

Motives of Sharing Fake News and Effects on Mental Health of Social Media Users: A Meta-analysis

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ABSTRACT

After the outbreak of COVID-19, the world faced various economic, health, and social challenges alongside terror from fake news and posts on social media. There has been a significant impact from the spread and sharing of fake news on the mental health of social media users. Henceforth, this study examined this issue within the context of uses and gratification theory. In doing so, the study performed a meta-analysis using cross-sectional studies regarding social media usage and the association between use and gratification among social media users. Fifteen articles from 2010 to 2020 were retrieved and finalised through strict selection criteria from Google Scholar, PubMed, and Web of Science. A random effect model was deployed to estimate the uses and gratification achieved from social media usage and the motivation behind sharing specific posts. The selected articles suggested a positive and significant role of the uses and gratification perspective in motivating users to select specific social media platforms to create and share posts. It was also identified that gratification can result from the performance of both positive and negative actions on social media by social media users. This study offers new insights into social media usage from the uses and gratification perspective during health crises, shedding light on its impact on fake news dissemination and suggesting practical algorithmic control measures.

Keywords: *Uses and gratifications, meta-analysis, fake news, mental health, social media.*

INTRODUCTION

The rising trends of sharing fake news have become significantly alarming. Even if the sharing of fake news is not new, it has become a cause for concern because of the significant increase in the use of social media that has accelerated the spread of information (Apuke & Omar, 2021). The trend of sharing posts in various formats, rapid retweeting of information and a significant flow of information from one part of the world to another through social media in no time means that the spread of information is uncontrollable, independent and its origins come from unknown sources (Jiang et al., 2021). As a result of this spread of information, social media has become the penultimate source of fake news and information dissemination. It has also been observed that social media is considered an authentic and influential source by most social media users, which means there are significant chances of accepting unauthentic and unfiltered misinformation (Dessart & Veloutsou, 2021). Fake news is defined by Tandoc et al. (2020) as concocted content resulting from copying legitimate news but presented in such a way that it lures the readers or the public to believe in its legitimacy. Furthermore, government officials and influential individuals are regularly engaged and involved with the proliferation of this kind of misinformation to audiences on a large scale to achieve an agenda (Talwar, Dhir, Singh, Virk, & Salo, 2020). Hence, it can be said that fake news touches the lives of many individuals from

different aspects due to the increased rate of fake news, particularly during the chaos of the COVID-19 pandemic, when the outbreak of the novel virus was reported in China and slowly spread to other parts of the world (Gupta, Bansal, Mamgain, & Gupta, 2022; Hua & Shaw, 2020). It was reported to be transmitted from one human to another human through contacts or droplets; ensuing mass panic and alarmed the communities to be more vigilant of the problem through sharing of sometimes unnecessary or unverified information (Fernández-Torres, Almansa-Martínez, & Chamizo-Sánchez, 2021). It has been found that the sharing and spreading of false information and news when it comes to health issues or information regarding a pandemic causes significant levels of threats to the physical and mental health of the public, specifically those who spend time consistently on social media (Usher et al., 2020). However, information regarding the motivations behind the spreading and sharing of misinformation has yet to be deliberated, which is why there are several aspects through which authentic information and misinformation should be differentiated. The significant growth of the spreading and sharing of fake news during the distressful time of the COVID-19 pandemic requires a significant level of background research and focus to identify the motivations of the sources behind the spread and sharing of suspicious information (Zhang & Ghorbani, 2020; Apuke & Omar, 2021). The intentions of the social media users behind disseminating such misinformation are yet to be determined. Henceforth, certain filters are necessary to understand the proliferation of misinformation (Apuke & Omar, 2021). Moreover, previous studies focused on sharing and spreading fake news regarding health-related issues and crises are limited. Nevertheless, the consideration and literature towards this issue are significantly growing (Mohammed et al., 2023).

Various studies have focused on the sharing and spreading of fake information on social media with the help of the uses and gratification perspective or theory (Kasirye, 2021). The primary reason behind focusing on this problem alongside this perspective was that it helps to identify the motivation of the people spreading and sharing such fake information. The uses and gratification perspective significantly help the comprehension and capitalises on news sharing through social media (Jiang et al., 2021). Several studies have considered this theory along with the component of altruism. Meanwhile, other studies have argued that the uses and gratification perspective is linked with disseminating and sharing fake news, such as during the COVID-19 pandemic (Tran, 2021). Further to this, earlier studies had proposed the extension of the examination of fake news sharing based on the intrinsic participatory nature of people on social media, linking the uses and gratification perspective with the impact on the mental health of social media users (Samani & Guri, 2019; Oliveira et al., 2020; Bui, 2014; Santos et al., 2022). It has been observed that there are limited meta-analyses or systematic reviews conducted regarding the issue of spreading fake news during the COVID-19 pandemic along with the uses and gratification perspective (Apuke & Omar, 2021). However, it has been found that these issues and problems have yet to be discussed alongside a prominent and significantly applied perspective and theory, namely the uses and gratification perspective. Given that the problem of fake news reporting and dissemination of fake information during COVID-19 is significantly increasing, it has become essential to assess this problem and issues alongside the uses and gratification perspective to identify the motivations of the users behind disseminating such misinformation and fake news.

RESEARCH OBJECTIVES

This meta-analysis has the following research objectives: 1) to analyse the results of the previous studies from the period 2010 to 2020 regarding the uses and gratification perspective in relation to the spreading and sharing of fake news about COVID-19; and, 2) to investigate the effects of spreading and sharing fake news about COVID-19 on the mental health of social media users and the general public.

To address the aim of this study, specific inclusion and exclusion criteria have been established, which are detailed in the methodology section and subsequently guided the selection of data sources for this study. This meta-analysis has the following research questions: 1) how has the uses and gratification perspective contributed to spreading fake news about COVID-19?; and 2) what effects did such fake news have on the mental health of social media users and the general public between 2010 and 2020?

This article is structured into sections to confirm the findings' coherence and clarity. The introduction provides an overview of the topic and sets the stage for the analysis. The methodology section outlines the study design and its criteria, involving search strategy, inclusion and exclusion criteria, methodological quality assessment and the statistical methods used for the analysis. Findings are presented in the results and discussion section, and the interpretation is within the broad study domain. Finally, the key insights of the studies are presented in the conclusion section, along with limitations and future suggestions.

METHODOLOGY

This meta-analysis was carried out with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for meta-analysis and reporting systematic reviews (Parums, 2021). The upcoming sections will explain the search strategy, the inclusion and exclusion criteria for the studies, the data extraction procedure, methodological quality assessment and statistical data analysis. The methodology strictly follows the PRISMA guidelines to confirm the strong standards maintained in the research procedure. This framework helps with applicability and transparency for conducting systematic reviews and meta-analyses, which is important for providing unbiased and reliable findings. This detailed methodology results in an enhancement of the scientific value along with the integrity of the study.

This study duration is from 2010 to 2020 due to the significant increase in social media usage in 2010, followed by the advancement of many social media platforms (Kane et al., 2014). However, due to the lack of authenticity, this decade experienced a surge in the creation of misinformation and fake news (Di Domenico, Sit, Ishizaka, & Nunan, 2021; Meel & Vishwakarma, 2020); specifically during the year 2016 due to the presidential elections in America (Figueira & Oliveira, 2017). For media behaviours, the pre-pandemic period established a baseline and sample from 2010 for COVID-19, allowing for historical comparison and supporting longitudinal analysis to identify trends and changes over time. It distinguishes pandemic-specific shifts by capturing the evolution of media through the uses and gratification theory. The risk of bias assessment was also considered.

Based on Moola et al., (2017), a standardised critical appraisal instrument by the Joanna Briggs Institute has been utilised for the risk of bias assessment. N Stands for no, Y Stands for yes, and U stand for Unclear. The score from 1 to 9 represents the following statements:

1. Was the sample frame appropriate to address the target population?
2. Were study participants recruited appropriately?
3. Was the sample size adequate?
4. Were the study subjects and setting described in detail?
5. Was data analysis conducted with sufficient coverage of the identified sample?
6. Were valid methods used for the identification of the condition?
7. Was the condition measured in a standard, reliable way for all participants?
8. Was there appropriate statistical analysis?
9. Was the response rate adequate, and if not, was the low response rate managed appropriately?"

SEARCH STRATEGY

It is fundamental to develop a detailed search strategy to maintain the integrity of meta-analysis (Katsarov et al., 2022). It confirms that all relevant studies are recognised by reducing publication bias and offering broad data for analysis. This is vital in fields like public health, where emerging evidence can rapidly transform understanding (Iezadi et al., 2021). A careful search strategy, which includes several databases and manual searches of reference lists, broadens the review scope and identifies those studies that can be missed otherwise. The search strategies include information regarding the keywords utilised for this search, as presented in Figure 2. The researcher did not apply any language restrictions, and further inspection was done with the help of the selected references. In addition to the inspection for further studies through the references, grey literature was also searched manually.

INCLUSION AND EXCLUSION CRITERIA

Setting precise and transparent criteria for including and excluding studies is critical. These criteria confirm that only those studies are included that are related to the research questions and improve the reliability and coherence of the findings (Mpofu, 2021). This helps to define the boundaries of the review by affirming that there is comparability of studies on variables like population, design and outcomes relevant to the Uses and Gratification Theory and its influence on mental health during the COVID-19 pandemic. For this study, the following studies are included;

1. Reports the relationship between the uses and gratification perspective or theory and social media usage for sharing misinformation regarding the COVID-19 pandemic.
2. Significantly focused on the uses and gratification perspective or theory related to social media usage and reporting.
3. Assessed the reporting and news sharing on social media regarding COVID-19 and its impact on the mental health of the general public and social media users while considering the uses and gratification perspective or theory.
4. Presented in the full-text form.
5. Focused on very specific samples
6. Have not considered the uses and gratification theory

The following flowchart (see Figure 1) shows that using key terms and search terms in Google Scholar, PubMed, and Web of Science, the author found 100 records that were further filtered based on their relevance. Finally, after cross-checking, the duplication was eliminated, and 90 records were found. The implementation of title screening helped to identify 50 records, while 32 records were retained after the abstract screening. The articles were evaluated and screened based on full-text articles, where 20 records only passed the inclusion criteria. Overall, 15 papers were considered for the analysis since the identified investigations matched all the set inclusion criteria.

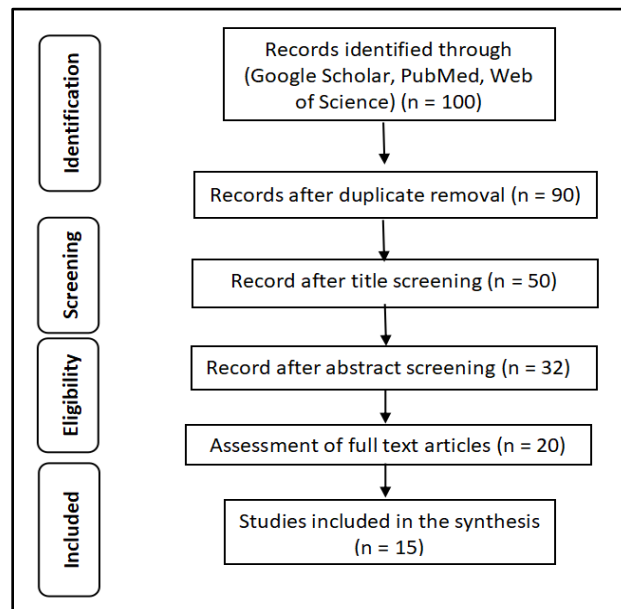


Figure 1: Flowchart of the study selection

Table 1 presents the search strategy used for the extraction of relevant papers.

Table 1: Web search strategies

<p>Google Scholar: (“pandemic COVID-19” OR “COVID-19” OR “fake news regarding COVID-19 and public mental health” OR “COVID-19 outbreak and public mental health” OR “pandemic of COVID-19, fake news dissemination and uses and gratification perspective” OR “Uses and gratification perspective”)</p> <p>Web of Science: (“pandemic COVID-19 and mental health” OR “COVID-19” OR “fake news regarding COVID-19 and uses and gratification perspective” OR “COVID-19 outbreak and uses and gratification perspective” OR “Fake news dissemination and uses and gratification perspective” OR “Uses and gratification perspective”)</p> <p>PubMed: (“pandemic of COVID-19 and fake news” OR “COVID-19” OR “Misinformation about COVID-19 and uses and gratification perspective” OR “COVID-19 outbreak and uses and gratification perspective” OR “Fake news dissemination and uses and gratification perspective” OR “Uses and gratification perspective”)</p>

METHODOLOGICAL QUALITY ASSESSMENT

The study focuses on data extraction, another vital aspect of a robust methodology. This focus is essential because systematic errors in data extraction can potentially influence the meta-analysis outcomes (Lee et al., 2022; Tierney et al., 2021). Using a standardised form and having multiple reviewers will reduce the data collection bias and lower the risks of errors, which can be seen in

single-reviewer setups (Schmidt et al., 2021). This procedure confirms that all critical information is collected structurally, helping to synthesise reliable and accurate data. Accurate data synthesis is vital for meta-analysis conclusions' validity, making this step one of the basics of the methodology utilised in the systematic review (Chandler et al., 2019; Pigott & Polanin, 2020). It also helps to evaluate the applicability and quality of the findings in a broader research context. In addition, checking the methodological quality of the included extracted studies is essential to examine their strength of evidence. It helps recognise the studies' risk of bias and understand how it can impact the meta-analysis findings. The PRISMA checklist is presented in Table 2.

Table 2: PRISMA checklist

Section	#	Checklist item	Reported on Pg. #
TITLE			
Title	1	Identification of the report as a meta-analysis or systematic review.	1
ABSTRACT			
Structured summary	2	Summarisation of the "background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number."	1
INTRODUCTION			
Rationale	3	Explanation of the rationale of this review.	2
Objectives	4	Explanation of the objectives and providing clear objectives.	4
METHODS			
Protocol and registration	5	Indication and explanation of the review protocol.	4
Eligibility criteria	6	Specification and indication of the eligibility criteria of the studies along with its rationale.	5
Information sources	7	Description of the information sources.	5
Search	8	Presentation of the search strategy.	4
Study selection	9	Stating the procedure of study selection in detail.	5
Data collection process	10	Description of the data collection procedure, data extraction procedure, and data confirmation procedure from the investigators.	5
Data items	11	Defining the variables and the items.	5
Risk of bias in individual studies	12	Description of methods applied for assessment of risk of bias in individual studies.	10
Results of individual studies	13	Simple summarisation of the studies.	6
Synthesis of results	14	Presentation of the results of all of the meta-analyses done.	6
Risk of bias across studies	15	Presentation of results regarding assessment of the risk bias across studies.	10
Additional analysis	16	Presentation of results of additional analysis.	13
RESULTS			
Study selection	17	Presentation of details regarding study screening, eligibility criteria assessment, and included studies.	12
Study characteristics	18	Presentation of the characteristics of the study.	6
Risk of bias within studies	19	Presentation of assessment of the risk of bias within studies.	10
Synthesis of results	20	Presentation of the results for the meta-analysis.	10
Risk of bias across studies	21	Presentation of assessment of the results of risk of bias across the studies.	10
Additional analysis	22	Results for additional analysis.	-
DISCUSSION			
Summary of evidence	23	Summarisation of the major findings of the study.	14
Limitations	24	Discussion of the limitations of the study.	16
Conclusions	25	Providing results with implications and future research recommendations.	15

Using standardised tools provides a structured strategy to critically appraise several aspects of execution and study design (Munn et al., 2015). This tool reduces subjectivity in the appraisal procedure and confirms consistency, essential for study comparison across several designs and settings (Marušić et al., 2020). The Joanna Briggs standardised critical appraisal instrument is utilised to review the studies included in this meta-analysis. Moreover, independent reviewers assessed and reviewed the studies included in this meta-analysis. Table 3 presents the risk scoring for the included studies.

Table 3: Risk of Bias Assessment

Studies	Quality score from 1 to 9									Total
	1	2	3	4	5	6	7	8	9	
(Apuke & Omar, 2021)	N	Y	Y	N	Y	Y	Y	U	Y	6
(Talwar et al., 2020)	Y	N	Y	Y	U	Y	U	Y	Y	6
(Heravi et al., 2018)	Y	Y	N	N	U	Y	Y	Y	Y	6
(Tandoc Jr et al., 2020)	Y	U	U	Y	Y	Y	Y	U	Y	6
(Froget et al., 2013)	N	Y	Y	Y	Y	U	U	Y	Y	6
(Ray et al., 2019)	N	Y	Y	Y	N	Y	Y	Y	Y	7
(Kaur et al., 2020)	Y	Y	Y	Y	N	N	Y	Y	Y	7
(Korhan & Ersoy, 2016)	Y	Y	Y	Y	U	N	Y	U	Y	6
(Shin, 2011)	Y	N	N	Y	Y	Y	N	Y	Y	6
(Basilisco & Cha, 2015)	Y	Y	U	Y	Y	N	N	Y	Y	6
(Mobarhan et al., 2014)	Y	N	Y	Y	Y	Y	Y	Y	N	7
(Smock et al., 2011)	U	Y	Y	Y	N	Y	Y	Y	Y	7
(Tanta et al., 2014)	N	Y	Y	Y	Y	Y	Y	Y	N	7
(Sampat & Krishnamoorthy, 2016)	Y	Y	N	Y	Y	Y	U	Y	Y	7
(Eginli & Tas, 2018)	Y	Y	Y	Y	Y	N	Y	Y	U	7

The independent reviewer's utilisation helps to reduce the reviewer's biases, offering an objective assessment of the high quality of the study (Pigott & Polanin, 2020). The characteristics of the included studies are provided in Table 4 below. The characteristics include the authors' names, the country in which the study was conducted, sampling method, sampling size, percentage of males and females in the sample, data collection method and the assessment of the study towards uses and gratification theory. Documentation of such characteristics affirms transparency and helps the readers gain knowledge of potential limitations and the context of the studies included (Kossmeier et al., 2020).

Table 4: Characteristics of included studies

Authors	Country	Sampling method	Sample size	Males (%)	Females (%)	Data collection method	Uses and Gratification Assessment
(Apuke & Omar, 2021)	Nigeria	Convenience sampling	385	53.2%	46.8%	Online questionnaire survey	Significant association.
(Talwar et al., 2020)	India	Convenience sampling	Two sets: 471 and 374 Social media users	55%	45%	Online questionnaire survey	Significant association.
(Heravi et al., 2018)	India, the USA, Australia, and the UK	Convenience sampling	874	49.6%	50.4%	Online questionnaire survey	Significant association of uses and gratification.

(Tandoc Jr et al., 2020)	Singapore	Survey sampling	2501 Survey respondents & 20 Interviewees	43%	57%	Online questionnaire survey	Dual aspect relationship between uses and gratification.
(Froget et al., 2013)	Mauritius	Simple random sampling	392	43.6%	56.4%	Online questionnaire survey	Different motives and uses are associated with gratification.
(Ray et al., 2019)	USA	Purposive sampling	395	63.54%	36.46%	Cross-sectional survey	Significant association of gratification and ease of use.
(Kaur et al., 2020)	Japan	Purposive sampling	309	61%	39%	Cross-sectional survey	The positive association between uses and gratification and intentions to act.
(Korhan & Ersoy, 2016)	Eastern Mediterranean	Convenience sampling	832	54%	46%	Online questionnaire survey	Uses and gratification related to entertainment and changing needs.
(Shin, 2011)	Korea	Convenience sampling	257	55.8%	44.2%	Web-based Questionnaire survey	Both gratification and confirmation impact intention.
(Basilisco & Cha, 2015)	Philippines	Convenience sampling	243	43.6%	56.4%	Online survey questionnaire using Google tool	A positive association between uses and gratification and social media usage.
(Mobarhan et al., 2014)	Malaysia	Convenience sampling	602	60%	40%	Semi-structured interviews	A significant association between gratification and the usage of social media.
(Smock, et al., 2011)	USA	Simple random sampling	267	65%	35%	Structured questionnaire-based survey.	Association between gratification and different features of the Facebook application usage.
(Tanta, Mihovilović, & Sablić, 2014)	Croatia	Purposive sampling	431	55%	45%	Questionnaire-based survey	Socialisation and communication through social media applications bring a significant level of gratification.
(Sampat & Krishnamoorthy, 2016)	India	Convenience sampling	242	49.6%	52.8%	Online questionnaire-based survey.	A significant association between gratification and motivation to perform actions.
(Eginli & Tas, 2018)	Turkey	Purposive sampling	10	60%	40%	Interviews	A significant association between gratification and the usage of social communication applications.

STATISTICAL ANALYSIS

In meta-analysis, there must be a careful selection of the statistical tool used for analysis to handle the heterogeneity and complexity of the data appropriately. It is crucial to select an appropriate model as it will directly impact the reliability and strength of the results. In this study, a random effect model along with the genetic inverse variance method has been implemented,

which is an appropriate technique for meta-analysis; having expected variability across studies, it is considered in this technique that those studies that are included are the samples of all potential studies and helps for variability beyond sampling error. This model is suitable in this context as there is potential heterogeneity, and it will offer a more conservative estimate and consider the differences among the study results (Stogiannis, Siannis, & Androulakis, 2024). Moreover, evaluating the publication bias and heterogeneity is essential for interpreting the strength of the results obtained through meta-analytically, impacting the conclusion confidence drawn from the meta-analysis (Borenstein, Hedges, Higgins, & Rothstein, 2021).

Moreover, the double arcsine transformation of prevalence by Freeman and Tuckey has also been implemented for stabilisation (Lin & Xu, 2020). For the analysis of heterogeneity among the studies, Hedges Q has been applied, and the level of significance applied over here was equal to $p < .10$. Moreover, the I² statistic has been introduced alongside a 95% confidence interval for quantification of heterogeneity, the values of I² that are present between 25% to 50% are supposed to be low. In contrast, the values between 50% and 75% are supposed to be moderate, whereas those above 75% are set as high values. High levels of heterogeneity indicate that the variability in effect estimates is because of study differences despite chance alone (Pustejovsky & Tipton, 2022). Variation can be present in such a situation when different studies on the same problem present different results because of the variation in the sampling. Then, that variation is not explained fully. The heterogeneity can result from differences in the demographics of the sample for different studies or the designs of the other studies. It is essential to address heterogeneity to affirm the validity of the conclusions drawn from the meta-analysis (Solanki, Fitzpatrick, Jones, & Lee, 2020).

Furthermore, sensitivity analysis was also carried out to assess the impacts of individual studies on each other. This analysis facilitates the recognition of whether a single study affects the overall result disproportionately, thus confirming the credibility of the findings. Moreover, the bias of publication was found with the help of a funnel plot, Egger's analysis (Egger, Schneider, & Smith, 1998) and Begg's analysis (Becker, 1997), where p values $< .10$ represent the publication bias. Addressing and detecting the publication bias is crucial as it influences the reliability and accuracy of the meta-analytic conclusions (Page, Sterne, Higgins, & Egger, 2021). Metaprop package and STATA statistical software have been utilised. Advanced statistical software like STATA improves the accuracy and precision of meta-analytic visualisations and computation (StataCorp, 2020).

RESULTS AND DISCUSSION

Figure 2 below represents the procedure for selecting the studies included in the synthesis. The total record of studies that were identified through the search on Web of Science, Google Scholar and PubMed was equal to 100. Later on, after the deletion of the duplicate studies, 90 studies were left, whereas, with further screening and analysis of the titles, 40 more studies were deleted, so 50 studies were left for synthesis. Furthermore, the abstracts of the studies were analysed to check their relevance. The irrelevant studies were discarded based on the abstract summarising the whole research. After the deletion because of the abstract screening, 20 studies were left.

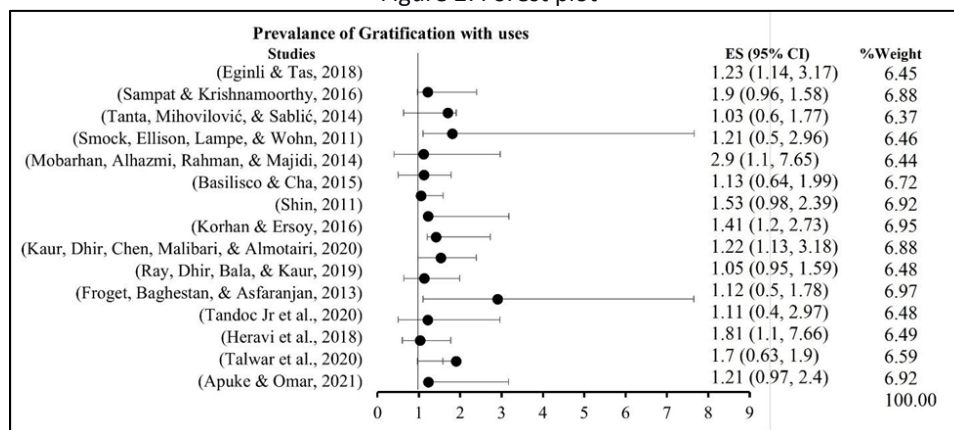
Furthermore, full-text articles were analysed and assessed for inclusion in the meta-analysis. After this assessment, 15 studies were left. These are the 15 studies included in this meta-analysis for synthesis. Table one represents the characteristics of the included studies. In the data extraction procedure from the studies, the authors of the studies were extracted and presented in Table 1, the country names were extracted, and the sampling method and sampling size were extracted.

Moreover, the data presents the percentage of males in each study and the rate of females in the sample for each survey. Furthermore, the data collection method and assessment of uses and gratification regarding each study are provided in the table. Figure 2 represents the forest plot associated with each study's uses and gratification assessment. Through this analysis, it has been found that there is no bias related to publication present for these studies. So, the publication bias has been negated by the results of this study. This test and results have also been confirmed by further analysis done by the performance of Begg's analysis, resulting in a p-value of .301, a non-significant value, representing no publication bias present for the selected studies.

Further, both of these results and values were confirmed by Egger's test results, which have resulted in a value equal to .124, representing no publication bias present for these studies. Moreover, it is also proposed that publication bias cannot always be the problem in the meta-analysis and is not an issue in this meta-analysis, as the prevalence rate represents the outcome measure that has resulted in non-significant levels that can include biased publications. In the table, the sections mentioned are essential for a meta-analysis according to PRISMA. Furthermore, the checklist items have been elaborated alongside the page on which they have been reported.

The web search strategies were presented, showing the keyboards utilised and the methods implemented to retrieve the required studies from Google Scholar, Web of Science and PubMed. Risk of bias assessment has been provided in Table 1, which provides the quality score for the studies from 1 to 9. It has been identified that the studies by Apuke and Omar (2021), Talwar et al. (2020), Heravi et al. (2018), Tandoc Jr et al. (2020), Froget et al. (2013), Korhan and Ersoy (2016), Shin (2011) and (Basilisco & Cha, 2015) have a quality score of 6. Whereas the studies by Ray et al. (2019), Kaur et al. (2020), Mobarhan et al. (2014), Smock et al. (2011), Tanta et al. (2014), Sampat and Krishnamoorthy (2016) with Eginli and Tas (2018) have a quality score of 7 based on the risk of bias assessment results.

Figure 2: Forest plot



The results of the meta-analysis have reflected the positive role of gratification. The study by Apuke and Omar (2021) has taken different kinds of gratifications into account to determine the impacts on the preference of usage and ways of usage. It has been found that all sorts of gratification significantly impact the motivation to use social media in a specific way (Xu et al., 2012). It has also been observed that gratification plays a significant role in using social media to spread and share fake news. The studies by Talwar et al. (2020), Heravi et al. (2018) and Tandoc Jr et al. (2020) have represented that gratification can work in both ways. It can either result in positive results or negative results and actions. It, therefore, becomes apparent that gratification cannot be looked at as a simple gain but rather as the result of an interaction between the person and the context, which can have significant effects. In the case of the study by Froget et al. (2013), it has been proven that one can be gratified by reporting fake news and negating fake news on social media.

In the study by Ray et al. (2019), it was imposed that gratification comes from posting fake news on social media for recognition and internal satisfaction. Moreover, the studies by Kaur et al. (2020), Korhan and Ersoy (2016), Shin (2011) with Basilisco and Cha (2015) have represented that gratification can result in several internal feelings, including the feeling of acknowledgement, internal satisfaction, and entertainment (Froget et al., 2013). This finding is essential in considering the persuasive nature of fake news on social media because it means that while external factors may influence people's actions, there are always internal motives that make people more vulnerable. These motives may involve a desire for recognition or power.

As a result of the assessment of the spreading of fake news on social media during COVID-19 and its impacts on the mental health of the general public and social media users, from the uses and gratification perspective, the assessed studies have resulted in interesting findings. A study by Apuke and Omar (2021) has reported that the circulation of misinformation is positively related to information dissemination gratification. The association of socialisation gratification and fake news sharing related to COVID-19 is positive and significant. No relationship between entertainment gratification and phoney news dissemination. Whereas the study of Talwar et al. (2020) proposed that to remain popular, sharing fake news by social media users, religious and non-religious, is observed to be sensational, and the sense of gratification has been associated with it. Altogether, these findings suggest the need to investigate the influence of psychology, sociology, and information science on the spread of fake news.

Heravi et al. (2018) have proposed a significant association between the usage of social media platforms by users for entertainment, the spread of misinformation and the feeling of gratification by social media users. It has been analysed that the results of the uses and gratification perspective can result in both directions; first, posting fake news and sharing misinformation can bring a sense of gratification to a social media user. This can be the first form of gratification of using social media platforms to share and spread misinformation. On the other hand, removing misinformation and catching the culprit behind the sharing of the misinformation can also cause gratification for the person and internal satisfaction (Tandoc Jr et al., 2020). This nuanced understanding is necessary for preventing the spread of false information and fostering awareness about the importance of critical thinking when reading the news and using social media platforms.

Froget et al. (2013) proposed that gratification is, first of all, strongly associated with using social media for entertainment. After that, it is strongly related to the use for discussion; in the third place, it is strongly associated with the use for meeting people. Lastly, it is most related to maintaining relationships. Ray et al. (2019) have proven that gratification is significantly related to the different kinds of uses. Still, it is positively and significantly associated with the uses based on the promised contents' ease of use and delivery. Whereas, while assessing the sentiments of the users, Kaur et al. (2020) have identified that intention to purchase, intention to perform an action and intention to use directly and significantly associated with the uses and gratification perspective, uses and gratification perspective significantly influence the frequency and intention of usage. This insight is essential because it means that the motives and reasons behind social media interactions differ and can shade the rates of interaction and sharing of fake news and influence the creation of approaches and solutions for the fight against fake news on social media. Korhan and Ersoy (2016) proposed that using different social media platforms significantly enhances university students' gratification levels. Most students find Instagram to be the most entertaining and are the most gratified by its usage.

Moreover, the usage and gratification of the students in the university are also related to the students' changing levels of needs. In the light of the uses and gratification theory, it has been found that both confirmation and gratification significantly play a role in forming, reforming, or deforming the intention of usage and intention of acting. Shin (2011) has identified that uses and gratification-based motivation significantly relate to social media usage. These motivators related to uses and gratification are identified as seeking convenience, friends, entertainment, social support, and information. Basilisco and Cha (2015) have also observed that a significant association is present between the gratification that social media users feel and the usage of social media for different sorts of gratification, including the gratification of entertainment, gratification related to connecting to friends and the gratification obtained through support.

The level of gratification of different social media users depends significantly on the features of the social media applications, and the gratification varies from one feature to another feature. This has shown that gratification is significantly and positively associated with the usage method and type (Mobarhan et al., 2014). It has been observed through the results of the study by Smock et al. (2011) that most of the gratification for social media users is obtained through socialisation with friends and communication with people online, which means that spreading of misinformation and sharing information brings gratification alongside with the communication and socialisation with friends and people online. The study by Tanta et al. (2014) analysed the impacts of gratification on the motivation of social networking gamers. It has been found that there is a significant association of gratification with the motivation to play social networking games. Gratification is also responsible for the consistent motivation behind the performance of a specific task, which is also related to positive word of mouth (Sampat & Krishnamoorthy, 2016).

The study results by Eginli and Tas (2018) are analysed according to the uses and gratification perspective or theory. The analysis of the findings of this study regarding the uses and gratification perspective or theory aids in appreciating the need to try and understand what the individual intends to gain in combating fake news by formulating mechanisms to quash such an entity. In that case, it can be identified that the users of the different social media sites have represented that the social networking sites have characteristics of relational socialisation,

informational cooperation, strategic, expressive, and four dimensionalities, and the users significantly respond to the need for interpersonal communication.

As identified earlier, most studies that have considered the spread and sharing of fake news in the context of the COVID-19 pandemic and the mental health of the general public have not significantly considered the uses and gratification theory and perspective.

CONCLUSION

This study has significantly provided the association of uses and gratification perspective with a significant focus on the usage of social media in a certain way, the usage of different social media platforms, and the motivations behind that. The study examined 15 previous studies from 2010 to 2020. It has also been found that almost no study previously has considered the meta-analysis of the earlier studies regarding the spread and sharing of fake news in the context of COVID-19 and the mental health of the general public. Moreover, other studies that have discussed this issue have yet to conduct meta-analyses about the uses and gratification perspective. So, this study significantly contributes to the literature and theory regarding the importance of uses and gratification perspective when using social media for spreading fake news during health issues and pandemics and its impacts on the general public and social media users. This study can also be implemented and utilised to control the algorithm that controls social media usage by social media users to minimise the level of fake news sharing and spreading on social media.

However, this study also experienced some limitations, including the limitations of studies included for meta-analysis, as only 15 studies have been included for the synthesis or the meta-analysis, so future researchers are recommended to consider a more significant number of studies for meta-analysis. As a result, the results can be generalised significantly and implemented from further perspectives. Moreover, the period taken to select the studies is also limited. Future researchers are recommended to consider an extended period. Moreover, future researchers should consider issues like bowling on social media and online platforms alongside the uses and gratification theory or perspective for future meta-analysis studies. In addition, future studies need to conduct qualitative analysis to deepen the understanding of user motivation and behaviours behind sharing fake news. This strategy will offer a more robust perspective on the uses and gratification theory in the context of social media and the dynamics of misinformation dissemination.

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