scopus, Taylor & Francis, and Web of Science. After the classification and analysis of the articles on the basis of some key features, a detailed description and discussion of the findings have been carried out. The results concerning the characteristics and functions of COVID-19 humour reveal that most studies investigated image-text memes; the most important feature found was 'humour', in addition to others like sarcasm, irony, satire, criticism, juxtaposition, and locality. Intertextuality played a significant role in the structure of humorous posts, especially those related to specific countries. Additionally, it shows that although research on COVID-19 humour on social media is still in an early phase, several findings appear stable across various studies included in this review. Moreover, most humour studied is not only about the virus or the disease itself, but also focuses on absurd situations individuals found themselves in due to the pandemic and the lockdown that followed.

Keywords: COVID-19, humour, memes, social media.

1. Introduction

Social media facilitates individual and group interactions, content generation and sharing, as well as alteration and recombination of digital material in real-time. This provides data on the social impact of an event, citizen interaction, and areas of major societal interest (Martínez-Cardama & García-López 2021). Popular social media platforms like Facebook, Twitter, Instagram, and WhatsApp create a range of content for instant consumption. One of the central characteristics of these platforms is the practice of sharing humour (Laineste & Voolaid 2017). Most such humorous social media posts are in the forms of memes (captioned images/videos)

(Taecharungroj & Nueangjamnong 2015), which are structurally infinite, and can accommodate new layers with different meanings (Nichols 2017, as cited in Martínez-Cardama & García-López 2021). Moreover, various social media means can retransmit these humorous utterances, which may travel across language and cultural borders (Weitz 2017).

Humour is a human characteristic manifesting itself continually in everyday life. It is a “ubiquitous” human activity (Martin 2007), as well as a complex and multifaceted phenomenon that has been assigned different meanings within the literature with varying cognitions and behaviours (Martin 2019). According to Hussein & Aljamili (2020), humour emerges in response to psychological stress caused by life’s upheavals in an effort to maintain mental and emotional well-being. From a physiological perspective, humour elicits laughter, releasing endorphins and relieving stress (Sliter et al. 2014). From a communication perspective, humour is considered a pleasant mode of communication that elicits humorous reactions and expressions such as laughter (León-Pérez et al. 2021). Laughter and humour often go together, although humour does not necessarily entail laughter (Charaudeau 2006: 20, as cited in Vincent-Durroux 2020). Abel (2002) identifies humour and laughter as reflections of human values, which can function as coping mechanisms. Overall, humour is considered to be an amusing and positive experience.

A variety of theories exist that explain the creation, mechanism, and functioning of humour. In Western thought, Plato’s writings from the fourth century BCE are the earliest descriptions of humour, and they depict laughter and comedy in a principally negative light as based on scorn for the people being laughed at, whereas Aristotle saw some value to wittiness in conversation (Morreall 2009). These theories are considered versions of what has come to be known as Superiority Theory, which involves a sense of victory or triumph (Feinberg 1978; Gruner 1997; Morreall 1983, as cited in Meyer 2015). In the 18th century, two new accounts of humour began competing with the Superiority Theory, known as the Relief Theory and the Incongruity Theory (Morreall 2009). The Relief Theory focuses on physiological release or relief generated by laughter (Bain 1865; Spencer 1864, as cited in Lockyer & Weaver 2021), and the Incongruity Theory concentrates on the violation of an accepted norm or pattern (Morreall 1983; Meyer 2015). These three theories of humour revolve around a “pleasant psychological shift” (Morreall 1983), and according to Tsakona (2020), take context into account to a certain extent when defining humour. However, she identifies that the two most influential linguistic theories of humour, namely the Semantic Script Theory of Humour (SSTH; Raskin 1985) and the General Theory of Verbal Humour (GTVH; Attardo and Raskin 1991; Attardo 1994, 2001) are deficient in the explanation of context-related factors that are essential in discourse analytic or sociolinguistic approaches to humour. To encompass most aspects of context significant for the production, interpretation, and analysis of humour, Tsakona (2020) proposes the Discourse Theory of Humour (DTH). She proposes three main Analytical Foci: Sociocultural assumptions, Genre, and Text, in order to bring forward a model for the analysis of humorous discourse in context.

Since the emergence of social media, researchers have been interested in studying humour on these platforms from different perspectives. Shifman et al. (2007) assessed online humour in the context of the 2005 UK election, exploring the motivations of different actors who distributed web-based political humour and the nature of the texts. Shifman & Lemish (2010) presented the first analysis of popular internet humour about gender. Taecharungroj & Nueangjamnong (2015) tested the effect of various types and styles of humour on the virality of memes on Facebook through quantitative and qualitative content analysis of 1,000 memes. Mourão et al. (2016) examined how political journalists used humour on Twitter during the first 2012 presidential election debate in the USA by content analysis of tweets posted by 430 political journalists during the debate. In the context of Brazil, Trindade (2018) studied the disparagement humour and gendered racism on Facebook by developing a critical discourse

analysis of selected posts. Joshua (2020) examined how memes peculiar to Nigerians on Facebook, Twitter, and Instagram employ language to convey humour and irony. Chatterjee (2020) analysed memes of Indian Prime Minister Narendra Modi based on themes like Modi's foreign trips for official purposes, his yoga postures, his meeting with foreign delegates, and the demonetisation that took place during his tenure. Employing advertising humour typologies, Manor (2021) analysed humorous tweets published by the Russian Embassy to the United Kingdom to understand why diplomats use humour on Twitter and investigate whether humour can serve as a public diplomacy resource. Cottingham & Rose (2022) examined humour practices on Twitter during the Ebola outbreak and concluded that humour may seem frivolous or irreverent but can constitute a powerful practice for managing anxiety and fear during an outbreak. Thus, humour on social media has been studied by researchers in various academic disciplines like politics, journalism, race studies, and disaster studies.

Over the years, humans have found a way of making sense of their predicaments through humour (Chukwumah 2021). In one of the most prominent frameworks involving the connections between humour and well-being - Humor Styles Model, Martin et al. (2003) posit four dimensions relating to individual differences in the uses of humour. These are uses of humour to enhance the self (*self-enhancing*), to enhance one's relationships with others (*affiliative*), to enhance the self at the expense of others (*aggressive*), and to enhance relationships at the expense of self (*self-defeating*). In a classic empirical study, Martin & Lefcourt (1984) provided initial evidence for the stress-buffering role of humour and found that the relation between the sense of humour and disturbed moods can be better understood in terms of interaction with stressful experiences. It has been reported that the use of social media increases during disasters and pandemics (Fraustino & Ma 2015). As the global community has been facing the COVID-19 pandemic, individuals have relied on social media for interaction, information, social connections, humour, leisure, and convenience. The pandemic has placed irresistible pressure on language resources that encouraged creating humorous expressions to cope with the situation (Uwen & Ushie 2022). Humorous posts related to various aspects of the COVID-19 pandemic, be it the lockdowns, work from home, school from home, etc., are all over social media. Many researchers, such as Kuipers (2020), Strick (2021), Sebba-Elran (2021), and Cancelas-Ouviña (2021), have argued that humour functions as a potential coping mechanism in a pandemic situation. COVID-19 memes, according to Sebba-Elran (2021), give vent to anxieties and convey a communal need to protect and foster group solidarity. Memes have been seen to be "very useful" and "socially speaking" by Cancelas-Ouviña (2021).

Most social media posts about COVID-19 tend to be primarily negative or serious, whereas humorous posts can deal with the same serious issue by pointing out "the funny or ironic aspects of a situation" (Phillips-Kumaga et al. 2022). The sense of humour can facilitate the restructuring of a crisis situation so it is less stressful (Abel 2002), thereby making people receptive to messages which they would otherwise not have been open to (Ogba 2021) hence promoting positive social interaction and solidarity (Chadwick & Platt 2018; Uwen & Ushie 2022). The general posts mainly deal with topics such as COVID-19 tests and deaths (Ahmed et al. 2021), misconceptions and complaints about COVID-19 control (Kwok et al. 2021), the spread of the virus, and bans and orders (Norstrom & Sarna 2021). In this scenario, humorous posts add relief for social media users. The general posts are not always pessimistic or serious; some positive posts are also available, such as those dealing with the newfound cures and vaccines, recovery from COVID-19, and tribute to the frontline COVID-19 warriors (Batool et al. 2021). However, humour is distinct from such positive responses in terms of the control the individual has over the frequency and intensity in which positive responses are made (Crawford & Caltabiano 2011) and enhanced (Kuiper 2012). Hence, exploring humorous posts on social media could be interesting as it would help bring individuals' concerns to light and identify the trends present in social media communication during a crisis, especially in a pandemic situation

like COVID-19. Furthermore, humour and its potential as a tool in psychological therapy are taken lightly. However, humour has therapeutic powers; endorphins secreted by laughter can help relieve stress and depression (Yim 2016). Therefore, scholars have treated humorous posts as significant sites of examination. This article aims to review and synthesise the literature on COVID-19 humour on social media.

2. Methodology

The following steps were taken to carry out this systematic review:

- (1) Identifying and analysing research studies on COVID-19 humour on social media.
- (2) Developing a classification for the key features of the studies.
- (3) Analysing the results obtained from the classification of the studies and exploring their research focus and limitations, as well as neglected areas of research.
- (4) Providing suggestions for filling the key gaps after the analysis of the studies related to the subject matter.

The specific application of the method is elaborated in the sections below:

2.1. Search strategy

Research articles on studies on COVID-19 humour on social media were selected for this systematic literature review; first, a keyword-based search in four databases, viz. Science Direct, Scopus, Taylor & Francis, and Web of Science was performed, and studies addressing COVID-19 humour on social media were identified. Keywords such as *COVID-19*, *coronavirus*, *humour*, *memes*, and *social media* were used in different combinations. Second, the content of the resulting studies was checked for their topical relevance and correspondence with the review's criteria. In the final step, an element of the non-systematic search was added to identify relevant studies not found through the systematic search. All the research papers included in the study were found in the searches up to 8 October 2022.

The following eligibility criteria were used for screening the selected articles:

2.1.1. Inclusion criteria

- Studies published as research papers/articles in a journal
- Studies published after December 2019 (the month of identification of the first known case of COVID-19 in Wuhan, China)
- Studies published in the English language
- Studies directly using data from social media for analysis
- Studies dealing with humorous posts only

2.1.2. Exclusion criteria

- Conference abstracts, reviews, opinion papers, editorials, doctoral theses, and textbooks
- Studies published in languages other than English

2.2. Study selection

The preliminary search through scholarly databases yielded 385 results, of which 283 were excluded after title reviewing. The initial exclusion includes duplicate articles and those deemed irrelevant based on their title. The remaining 102 articles went through abstract reviewing, with 32 articles not meeting the inclusion criteria getting excluded. Seventy articles, together with 15 articles manually selected by backward reference searching and online random searching methodology, were assessed for full-text review. After reviewing the full texts based on eligibility criteria, 42 papers were selected for the final assessment. An overview of the article's selection process is illustrated as a PRISMA flow diagram in Figure 1: "PRISMA stands for Preferred Reporting Items for Systematic Reviews and Meta-Analyses. It is an evidence-based minimum set of items aimed at helping scientific authors to report a wide array of systematic reviews and meta-analyses" ("Preferred Reporting Items for Systematic Reviews and Meta-Analyses" 2022).

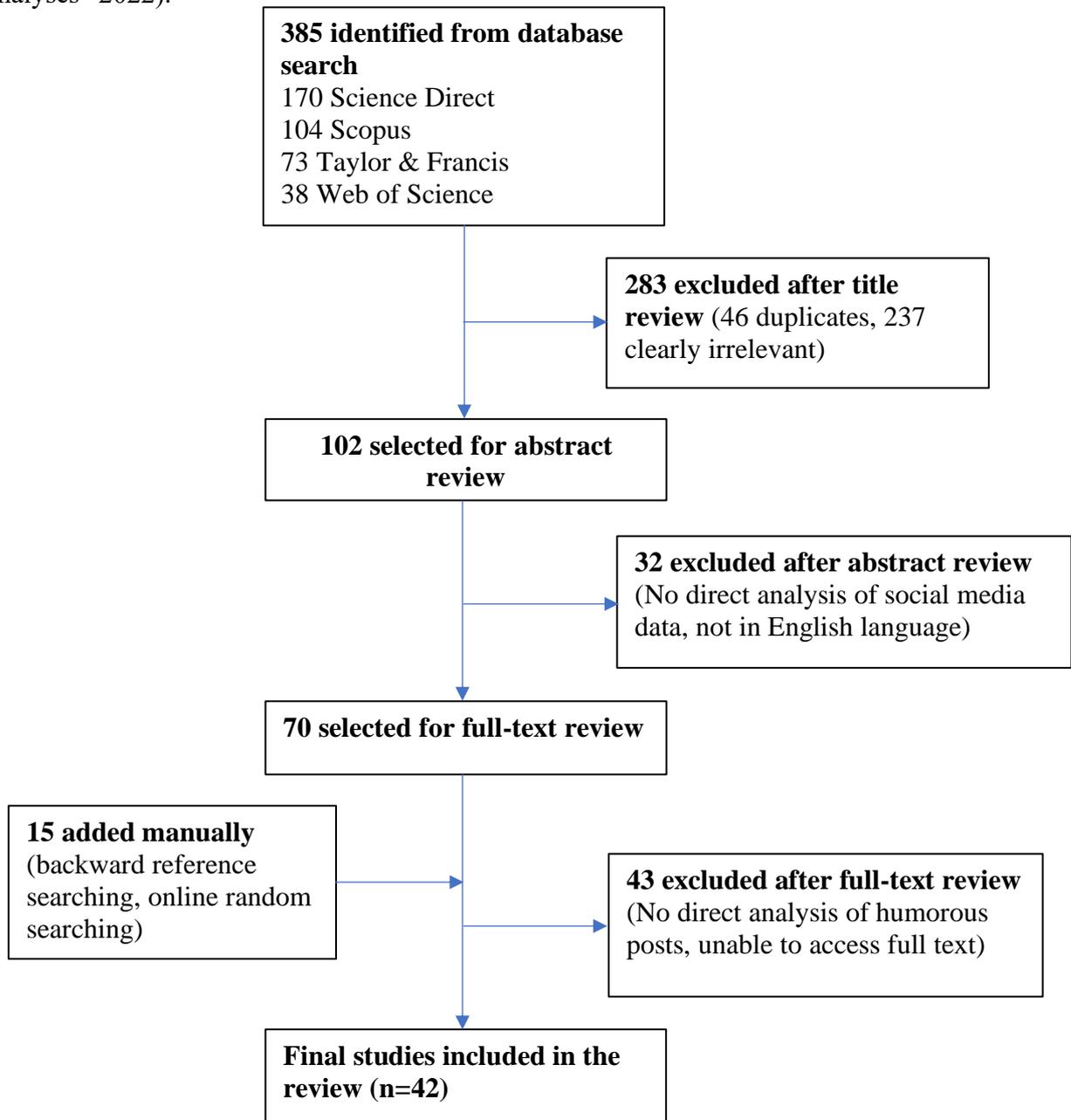


Figure 1. PRISMA flow diagram for the identification and selection of studies

3. Results

The selected articles were analysed, and a classification for the key features was developed based on various facets of these studies identified by the researchers: the social media platform chosen for data collection, sample size, mode of posts, temporal distribution of posts, geographical distribution of focus, topical distribution, research methods used in the studies, thematic distribution, elements of communication, characteristics, and functions of posts. The following sections present the articles' overall categorisation according to the above classification. It further offers an analysis of each category.

3.1. Social media platform for data collection

Grouping the studies included in this review by their choice of the social media platform for data collection helped assess the potential scope of the humorous posts. It resulted in 12 categories: Facebook (n=21), WhatsApp (n=15), Twitter (n=13), Instagram (n=6), Reddit (n=4), YouTube (n=4), Telegram (n=2), TikTok (n=2), Imgur (n=1), 9gag (n=1), other websites (n=6), and not specified (n=3). Facebook was found to be the most preferred (50 per cent) platform studied, followed by WhatsApp (36 per cent) and then Twitter (31 per cent) (Figure 2). It is noteworthy that Snapchat was not considered in any studies, although the platform is “taking the lead in usage and motivations for use in several aspects” (Alhabash & Ma 2017).

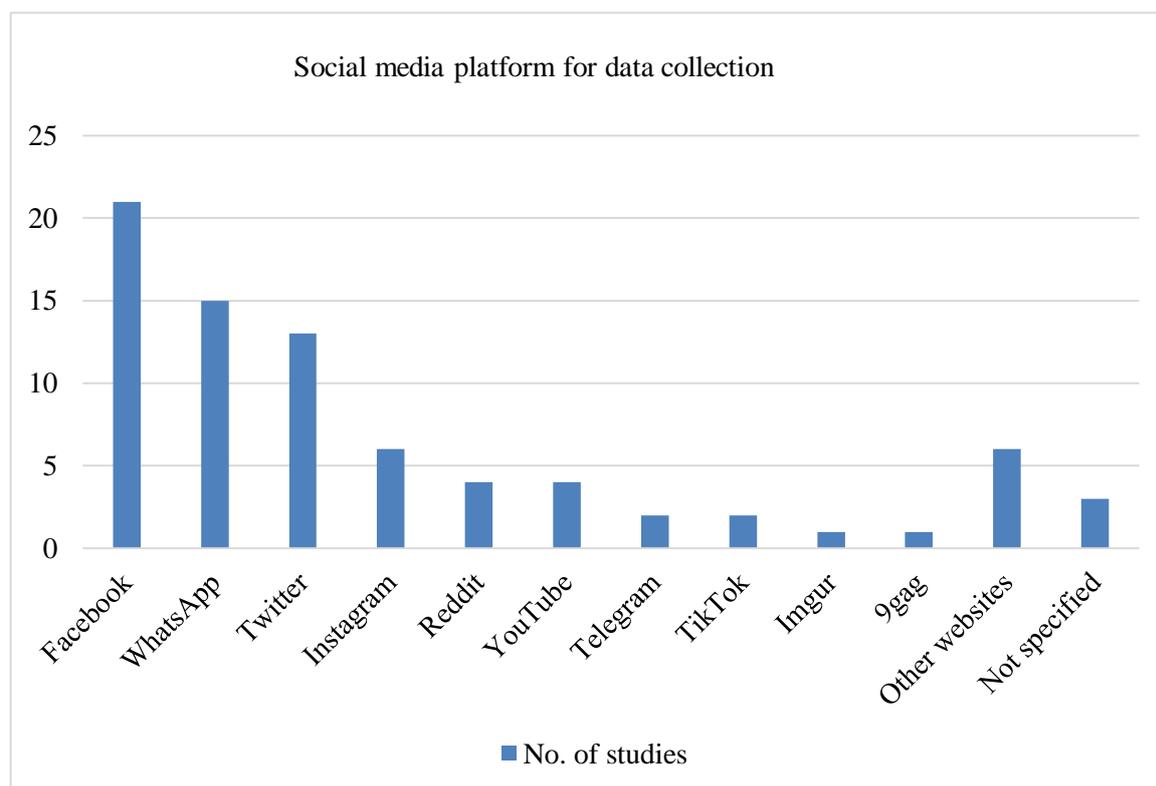


Figure 2. Social media platform for data collection

3.2. Mode of posts

Social media posts come in different forms; most of the time, these posts are multimodal. Studying various modes helped in the assessment of the nature of the available posts. After grouping the studies considering the mode of the posts, four categories were found: image-text (n=29), video (n=10), text (n=10), and image (n=5). Twenty-six per cent of the total studies

explored more than one post type, most of which comprised image-text memes, as evident from Figure 3. The reason behind this could be the popularity and the virality of image-text memes on social media platforms.

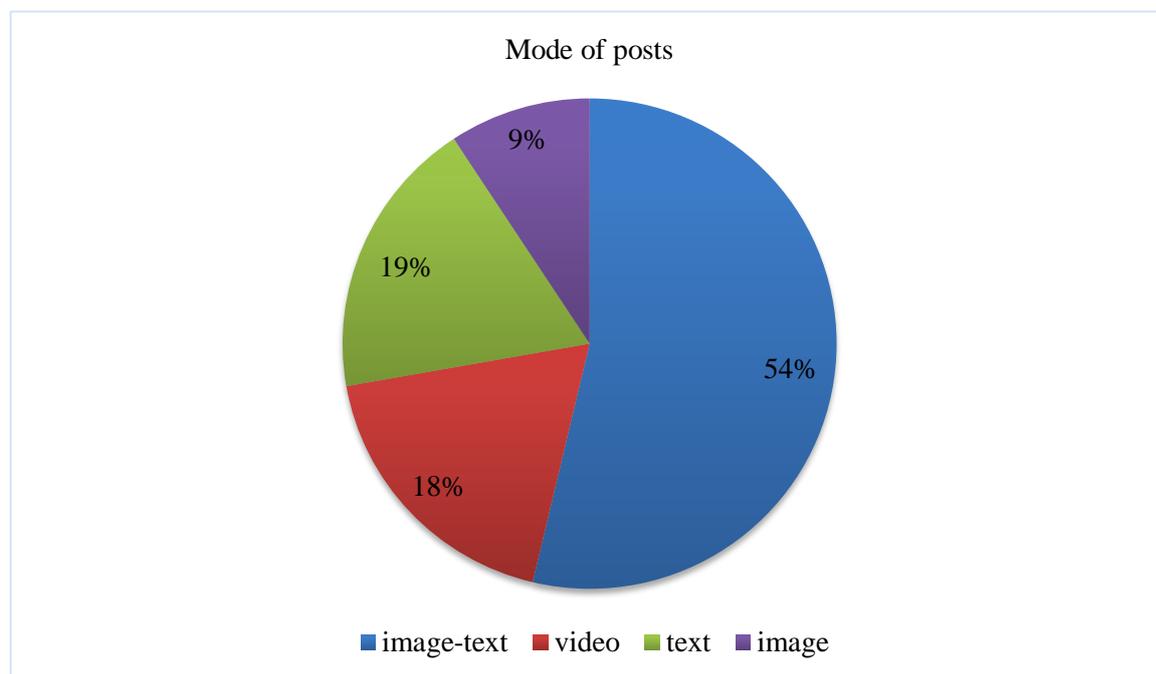


Figure 3. Mode of posts

3.3. Geographical distribution

The geographical distribution of the selected studies was reviewed to thoroughly understand the geographical and relevant cultural context. The researchers analysed COVID-19 humour on social media in their respective countries in almost 69 per cent of the reviewed studies. The research took place in the context of countries such as Nigeria (n=6), Jordan (n=3), Spain (n=3), Poland (n=2), Egypt (n=2), Kenya (n=2), Ghana (n=2), Israel (n=2), Italy (n=1), India (n=1), Singapore (n=1), Malaysia (n=1), China (n=1), Zimbabwe (n=1), Pakistan (n=1), and Indonesia (n=1). Most of these were non-Western countries, and Nigeria was the most studied one. As discussed by Ukwueze & Igbokwe (2021) and Uwen & Ushie (2022), the reason behind this could be the Nigerian temperament of amusing themselves by creating humour to fill the lack of the basic amenities that make for a good life and that COVID-19 offered yet another crisis-motivated opportunity to practise this psychic identity of Nigerians. Additionally, researchers observed that some Nigerians were sceptical about the reality of the pandemic (Tunde Asiru & Bello 2021) and considered the guidelines published by the Nigeria Centre for Disease Control (NCDC) as ridiculous, hence the humorous responses found on social media (Ogoanah & Ojo 2021). These country-specific studies are targeted at COVID-19 humour in respective sociocultural contexts.

3.4. Temporal distribution of posts

The researchers focused their analysis on posts from specific time periods. Analysing the time periods of the data creation/collection indicates the data of interest to the researchers. Although certain studies (17 per cent) did not specify the time of collection/creation of posts (Ajayi & Akinrinlola 2021; El-Shokrofy 2021; Inyabri et al. 2021; Khan et al. 2020; Ogoanah & Ojo

2021; Outley et al. 2021; Salman et al. 2022), the remaining studies mainly considered the posts from the period between March 2020-May 2020, as can be seen in Figure 4. Internet meme activity increased during the first lockdown phase (Priyadarshini et al. 2021), March 2020-May 2020, which was imposed in most parts of the world. This highlights that the humorous posts, mainly during the lockdown period, were of interest to the researchers. Further, the data shows that the posts from a very short period (1-3 months) were considered in 26 per cent of the total studies (Barnes et al. 2021; Chibuwe & Munoriyarwa 2022; Haider & Al-Abbas 2022; Hussein & Aljamili 2020; Lemish & Elias 2020; Lomotey 2020; Mahat-Shamir & Kagan 2022; Norstrom & Sarna 2021; Tunde Asiru & Bello 2021; Ukwueze & Igbokwe 2021; Wabende 2021). In some others (17 per cent), more extended periods (8-11 months) were considered (Al-Daher et al. 2022; Chłopicki & Brzozowska 2021; Dynel 2022; Graham 2022; Marfo et al. 2022; Uwen & Ushie 2022; Younes & Altakhaineh 2022).

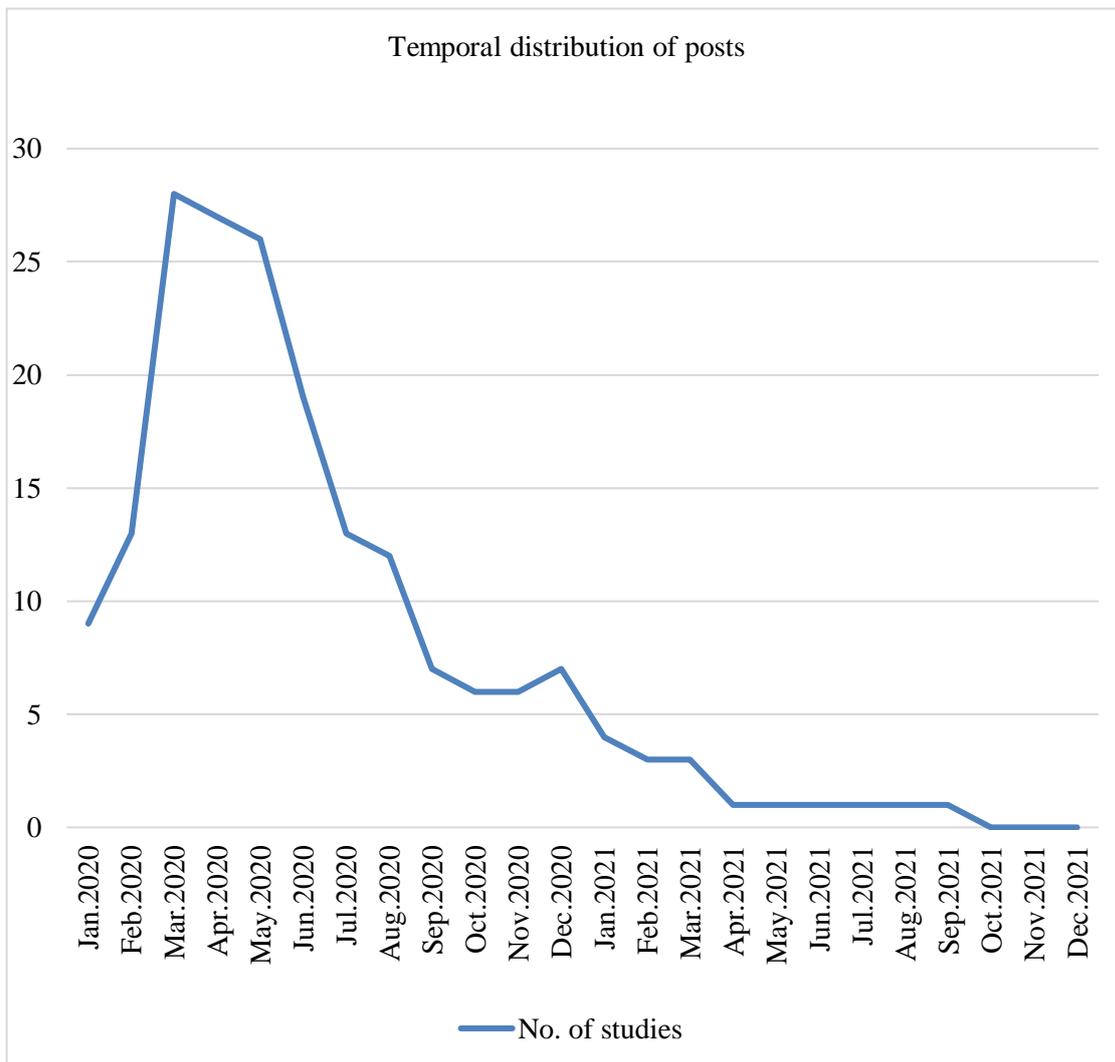


Figure 4. Temporal distribution of posts

This indicates that there is a deficit of studies that cover longer periods. This might be because of the uncertainty of the extraordinary nature of the COVID-19 pandemic, making it hard to track the rapidly changing situation. Additionally, the data collection period was too early in the pandemic and studies covering more extended periods could not have been conducted by then. Moreover, the short period (1-3 months) did not allow the researchers to study the temporal and dynamic aspects of the COVID-19 humour. Although some studies

considered longer periods (8-11 months), the researchers did not study the temporal trends of the COVID-19 humorous posts. Although one of the studies (Martínez-Cardama & García-López 2021) discussed the change in the tone of the humorous messages over time, the period considered was very short, i.e., from 14 March 2020 to 21 June 2020. Likewise, the shift in meme content with the development of COVID-19 in Indonesia was studied by Kadri & Jumrah (2022) from January to June 2020, which is a period of moderate length, comparatively. However, changes in the COVID-19 related themes, and patterns of linguistic and visual aspects of memes, with changing phases of COVID-19, could also be explored. Such exploration can facilitate keeping a record of the unprecedented nature of the pandemic times and the way it has changed how individuals view their worldly presence in relation to their work, relationships, leisure, and more.

3.5. Topical distribution

The topical distribution helped in the assessment of various aspects of humour on social media, as discussed in the selected studies, such as creativity (Cancelas-Ouviña 2021; Glăveanu & de Saint Laurent 2021), virality/popularity (Barnes et al. 2021; Cancelas-Ouviña 2021), themes (Al-Daher et al. 2022; Norstrom & Sarna 2021; Phillips-Kumaga et al. 2022), typology (Kadri & Jumrah 2022), and many linguistic aspects such as satire (Tunde Asiru & Bello 2021), metaphors and metonymies (Younes & Altakhaineh 2022), peculiar humorous expressions (Uwen & Ushie 2022), semiotic patterns (Hussein & Aljamili 2020), implicature (Salman et al. 2022), and pragma-multimodal functions of memes (Ajayi & Akinrinlola 2021). Moreover, other topics like meme factories (Abidin 2020), memetic trends (Dynel 2020, 2022; Kadri & Jumrah 2022), gender (Lomotey 2020; Han & Kuipers 2021; Haider & Al-Abbas 2022), race (Matamoros-Fernández et al. 2022), culture (Khan et al. 2020; Martínez-Cardama & García-López 2021), and politics (Murru & Vicari 2021; Nabea 2021; Chibuwe & Munoriyarwa 2022) were also dealt with in the selected studies. Overall, the reviewed studies explored a large variety of characteristics and functions of humorous posts related to COVID-19.

3.6. Sample size

Studying the sample sizes of the selected studies was important to assess the reliability and validity of the conclusions of the studies, as “one can draw a precise and accurate conclusion only with an appropriate sample size” (Nayak 2010). Some studies (7 per cent) did not specify the sample size (Lomotey 2020; Chłopicki & Brzozowska 2021; Inyabri et al. 2021). In almost 31 per cent of the studies, the sample size considered was very small; the number of posts ranged from 3 to 20 (Hussein & Aljamili 2020; Ajayi & Akinrinlola 2021; El-Shokrofy 2021; Lotfy & Soliman 2021; Nabea 2021; Ogoanah & Ojo 2021; Outley et al. 2021; Raj & Jayaprakash 2021; Tunde Asiru & Bello 2021; Ukwueze & Igbokwe 2021; Wabende 2021; Kadri & Jumrah 2022; Salman et al. 2022). This small sample size did not seem representative of the whole population and thus possibly resulted in sampling errors in some of the studies. Additionally, this prevented researchers from exploring a greater variety of humorous posts. Only 19 per cent of the studies dealt with significant amounts of samples, ranging from 954 posts to 129,326 posts (Barnes et al. 2021; Cancelas-Ouviña 2021; Martínez-Cardama & García-López 2021; Murru & Vicari 2021; Norstrom & Sarna 2021; Roig & Martorell 2021; de Saint Laurent et al. 2022; Dynel 2022). On the whole, the researchers utilised different data sizes ranging from single-digit numbers to a few thousand. In the future, more corpus-based research might facilitate more large-scale investigation of multiple characteristics of a feature, especially from a linguistic perspective, resulting in a fuller understanding of its use.

3.7. Research methods used in the studies

Different methods were used for data collection in the reviewed studies. Purposive sampling (Hussein & Aljamili 2020; Khan et al. 2020; Ajayi & Akinrinlola 2021; Chibuwe & Munoriyarwa 2022; Dynel 2022; Martínez-Cardama & García-López 2021; Raj & Jayaprakash 2021; Tunde Asiru & Bello 2021; Haider & Al-Abbas 2022; Kadri & Jumrah 2022; Marfo et al. 2022; Matamoros-Fernández et al. 2022; Phillips-Kumaga et al. 2022; Uwen & Ushie 2022; Younes & Altakhaineh 2022), random sampling (Lomotey 2020; Glăveanu & de Saint Laurent 2021; Inyabri et al. 2021; Aronson & Jaffal 2022), convenience sampling (Mahat-Shamir & Kagan 2022), and the virtual snowball sampling (Graham 2022) were commonly used. Extraction of relevant data by the use of tags (Dynel 2020, 2022; Inyabri et al. 2021; Matamoros-Fernández et al. 2022), keywords (Lomotey 2020; Cancelas-Ouviña 2021; Murru & Vicari 2021; Graham 2022; Matamoros-Fernández et al. 2022; Younes & Altakhaineh 2022), and hashtags (Dynel 2020; Han & Kuipers 2021; Norstrom & Sarna 2021; Marfo et al. 2022) was observed. The researchers employed various tools like Reddit API (de Saint Laurent et al. 2022), Python (de Saint Laurent et al. 2022; Dynel 2022), R Studio tool (Roig & Martorell 2021), Pushshift API (Barnes et al. 2021), and Twitter Capture and Analysis Tool (TCAT) (Murru & Vicari 2021) to retrieve data from social media. However, certain studies did not specify their search strategy for finding and collecting the data (Outley et al. 2020; Barnes et al. 2021; Chłopicki & Brzozowska 2021; El-Shokrofy 2021; Al-Daher et al. 2022; Salman et al. 2022). Researchers employed online questionnaires (Glăveanu & de Saint Laurent 2021; Younes & Altakhaineh 2022) and semi-structured interviews (Roig & Martorell 2021) to collect individuals' responses. It is apparent from the data collection methods that the researchers have used automated systems to collect data from various social media platforms.

The researchers applied various qualitative, quantitative, computational, and mixed methods to address their research goals and questions. However, the sample size seems to affect the choice of methods for analysis. The studies with smaller samples used the traditional qualitative and quantitative methods. On the other hand, the researchers considering larger data samples used computational research methods. In total, the researchers used 14 different research designs for the analysis of the posts on social media: discourse analysis (n=11), content analysis (n=10), descriptive analysis (n=3), social semiotic analysis (n=3), visual analysis (n=2), narrative analysis (n=2), pragma-multimodal analysis (n=1), linguistic analysis (n=2), machine learning models (n=1), verbal analysis (n=1), thematic analysis (n=3), artificial intelligence techniques (n=1), corpus-based analysis (n=1), and exploratory analysis (n=1). Discourse analysis was the most used method for analysing the posts. Various types of discourse analysis, such as multimodal discourse analysis (Dynel 2020, 2022; Lotfy & Soliman 2021; Ogoanah & Ojo 2021), genre-based discourse analysis (Han & Kuipers 2021), critical discourse analysis (Graham 2022; Haider & Al-Abbas 2022), multimodal critical discourse analysis (Inyabri et al. 2021), and feminist critical discourse analysis (Lomotey 2020) were used in the studies. This method enabled the researchers to focus on the production and distribution processes of the COVID-19 humour. However, sentiment analysis, the “popular and recurring element in social media studies with automated analytics” (Ravi & Ravi 2015, as cited in Sykora et al. 2020), has not found a place in these studies.

Some researchers adopted triangulation methods. Thirteen per cent of the total studies adopted a triangulation approach; for example, Abidin (2020) used a triangulation of personal interviews, digital ethnography, and content analysis. Glăveanu & de Saint Laurent (2021) used triangulation of quantitative and qualitative methods and questionnaires. Nabea (2021) analysed memes using a triangulated approach, taking into consideration concepts from Ferdinand de Saussure (2011), Umberto Eco (1984), and Algirdas Greimas (1987). Norstrom & Sarna (2021) conducted their research using content analysis as the primary research method and framing and

narrative analysis as additional. This proved to help decrease the deficiencies and biases of using any single method.

3.8. Thematic distribution

The themes in the selected studies have been studied to identify the patterns in the data that are important or interesting. The recurrent themes in the humorous posts were found to be related to COVID-19 preventive measures such as masks (Dynel 2020, 2022; Martínez-Cardama & García-López 2021), social distancing (Cancelas-Ouviña 2021), lack of sanitary material (tests, masks, protective material), and vaccines (Cancelas-Ouviña 2021). Additionally, other themes related to the side effects of lockdown in COVID-19, such as putting on weight (Cancelas-Ouviña 2021; Khan et al. 2020), experimenting with ways to eliminate the coronavirus (Younes & Altakhaineh 2022), affected marital relations (Khan et al. 2020; Haider & Al-Abbas 2022; Uwen & Ushie 2022), sex as a pastime (Chibuwe & Munoriyarwa 2022; Haider & Al-Abbas 2022; Kadri & Jumrah 2022), and expected population increase (Khan et al. 2020) were identified. Moreover, there were other themes that were exclusive to COVID-19, like the power of COVID-19 (Younes & Altakhaineh 2022), changes brought about by the pandemic (Wabende 2021), the extended period of the pandemic and its implications (Martínez-Cardama & García-López 2021), and reactions to government's decisions regarding COVID-19 control (Khan et al. 2020; Al-Daher et al. 2022; Dynel 2022). Furthermore, the new normal life during COVID-19 was one of the prominent themes that included sub-themes such as online education (Khan et al. 2020; Cancelas-Ouviña 2021; Al-Daher et al. 2022; Aronson & Jaffal 2022), work from home (Cancelas-Ouviña 2021), parenting during lockdown (Lemish & Elias 2020; Cancelas-Ouviña 2021; Martínez-Cardama & García-López 2021; Haider & Al-Abbas 2022; Phillips-Kumaga et al. 2022), and working mothers (Han & Kuipers 2021). This variation in themes indicates that although all the humorous posts in the selected studies shared a common focus area, namely the COVID-19 pandemic, each approached it differently and offered windows through which readers could view and understand the pandemic situation on different fronts. However, no theme related to life after the lockdown was identified in the selected studies, even though a few studies considered posts (Figure 4) after the first phase of lockdown was lifted in the majority of the countries ("COVID-19 lockdowns" 2023).

Since China was the country of the first known case of COVID-19, many humorous posts were found to be revolving around this fact. Several related themes emerged, such as the conspiracy theories attributing China to be the creator of the virus (Khan et al. 2020), linking coronavirus with things that seem Chinese (Kadri & Jumrah 2022), and sinophobia (Matamoros-Fernández et al. 2022). de Saint Laurent et al. (2022) found that most memes focused on themes such as coronavirus transmission, protective measures, shopping and stockpiling, virus spread, symptoms, and infected people. In a gender-specific study related to memes during COVID-19, Lomotey (2020) found themes focusing on various perceptions of men and women during the pandemic. Another similar analysis of gendered memes by Haider & Al-Abbas (2022) generated the following themes: marital relations, habits, beauty, makeup, and violence. In their study, Aronson & Jaffal (2022) worked on memes related to the experiences of young adults during the pandemic, which covered the following topics: lack of productivity, mental health, friendships, romantic relationships, and conflicts. In the study focusing on mask memes, Dynel (2022) found four sub-themes: type of mask, evaluation of mask-wearing, masks being commonplace, and masks as tools. This way, the researchers also explored a number of sub-themes of COVID-19 humour in their respective studies. However, separate studies of sub-themes related to the broader thematic areas like work-from-home culture and online education have not been carried out, and thus are the neglected areas under the thematic study of COVID-19 humorous posts.

A few studies analysed the themes in the context of a specific country. For example, in the case of Kenya, Nabea (2021) found three dominant themes, viz., the emergence of COVID-19, face masks as a safety protocol, and the effects of COVID-19 in Kenya. In Spain, the COVID-19 memes dealt with the initial denial of the virus, loss of previous lifestyle and incredulity around the duration of the situation (Martínez-Cardama & García-López 2021). In the analysis of everyday political Italian memes in the COVID-19 times by Murru & Vicari (2021), five leading discourses emerged, viz. 'We are all in this together', 'Good citizens and rule breakers', 'Down with the leader', 'Down with the experts', and 'The (Italian) model does not work', indicating themes such as solidarity, rule-breaking, and failure of the institutions. In the context of Poland, Norstrom & Sarna (2021) found themes such as free time, politics, services, work and study, bans and orders, and stigma and exclusion. Similarly, in Ghana, the following themes emerged: humour as a relief from boredom, diet humour, fashion humour, and humour on safety protocols (Phillips-Kumaga et al. 2022). Cartoonists satirised poverty, economy, corruption, and scepticism in their posts in Nigeria (Tunde Asiru & Bello 2021). Raj & Jayaprakash (2021) analysed three sample memes related to Tamil Nadu, India, namely 'Lockdown meme', 'Bye Bye Chennai', and 'Oscar Nayagan'. Kadri & Jumrah (2022) identified three stages of Indonesian netizens' conversations about COVID-19, viz. the stage before COVID-19 was confirmed, the stage after the coronavirus was confirmed and spread, and the stage when social assistance was distributed to contain COVID-19. Though based in different countries, the studies show that the themes of COVID-19 humour in one country found their equivalents, albeit with slight variation, in other countries.

3.9. Elements of communication

In simple terms, communication is the transmission of a message from a sender to a receiver. Shannon & Weaver's (1949) transmission model of communication deconstructs communication into several recognisable elements, viz. *Source*, *Message*, *Channel*, and *Receiver*. In this systematic review, the majority of the studies (64 per cent) aimed to examine the message, i.e., the humorous post, focusing on the tools of humour employed in these posts (Dynel 2020, 2022; Khan et al. 2020; Lomotey 2020; Ajayi & Akinrinlola 2021; Chłopicki & Brzozowska 2021; Han & Kuipers 2021; Lotfy & Soliman 2021; Martínez-Cardama & García-López 2021; Murru & Vicari 2021; Nabea 2021; Norstrom & Sarna 2021; Ogoanah & Ojo 2021; Outley et al. 2021; Priyadarshini et al. 2021; Tunde Asiru & Bello 2021; Ukwueze & Igbokwe 2021; Al-Daher et al. 2022; de Saint Laurent et al. 2022; Graham 2022; Haider & Al-Abbas 2022; Kadri & Jumrah 2022; Mahat-Shamir & Kagan 2022; Matamoros-Fernández et al. 2022; Phillips-Kumaga et al. 2022; Uwen & Ushie 2022; Younes & Altakhaineh 2022). Outley et al. (2021) and Wabende (2021) attempted to consider the following elements: source, i.e., the sender (author/sharer), the message, i.e., humorous post, and the receiver, i.e., social media users, in their studies. In some of the studies (12 per cent), two of these elements, i.e., the source and the message, were considered (Abidin 2020; Cancelas-Ouviña 2021; Inyabri et al. 2021; Roig & Martorell 2021; Aronson & Jaffal 2022); whereas, in some (10 per cent), the message and the receiver were considered (Hussein & Aljamili 2020; Glăveanu & de Saint Laurent 2021; Raj & Jayaprakash 2021; Chibuwe & Munoriyarwa 2022). However, none of the studies came up with any comprehensive and focused findings on the cumulative process of communication involving all aspects, viz. Source, Message, Channel, and Receiver.

3.10. Characteristics of the humorous posts

In the selected studies, the humorous posts were analysed for characteristics that they display. The most important characteristic found was humour itself (Cancelas-Ouviña 2021; Glăveanu & de Saint Laurent 2021; Martínez-Cardama & García-López 2021). Other features include

creativity (Cancelas-Ouviña 2021; Chłopicki & Brzozowska 2021; Glăveanu & de Saint Laurent 2021), virality (Barnes et al. 2021; Cancelas-Ouviña 2021), intertextuality (Cancelas-Ouviña 2021; Chłopicki & Brzozowska 2021), informal register and code-mixing (Uwen & Ushie 2022); satire (Khan et al. 2020; Martínez-Cardama & García-López 2021; Nabea 2021; Chibuwe & Munoriyarwa 2022), sarcasm (Lotfy & Soliman 2021; Martínez-Cardama & García-López 2021; Salman et al. 2022; Younes & Altakhaineh 2022), surprise and meaningfulness (Glăveanu & de Saint Laurent 2021), silliness and exaggeration (Phillips-Kumaga et al. 2022), juxtaposition (Cancelas-Ouviña 2021; Al-Daher et al. 2022; Chibuwe & Munoriyarwa 2022; Dynel 2022), locality, graphic images (Cancelas-Ouviña 2021), incongruity (Al-Daher et al. 2022), sophistication and cognitive complexity (Chłopicki & Brzozowska 2021), intensification of communication (Martínez-Cardama & García-López 2021), irony (Martínez-Cardama & García-López 2021; Salman et al. 2022), parodies, pranks and spoofs (Dynel 2022), wordplay and visual play (Dynel 2022), self-defeat (Khan et al. 2020), testing, self-denigration, and criticism through humour (Salman et al. 2022). Most of these characteristics are linguistic in nature, for example, satire, sarcasm, irony, etc., which are specific and deliberate language constructions used to convey meaning. All these characteristics attest to the complex and multifaceted nature of COVID-19 humour.

In the case of the image-text type of posts, visual features such as grey content, image size, saturation, and text length have the most significant impact on the prediction of the virality of a post and not the features related to COVID-19, according to Barnes et al. (2021). In humorous posts from the Chinese TikTok, Han & Kuipers (2021) found characteristics like self-mockery, exaggeration, incongruity, and juxtaposition of the ideal and reality. Lotfy & Soliman (2021) discovered that memes utilised personification to engage the audience in pretence and create a realistic experience based on shared information about the pandemic. Audio features such as funny sounds, comical voices or upbeat, and happy but also strange background music were found by Han & Kuipers (2021) in TikTok videos. Specific to the language used in humour, Marfo et al. (2022) found the use of localised terminologies related to COVID-19 in Ghana. Salman et al. (2022) witnessed a violation of Gricean principles in the COVID-19 jokes. Ajayi & Akinrinlola (2021) found the language of these humorous posts filled with robust images. Surprisingly, the studies analysing the posts in image-text and video modes focused on linguistic aspects more. Consequently, there is a scarcity of studies conducting a detailed analysis of the visual and auditory features of such memes. Accordingly, exploration of all the modes present in the memes, namely, image, video, audio, and text can add significantly to the understanding of the combined effect of all these in the production of humour.

The researchers found that intertextuality played a significant role in the structure of humorous posts (Cancelas-Ouviña 2021; Chłopicki & Brzozowska 2021; El-Shokrofy 2021). In the context of Poland, Chłopicki & Brzozowska (2021) argued that the memes illustrated the clash between the world of COVID-19 with that of either the time of the socialist regime that ruled in Poland between 1945 and 1989 or the fictional worlds of films (mainly comedies) produced in the 1970s, 1980s and 1990s, which expressed contempt for the world of socialism. Ogoanah & Ojo (2021) found that Nigerian comedians based their humour within the context of the in-group's ideological position, i.e., the coronavirus does not exist and if it does, there are plentiful natural herbs to deal with it. Kadri & Jumrah (2022) found that Indonesians made funny memes by making dialogue between SpongeBob and Patrick cartoon characters. El-Shokrofy (2021) discussed how intertextuality was used to emphasise the continuity of political corruption in many countries from previous times up to the present COVID-19 times. Younes & Altakhaineh (2022) identified that the metaphors used in the humorous posts were from various source domains such as sports, digital games, animals, war, humans, food, nature, song, technology, and others. The researchers observed that there were references to social media, popular media, news, celebrities, geography, history, other diseases (de Saint Laurent et al.

2022), pop culture (Dynel 2022), films, TV series (Chłopicki & Brzozowska 2021), pornography (Kadri & Jumrah 2022), and politics (Chłopicki & Brzozowska 2021; de Saint Laurent et al. 2022). These intertextual references to various domains highlight aspects of the relatively complex and multidimensional COVID-19 crisis and its associated discourses.

3.11. Functions of the COVID-19 humour

The researchers found various functions carried out by the humorous posts related to COVID-19, such as entertainment and public announcements (Abidin 2020), political critiques (Khan et al. 2020; Murru & Vicari 2021; Nabea 2021; Chibuwe & Munoriyarwa 2022; de Saint Laurent et al. 2022; Dynel 2022; Kadri & Jumrah 2022), creating awareness about COVID-19 (Martínez-Cardama & García-López 2021; Ogoanah & Ojo 2021; de Saint Laurent et al. 2022), channelling citizen sentiment (Martínez-Cardama & García-López 2021; Al-Daher et al. 2022), buffering against death anxiety (Mahat-Shamir & Kagan 2022), questioning fellow citizens' behaviour (Dynel 2022), and transmission and reproduction of social and cultural norms (Lomotey 2020; Lotfy & Soliman 2021). Lemish & Elias (2020) found parental humour as an outlet for parents' anxieties and distress during the pandemic. Mahat-Shamir & Kagan (2022) found that humour was used to connect to cultural worldviews, as a means for inclusion in a social group, and as a means to gain a sense of control. Many researchers stated that humorous posts serve as a beneficial coping mechanism (Ajayi & Akinrinlola 2021; Uwen & Ushie 2022) and help maintain emotional well-being (Hussein & Aljamili 2020; Marfo et al. 2022). According to El-Shokrofy (2021), humour educates and instructs in times of crisis. Overall, these functions of COVID-19 humour were found to be "assertive, instructive, compelling, educative, enlightening, and refreshing" (Ajayi & Akinrinlola 2021). Moreover, these functions convey the pattern of the usage and consumption of humorous posts on social media during COVID-19.

In the selected studies, the researchers investigated the functions of COVID-19 humour on social media in their respective countries. In the Nigerian context, Ajayi & Akinrinlola (2021) found that one of the central functions performed by the COVID-19 humour was to inform and warn the Nigerian population about the need and strategies for preventing the spread of COVID-19. According to Cancelas-Ouviña (2021), memes were used as tools to show the Spanish people's social weariness and discontent. Chibuwe & Munoriyarwa (2022) found that the humorous posts in Zimbabwe mocked the country's economy, blaming the government for the poor state of affairs. These posts also addressed elite corruption, policy bankruptcy and inconsistency, and Zimbabwe's failed health delivery system. Murru & Vicari (2021) argued that the COVID-19 memes identified good or bad civic behaviours, critiqued lawmakers, and institutions. These functions indicate that, in some of these studies, humour was utilised mainly to criticise governments' decisions regarding COVID-19 prevention and restriction in respective countries.

4. Discussion and conclusions

The studies reviewed showed multifaceted investigations carried out on COVID-19 humour on social media. The current review attempted to cover all relevant studies available in four databases: Science Direct, Scopus, Taylor & Francis, and Web of Science. Additionally, relevant articles that were manually selected by backward reference searching and online random searching were also included in the review. After carrying out a classification based on some key features, a detailed description and discussion of the findings has been carried out. The results show that Facebook was the most preferred platform for examining humorous posts. However, no study has been conducted considering Snapchat, although it is widely used. The

reason behind this could be that the posts shared on Snapchat are not permanently available due to its feature of disappearing after 24 hours after adding. Additionally, Snapchat is considered “more personal” (Waterlaus et al. 2016), thus limiting its coverage in terms of the social reception of the posts.

Furthermore, the general quantitative findings emerging from the analysis of reviewed studies are hardly surprising. As predicted, the most productive time in terms of humorous posts related to COVID-19 on social media was the first phase of lockdown in most parts of the world, i.e., March 2020 to May 2020. This might be the consequence of the free time that was available to people when they were at home. By contrast, the productivity of humorous posts decreased after June 2020 as most restrictions were lifted by then. Moreover, the most studied type of posts, i.e., image-text, was also quite predictable as these posts are primarily memes widely circulated on social media platforms.

The identified topics and themes reveal that the humour studied is not only about the virus or the disease itself, but also focuses on the absurd situation the individuals found themselves in due to the pandemic and the following lockdown. All the humorous posts in the selected studies shared a common theme, namely the COVID-19 pandemic. The other recurrent sub-themes were social distancing, masks, vaccines, work from home, home-schooling, marital relations, parenting during the lockdown, and so forth. It was found that the themes were mainly related to COVID-19 and the resultant lockdown, which might be due to the selection of the posts more during the lockdown period, as evident in Figure 4. However, no identification of the theme related to life after lockdown has been found, even though a few studies considered the posts after the first phase of lockdown was lifted in the majority of the countries. Additionally, separate thematic studies regarding the new cultures resulting from the lockdown, such as work-from-home and online education, have not been carried out, and thus constitute neglected areas.

Moreover, a few studies analysed the themes in the context of specific countries. Though based in different countries, the studies indicate that the main themes of the COVID-19 humour remain similar, suggesting the universality of the COVID-19 experience. Along with the themes, the researchers also analysed the humorous posts for the various characteristics they displayed. The most important feature found was humour, in addition to other features such as sarcasm, irony, satire, criticism, juxtaposition, and locality, most of which were found to be linguistic features. Furthermore, it was revealed that intertextuality played a significant role in the structure of humorous posts, especially those related to specific countries. Interestingly, it was found that the studies analysing audio-visual memes tended to focus more on linguistic features, resulting in the inadequacy of studies conducting an in-depth analysis of the visual and auditory features of such memes. Forthcoming research focused on the exploration of all the modes found in the memes can add significantly to the multimodal analysis of humour.

Further, this review identifies that there is a deficit of studies that cover longer periods. The findings of many reviewed studies cannot be universally generalised as the researchers examined single time-periods, limiting the generalisability to other periods of the COVID-19 pandemic. The reason behind this could involve the uncertainty of the extraordinary nature of the COVID-19 pandemic, making it hard to trace the rapidly changing situation over a longer period. Moreover, there is a lack of studies dealing with the temporal and dynamic aspects of COVID-19 humour. Forthcoming studies can explore the changing trends over extended periods as the conditions of the infiltration of COVID-19 in various parts of the world change. Such research will help document the dynamic nature of the pandemic era and how it has changed the way individuals perceive their worldly existence.

The review identifies that the researchers adopted different digital tools to collect digital data from various social media platforms, which seem to complement each other well in the corresponding studies. Although the researchers utilised different data sizes, it was revealed that the small sample size did not seem representative of the whole population, and this prevented

researchers from exploring a greater variety of humorous posts. In the future, more corpus-based research might help bring out a large-scale investigation of the characteristics of such posts. Moreover, the researchers adopted 14 different methods for analysing the posts; discourse analysis is the most settled one. However, sentiment analysis, the prevalent method in social media studies, has not been explored in the studies. Future research focusing on this aspect may benefit the field.

Almost 69 per cent of the reviewed studies analysed the humorous posts in the context of their respective countries, targeted at diverse social groups. As established by Uwen & Ushie (2022), these humorous expressions are communicated through heterogeneous linguistic codes in different social contexts. Future research can provide insights into the sociocultural and sociolinguistic factors responsible for the linguistic choices in communicating COVID-19 humour among various social groups. Moreover, the geographical distribution reveals an obvious tilt towards studying humorous posts from the Global South and not much attention is paid to the COVID-19 humour in Western countries. Consequently, exploring the reason(s) behind this scenario would be interesting.

Furthermore, no clear picture seems to emerge regarding the elements and the process of communication as investigated in the studies. The connection among various elements of communication, viz. source, message, channel, and receiver, was not seen to have been explored much in the studies. The investigation of this connection might provide a holistic understanding of the entire process of production and distribution of COVID-19 humour and its reception by the audience. Future research should complement the findings of the reviewed studies with an in-depth, qualitative analysis of COVID-19 humour, which furthers the understanding of how meaning-making operates in constructing and transforming social and mimetic representations of a pandemic. Nevertheless, the reviewed studies highlight that humour is an indispensable method of communication, reasonably crucial for mental and emotional well-being. Some researchers used questionnaires and surveys to study the individual perception of COVID-19 humour. However, empirical and clinical research targeting the measure of psychological change humour plays in this respect could be more rigorously conducted in the future, focusing on acute cases of COVID-19 depression patients.

This systematic review concludes that despite being a relatively new area of research, a significant number of studies on COVID-19 humour on social media have taken place. However, this systematic review was limited due to the inability to access full texts of a few found relevant studies, which, thus, had to be excluded. Moreover, there has not been any systematic review of these studies. This article not only reviews and synthesises the literature on COVID-19 humour on social media but also highlights the need for a reassessment of the structure and role of humour in critical and stressful situations, which may further lead to the formulation of institutional strategies and steps in the direction of establishing humour as a powerful tool of relief in times of distress.

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