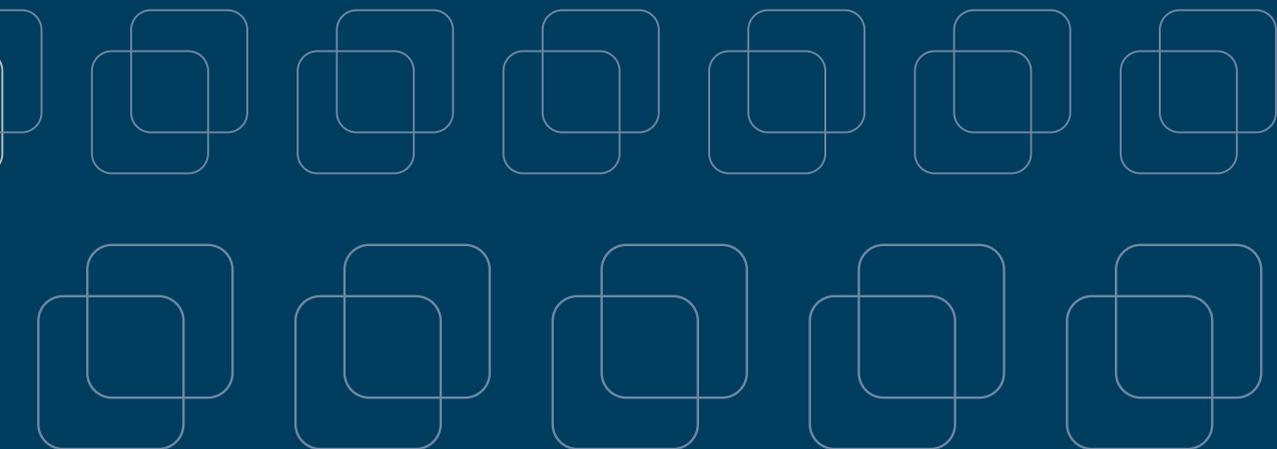


Faculty of Journalism
Lomonosov Moscow State University

World of Media

Journal of Russian Media and Journalism Studies

Issue 4, 2021



World of Media
Journal of Russian Media and Journalism Studies
Issue 4, 2021

Editor-in-chief: Elena Vartanova, Lomonosov Moscow State University, Russia
Executive editor: Anna Gladkova, Lomonosov Moscow State University, Russia

Advisory board:

Janusz Adamowski, University of Warsaw, Poland
Bogusława Dobek-Ostrowska, University of Wrocław, Poland
Jozef Dzyaloshinsky, National Research University – Higher School of Economics, Russia
Henrikas Iouchkiavitchious, Adviser to Director-General, UNESCO
Galina Schepilova, Lomonosov Moscow State University, Russia

Editorial board:

Bhanubhakta Acharya, University of Ottawa, Canada
Patrik Åker, Södertörn University, Sweden
Svetlana Bodrunova, St-Petersburg State University, Russia
Nico Carpentier, Charles University in Prague, Czech Republic
Alexander Chernov, Cherepovets State University, Russia
Terry Flew, Queensland University of Technology, Australia
Michael Freund, Webster University, Vienna, Austria
Michał Głowacki, University of Warsaw, Poland
Gregory Goldenzwaig, Södertörn University, Sweden
Daniel C. Hallin, University of California, San Diego, USA
Galiya Ibrayeva, Al-Farabi Kazakh National University, Kazakhstan
Sadia Jamil, Khalifa University of Science and Technology, UAE
Katja Lehtisaari, University of Helsinki, Finland
Boris Lozovsky, Ural Federal University, Russia
Mikhail Makeenko, Lomonosov Moscow State University, Russia
Paolo Mancini, University of Perugia, Italy
Lev Manovich, City University of New York, USA
Anthony Moretti, Robert Morris University, USA
Wolfgang Mühl-Benninghaus, Humboldt University, Germany
Hannu Nieminen, University of Helsinki, Finland
Kaarle Nordenstreng, University of Tampere, Finland
Anatoly Puyu, St-Petersburg State University, Russia
Massimo Ragnedda, Northumbria University Newcastle, Great Britain
Lyudmila Shesterkina, South Ural State University, Russia
Greg Simons, Uppsala University, Sweden
Hedwig de Smaele, KU Leuven, Belgium
Olga Smirnova, Lomonosov Moscow State University, Russia
Dmitry Strovsky, Ariel University, Israel
Pal Tamas, Institute of Sociology – Hungarian Academy of Sciences, Hungary
Jens Wendland, FRDIP Institute, Germany

Designer: Elena Sirotnina, Lomonosov Moscow State University, Russia
Cover designer: Arina Balantseva, Lomonosov Moscow State University, Russia

First published in 2021 by the Faculty of Journalism, Lomonosov Moscow State University

Printed in Moscow, Russia
9 Mokhovaya, Moscow, 125009, Russia

ISSN 2307-1605 (print)
ISSN 2686-8016 (online)

CONTENTS

Lead article

Royally represented or royally shafted? Effect of positive and negative captions and ideological beliefs on readers' evaluations of Kate Middleton and Meghan Markle

Anita A. Azeem, John A. Hunter, Ted Ruffman 5

Articles

COVID-19 and online education: Digital inequality and other dilemmas of rural students in accessing online education during the pandemic

Malini Srinivasan, Jishnu D., Shamala R. 34

Information sources, knowledge and compliance to COVID-19 safety protocol in Borno State, Nigeria

Joseph Wilson, Chima Onuekwe, Abdulmutallib Ado Abubakar, Collins Owili, Henry Okoro-Nwanja 55

LEAD ARTICLE

Royally represented or royally shafted? Effect of positive and negative captions and ideological beliefs on readers' evaluations of Kate Middleton and Meghan Markle

Anita A. Azeem¹

John A. Hunter

Ted Ruffman

University of Otago, New Zealand

To cite this article: Azeem, A., Hunter, J. A., & Ruffman, T. (2021). Royally represented or royally shafted? Effect of positive and negative captions and ideological beliefs on readers' evaluations of Kate Middleton and Meghan Markle. *World of Media. Journal of Russian Media and Journalism Studies* 4: 5-32. DOI: 10.30547/worldofmedia.4.2021.1

Abstract

We conducted a randomized controlled experiment to investigate the role of descriptive captions (positively and negatively worded) and ideological beliefs (Right Wing Authoritarianism and Social Dominance Orientation) on viewers' evaluations of two popular British Royal family members namely Meghan Markle and Kate Middleton. Participants included 300 undergraduate students from Dunedin, New Zealand who were randomly assigned to one of the four conditions: (1) Pro-Kate, (2) Anti-Kate, (3) Pro-Meghan or (4) Anti-Meghan captions accompanying the parallel images of these Royal members. We also included several distractor variables about other Royal family members and traditions. Outcomes were recorded as evaluations of six royal members (Charles, Diana, William, Harry, Kate, and Meghan). We found no significant effect of caption manipulation on outcome evaluations of Meghan and Kate. However, social dominance negatively correlated with Meghan and Harry whereas authoritarianism positively correlated with ratings of Charles. Our results indicate that a one-off exposure to biased media regarding celebrities may not significantly alter audience's evaluations of them, but ideological beliefs may influence this process, nonetheless.

¹ **Corresponding author**

Anita A. Azeem, Department of Psychology, University of Otago, PO Box 56, Dunedin, New Zealand.

E-mail: anita.azeem@otago.ac.nz; aroonanita@gmail.com

Keywords

Biased media, biased picture captions, SDO, RWA, Royal Family.

Introduction

Celebrities spend millions of dollars on marketing agencies to create a positive image in the media (Grunig 1993). Earnest followers of such sources may become psychologically involved with the celebrity as they develop a sense of intimacy with them owing to the amount of time and energy they have invested in reading or watching stories about them (Levy, 1979). Thus, media sources (like magazines, TV, newspapers and websites) act as reservoirs of beliefs and values which can shape public attitudes towards individuals, groups of people and issues (McCombs & Shaw, 1972). With the advent of tabloids, social media and online news, celebrity and political news has become not only widespread but also a potential source of misinformation (Frampton, 2015). To be the most 'liked' and 'shared' source of information, channels try to find the most unique or sensational news regarding celebrities which may or may not be true.

Royal family and the media

Members of the British Royal family have traditionally graced the entertainment pages of news, covers of magazines and make numerous appearances on television. In fact, on 2 June, 1953, when the coronation of Queen Elizabeth II took place, many families reportedly bought their first TV sets to watch and the *Daily Express* carried a headline describing it as 'Queen's Day—TV's Day' (Clancy, 2019). It was a special time in history as the public could now witness a highly exclusive event. Since then, several events of the Royal family have been viewed by billions of people around the world. Nearly 2.5 billion people in 200 countries (Baker, 2014; Brown, Basil, & Bocarnea, 2003) reportedly viewed Princess Diana's funeral in 44 different languages, making it one of the most watched events in history (Payne, 2000).

Several studies thereafter were conducted on the effects of news media reports on audience reactions (Myers, 2000; Puijk, 2009; Thomas, 2008). Months after her death, researchers started doubting if Diana's death was mourned as strongly by the audience around the globe as the media had portrayed. It was argued by researchers that the audience had learnt their reaction from the media portrayal of events (Dayan & Katz, 1992; Linenthal, 2001) and that the media created emotions in the public (Couldry, 2003; Lukes, 1975).

Given that a) media influences perception about celebrities, b) There is a general interest in the British Royal Family all around the globe and c) there is a recent Royal member who could be classified as an outgroup member based on her biracial descent, we examined the impact of biased media on perceptions of Meghan Markle as compared to Kate Middleton. The reason for comparing these two is obvious. Both of have a several things in common a) they are influential women b) they were not born royal and c) both frequently appear on fashion magazines covers and are evaluated by TV channels and the audience for their fashion and life choices.

Representation of Kate and Meghan

Ever since Prince Harry announced his engagement to Meghan Markle, journalists have been busy publishing various news stories regarding Meghan and her family. In 2018, *Time* and *Daily Express* mentioned that Meghan would modernize the Royal family (Attiah, 2018). Meghan is different from all the other royal members because of several reasons: she is biracial, a divorcee and an actress with strong feministic opinions (Ardifa & Yamin, 2020). However, Meghan's racial background has been highlighted by the media more often than her previous job, her nationality or her ex marriage. It appears that her ethnicity makes it most difficult for people to accept her as a part of the Royal Family. For instance, in 2018, *Glamour Magazine* and the *Sun* published the following headlines respectively: "Meghan Markle is an American woman, a daughter to a black mother and a white father, a descendant of those enslaved and those who were always free" and "[H]er mother is black with dreadlocks, and she passes as Caucasian; she often received hurtful comments about whether Doria was her real mum." (Ardifa & Yamin, 2020).

Recent scientific findings also indicate that Kate is generally represented in a more positive manner than Meghan by all newspapers (Eriksson, 2020; Ribot, 2019). Some specific examples targeting Meghan's racial background can be seen as published by *The Guardian* on 20 May, 2018, "The excitement about a black princess simply underlines how anachronistic the royal family really is." Lastly, in comparison to Kate, *The Guardian* on 17 December published, "The rumour itself is enough – the angry black woman [Markle] making a Defenceless white woman [Middleton] cry is exactly the kind of thing the press has prepped for since Meghan entered the royal family." The distinction between the two is clear by the last headline. Clearly Meghan's biracial identity is overpowering all her achievements at least in how the UK tabloids represent her and although she and Kate are both are married to Princes, it appears that the media generally presents them quite differently.

In fact, some media critics have noted that there is a disparity in the reporting of Meghan Markle vs. reporting of Kate Middleton even in instances when they both made the exact same choices. For instance, on 21 May, 2018, the British tabloid, Daily Mail published a picture of Kate Middleton entitled, “Pregnant Kate tenderly cradles her baby bump while wrapping up her royal duties ahead of maternity leave” (Brennan, 2018). The same source, on 28 January, 2019, published pictures of pregnant Meghan Markle with the title, “Why can’t Meghan Markle keep her hands off her bump? Experts tackle the question...” Similarly, on September 14, 2017, *The Express* carried the headline, “Kate’s morning sickness cure? Prince William gifted with an avocado for pregnant Duchess.” But on January 23, 2019, the Daily Mail published, “Meghan Markle’s beloved avocado linked to human rights abuse and drought, millennial shame.” (Brookes, 2020). Meghan Markle has been represented in the media quite differently than Kate Middleton even when she made similar choices and decisions, and when the pictures accompanying the headlines were near identical, leading to the conclusion that Meghan Markle has frequently been demonized and presented negatively (Brookes, 2020).

Mahfouz (2018) investigated Meghan Markle’s portrayal on Facebook and noted that those who posted about her can be clearly divided into two groups: pro-Meghan and anti-Meghan. The former often highlighted her independence, achievements, strength and involvement with the UN. The anti-Meghan group, on the contrary, focused on her racial descent, her profession as an actress and her previous marriage. This research indicates that indeed individuals have quite polarized opinions about her. It is then worth considering what the impact of negative media representations can be.

Impact of media representation

Two popular theories in media studies that have been extensively used to understand media representations are Agenda Setting Theory (McCombs & Shaw, 1972) and Framing theory (Goffman, 1974). Agenda setting research focuses on which issues are emphasized in the media whereas framing theory focuses on how they are discussed (Weaver, 2007). Minority groups, particularly ethnic and gender minorities, are largely underrepresented in the media and they are frequently portrayed negatively (Ramasubramanian, et al., 2017). Currently, African Americans are the only ethnic minority that receives a proportional amount of publicity (i.e. receives as much airtime on prime television as the percentage of population) (Behm-Morawitz, & Ortiz, 2013). However, this amount of publicity is not good news as the content is

often laden with stereotypical representations. So regardless of how frequently an individual or group appears in the media, a greater concern is how they are represented (framed in the media) and more importantly how that impacts the media consumers' attitudes, evaluations, emotions and behaviours.

The US media has recurrently framed ethnic minority groups as “a burden on the nation's economy”, “violators of American traditions”, the “most important problem in the country” (Dunaway, et al., 2007; Johnson, et al., 2003) as well as a threat to us (Atwell Seate & Mastro, 2016; Dragojevic, et al., 2016). Similarly, Hanson-Easey and Augoustinos (2010) argued that the UK media systematically represented others as a threat to the dominant community.

A number of researchers have evaluated media content in terms of the resulting emotional valence (positive or negative) and arousal (strength of emotion). For instance, threat, danger, war, destroy, fear and illegal are all negatively valenced words that cause high arousal in the readers and are frequently used to describe outgroup members (Barrett, 2004). African Americans have consistently been portrayed as “criminals”, “lazy”, “violent”, and “troublemakers” (Oliver, 1994; Staples, 2011). This ethnic minority has been the most well-researched, with all studies pointing to the same conclusion, that is, they are frequently represented as inferior, less civilized, are four times more likely to appear as perpetrators of crimes than as police officers on TV and are often overrepresented in violent roles and severely underrepresented in positive roles (Dixon & Linz, 2000; Eberhardt, 2019;). Women of colour also have a higher probability of appearing as hyper-sexual and workers who lack a work ethic (Tukachinsky, et al., 2015). In fact, Behm- Morawitz and Ortiz (2013) noted that a few character types have been developed to describe an African American woman and most TV representation is confined to these characterizations: Black Mammy (a faithful and asexual servant to white characters), Jezebel (a woman with somewhat lighter complexion who is highly sexualized and aggressively competes for White males' attention) and Sapphire (angry black female).

Such bias in frames impact an audience's attitudes and behaviours regarding fat prejudice (Frederick, Tomiyama, Bold, & Saguy, 2020), mental illness (Gwarjanski & Parrott, 2017), ethnic minorities (Cho, Gil de Zuniga, Shah, & McLeod, 2006) and immigrants (Jacobs & van der Linden, 2017) in a direction predictable from the bias. For instance, Frederick, Tomiyama, Bold, and Saguy (2020) found that fat-negative frames predicted support for policies discriminating against obese people, higher anti-fat attitudes and negative judgments of fat people, whereas fat-positive frames predicted more inclusive attitudes and behaviours. Similarly, negatively worded news story regarding North African immigrants lead to an

increase in unfavourable attitude towards that ethnic group whereas positively worded news had the opposite effect (Jacobs & van der Linden, 2017). Thus, for this unique study, our main interest was in comparing how consumption of biased posts/news affected viewers' perceptions of these royal members? At present it is unknown although general studies in news framing suggest that audiences' attitudes and behaviours are influenced by how the media frames issues (Entman, 1993).

Audiences' prior knowledge and attitude

No discussion on media manipulation would be complete without considering individual differences within the audiences. For instance, would media manipulation work or individuals who have greater prior knowledge about the issue? What about those who already have fixed beliefs?

Some studies have suggested that well-informed recipients are less likely to rely on media alone (Huber & Lapinski, 2006; Schemer, 2012). Likewise, some pre-existing dispositions (e.g., intolerance, high prejudice) may prevent individuals from altering their attitudes or behaviours even after exposure to positive media (e.g., Amir, 1969; Mastro & Tukachinsky, 2011). These studies highlight the importance of prior knowledge and pre-existing beliefs. Hence, when studying bias in news stories, it is also important to include measures of prior knowledge and ideological beliefs as well. Below, we consider two measures of biased beliefs.

Social Dominance Orientation (SDO; Sidanius & Pratto, 1999) and Right-Wing Authoritarianism (RWA; Altemeyer, 1998) have emerged as two robust predictors of prejudice (Wilson & Sibley, 2012). SDO and RWA both measure prejudice but researchers argue that they relate to different types of prejudice (Altemeyer, 1998; Duckitt, 1993; Sidanius & Pratto, 1999). SDO measures an individual's support for group-based hierarchy (Sidanius & Pratto, 1999). For instance, someone who score high on SDO would support existing social groupings and suggest that we should not strive for equality. RWA, on the other hand, focuses on submission to authority, conventionalism and obedience to those in power, for instance, teachers, political leaders and parents.

SDO is sustained by the need to enforce existing hierarchies whereas RWA emphasizes submission to authority and the maintenance of existing conventions and norms (Altemeyer, 1998; Duckitt, 1993; Sidanius & Pratto, 1999). Thus, both SDO and RWA are likely to impact on attitudes towards British royal family. Those high in both would see the royal family as upholding conventions and norms, helping to enforce existing hierarchies ('blue bloods' of noble birth

worthy of the throne versus commoners), and emphasizing submission to authority (with royals deemed to have a key role in guiding society). In this light, Kate Middleton might be seen as worthy since she is English, White, came from a wealthy family, and attended exclusive boarding schools. In contrast, although Meghan Markle also attended an exclusive preparatory school, she is American, mixed race, and did not come from a particularly wealthy family. As a result, those high in SDO and RWA might see Kate Middleton as more entitled to her role in the royal family than Meghan Markle.

Current study

In the current study, we presented photographs along with captions pertaining to British royal family members. Our use of photographs and accompanying captions (rather than lengthy articles or videos) was because the arrival of digital images was accompanied by a surge in the use of photographs in online and print sources (McNamara, 2011). Our main interest was in Kate Middleton versus Meghan Markle, although we included neutral information about other royal family members so that our research question isn't obvious to the participants. The experimental photographs pictured the two main protagonists in near equal circumstances (e.g., with Kate Middleton and Meghan Markle both fondly caressing their baby bumps).

Given that (a) media representation may alter an audience's attitudes, (b) there is a lot of interest in the British royal family even outside Britain and (c) SDO and RWA are related to prejudice, we hypothesized that:

1) Participants who viewed positive captions about Kate Middleton or Meghan Markle would rate each more positively than those who viewed negative captions about each.

2) Prior knowledge or involvement with the royal family would also be an important factor in the evaluations such that participants who a lot of prior information may be biased to view Meghan Markle negatively and Kate Middleton positively (given the bias present in the popular press), and therefore may not be influenced by the positive or negative captions.

3) People higher in prejudiced attitudes (SDO and RWA) would rate Meghan Markle more harshly, and in contrast, would display positive feelings for other royal members.

Methodology

Participants

University students ($N = 300$) completed a survey on Qualtrics®. Of these, 151 completed it in our research lab and 149 completed it from their home due to the covid-19 crisis. We inserted 12 attention questions throughout the survey and there were no significant differences between the attention scores of those who completed the study in the lab ($M=10.97$; $SD=1.33$) and those who completed it online from home ($M=10.86$; $SD=1.33$), $t(296) = .748$, $p = .455$. Therefore, we combined the data retaining only participants that had a score of 11 or 12 on the attention questions ($N=216$; 186 females). On average, these participants were 20 years old ($SD = 3.06$). Ninety-seven percent of the participants were currently enrolled in an undergraduate degree, with 65.7% pursuing a degree in Arts.

When asked if they would rate themselves as politically right or left, ranging from 1-9 (where 1 referred to political left and 9 referred to politically right) more respondents identified as politically left ($M=3.83$; $SD=1.74$). When asked if they support the British monarchy (on a scale from 1-9, where a high score meant higher support), participants displayed modest support for monarchy ($M=3.85$; $SD=2.08$). When asked how much prior information they had about the Royal family (1 = none at all, 2 = A little bit, 3 = A moderate amount, 4 = ardent follower), most indicated that they had no to little prior information ($M=1.53$; $SD=1.708$).

Procedure and Material

Participants were recruited via the Otago University's experimental participation pool and received course credit for completing the study on Qualtrics®, an online survey platform. After providing informed consent and basic demographic information, participants completed the 6-item versions of the SDO and RWA scales (Appendix A).

The participants then watched a short video introducing them to the British Royal family. The video simply explained how Queen Elizabeth was related to Prince Charles, Princess Diana, Harry, Will, Kate and Meghan. After watching the introductory video, participants viewed 32 picture/caption sets: 26 of these were distractor slides and 6 were experimental slides. The distractor slides had pictures and neutral descriptions about Prince Charles, Princess Diana, Prince William and Prince Harry. These stimuli were consistent across the four experimental groups. However, the six experimental slides were inserted amongst these distractors in a random order. We used four caption conditions for

these experimental slides (*see Appendix B*), with participants randomly assigned to one condition: Pro-Kate ($N=55$), Anti-Kate ($N=56$), Pro-Meghan ($N=51$) and Anti-Meghan ($N=54$). The descriptions in Appendix B appeared with a relevant image of either Kate or Meghan. Further, all six experimental slides were taken from actual British tabloid stories, including the Daily Mail, Mirror, Express and Sun, and were balanced by, for instance, turning a pro-Kate headline like, "Pregnant Kate tenderly cradles her baby bump while wrapping up her royal duties ahead of maternity leave" (*Daily Mail*: March 22, 2018) and replacing 'Kate' with 'Meghan' for the pro-Meghan group. Likewise, we used actual anti-Meghan captions like, "Why can't Meghan Markle keep her hands off her bump?" and replaced 'Meghan Markle' with 'Kate Middleton' for the anti-Kate experimental group.

At the end of all the slides, participants were asked to rate Prince Charles, Princess Diana, Prince William, Prince Harry, Meghan Markle and Kate Middleton along different dimensions (*See Appendix C*).

Measures

We used five measures for this study.

Royal Ratings. Attitudes towards the royal family members were measured by asking participants to rate each royal member along 20 dimensions on a nine-point Likert scale (*see Appendix C*). This scale was adapted from Hunter et al. (2015), who used it for assessing intergroup discrimination. In this way, 20 ratings were obtained for each royal family member in this study (Charles, Diana, Kate, William, Meghan, and Harry). Ten negative adjectives were reverse-scored (unhelpful, cold, selfish, unfair, dishonest, untrustworthy, inconsistent, arrogant, shy and hypocritical) and averaged with the 10 positive adjectives (cooperative, intelligent, strong, flexible, sincere, friendly, soft-spoken, non-aggressive, well-informed, reticent and confident) to compute a composite score for outcome feelings for each royal member. A higher score on this scale reflected more favourable evaluations of the royal family member. There was high internal consistency in responses using this scale for all members: Kate ($\alpha = .934$; $M = 6.81$; $SD = 1.03$); Meghan ($\alpha = .922$; $M = 5.44$; $SD = 1.04$); Diana ($\alpha = .90$; $M = 2.34$; $SD = .856$); William ($\alpha = .925$; $M = 6.18$; $SD = 1.09$); Harry ($\alpha = .918$; $M = 6.18$; $SD = 1.09$) and Charles ($\alpha = .916$; $M = 5.38$; $SD = 1.06$).

Prior Knowledge Quiz. We created a Prior Knowledge Quiz to assess how much the participants already knew about the royal family. The scale consisted of 10 multiple choice questions of varying difficulty levels (*see Appendix D*). We coded each correct answer as 1 and incorrect answers as 0, and then created a

composite score by averaging all 10 questions. Scores on this scale ($M = .726$; $SD = .173$) correlated with the participant's self-reported level of prior information ($r = .300$; $p < .001$).

Media Exposure Scale. We included a measure to record how much media each participant consumed. The media sources (magazines, online news) were chosen carefully and only the ones that frequently publish news regarding the royal family were listed (*see Appendix E*). Participants rated how frequently they consumed news from each source. The responses ranged from 0 (never) to 4 (daily). A composite score was created by averaging the scores obtained for those 24 sources. This composite score, which we call the Media Exposure Scale ($M = .530$, $SD = .310$) correlated positively with the Prior Knowledge quiz ($r = .176$; $p = .010$) and self-reported prior information ($r = .296$; $p < .001$).

Social Dominance Orientation. We used the six items from the SDO-6 scale (see Pratto et al., 1994). These included three items like, "It would be good if groups could be equal", and three reverse-scored items like, "Inferior groups should stay in their place" (*see Appendix A*). Participants could respond from 1 (strongly disagree) to 7 (strongly agree). Subsequently, we computed a composite score ($\alpha = .814$; $M = 1.89$; $SD = .781$).

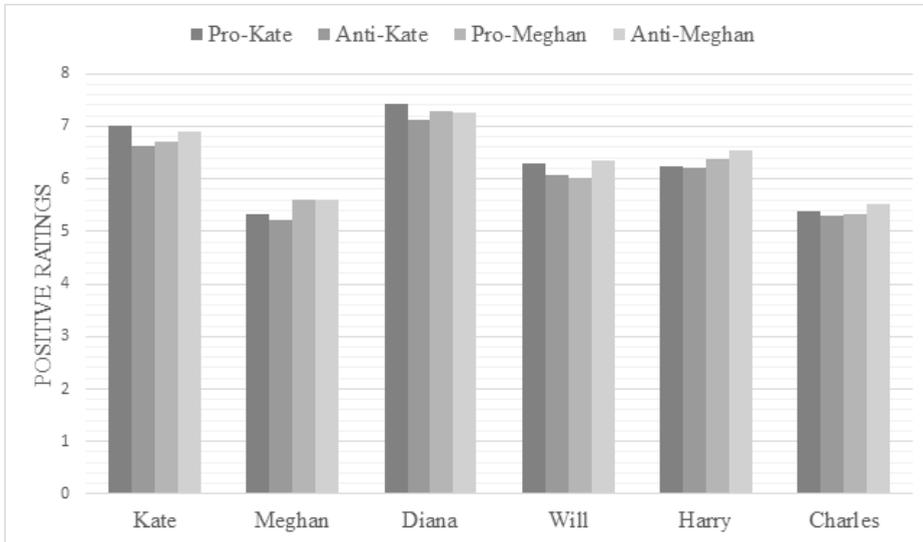
Right-Wing Authoritarianism. RWA was assessed using six items the RWA scale (Altemeyer, 1998). These included items such as, "Our country will be destroyed someday if we do not smash the perversions eating away at our moral fibre and traditional beliefs". Again, half the items were reverse-coded and participants rated the extent to which they agreed with each item on a 7-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree). These six items were averaged to create one variable for RWA ($\alpha = .670$; $M = 3.05$; $SD = .915$).

Results

Figure 1 shows the descriptive statistics for the composite score of each Royal member (the Royal Ratings scale) by experimental group.

Figure 1

Descriptive Statistics for Ratings of Royal Family Members



We used Pearson's correlations to understand how SDO, RWA and Prior Knowledge correlated with ratings for each royal member (see Table 1).

Table 1

Correlations Between Prior Information, SDO, RWA and Royal Ratings

Variable	1	2	3	4	5	6	7	8	9
1. Pre-Knowledge	-								
2. SDO	.034	-							
3. RWA	-.019	.206**	-						
4. Kate	.222**	-.056	-.042	-					
5. Meghan	.064	-.152*	-.074	.288**	-				
6. Diana	.146*	-.107	-.045	.485**	.446**	-			
7. Will	.280**	-.028	.114	.576**	.205**	.319**	-		
8. Harry	.093	-.146*	-.071	.386**	.652**	.445**	.290**	-	
9. Charles	-.029	-.003	.141*	.214**	.075	.149*	.318**	.123	-

Note. *p < .05, **p < .01.

The results of this analysis indicated that Prior Knowledge of the royal family correlated positively with ratings of Kate, William and Diana. On the other hand, SDO correlated negatively with ratings of Meghan and Harry (higher SDO = lower ratings). Finally, RWA correlated positively with ratings of Charles.

Next, we used a 4 (Caption Group: Pro-Kate, Anti-Kate, Pro-Meghan and Anti-Meghan) x 6 (Royal Ratings: one each for the six royal members) mixed model analysis of covariance (ANCOVA). Caption Group was a between-subjects variable and Royal Ratings was a within-subjects variable. Based on the results of our preliminary correlation analysis, we entered SDO, RWA and Prior Knowledge as covariates in the model. The results of this analysis are presented below.

Table 2

**Results of Mixed Model ANCOVA With Prior Knowledge,
SDO and RWA as Covariates**

Source	<i>F</i>	<i>p</i>	η_p^2
Royal Ratings	6.86	<.001	.023
Prior Knowledge	20.51	<.001	.065
SDO	2.47	.117	.008
RWA	1.24	.266	.004
Experimental Group	1.50	.214	.015
Royal Ratings x Prior Knowledge	6.20	<.001	.021
Royal Ratings x SDO	1.04	.388	.004
Royal Ratings x RWA	4.72	.001	.016
Royal Ratings x Experimental Group	1.08	.370	.011

There was a main effect for Royal Ratings and Prior Knowledge and there were two significant interactions, first, between Royal Ratings and Prior Knowledge, and second, between Royal Ratings and RWA.

Figure 1 provides insight into the main effect for Royal Ratings, with Diana and Kate receiving the highest ratings, and Meghan and Charles the lowest.

Therefore, we used multiple paired samples *t*-tests to understand how these scores differed, using Holms correction to ensure the family-wise error rate was maintained at $p < .05$. Evaluations were significantly higher for Kate than for Meghan: $t(215) = 16.35, p < .001$; William: $t(215) = 9.46, p < .001$; Harry: $t(215) = 6.08, p < .001$; and Charles: $t(215) = 16.03, p < .001$. Only Diana had significantly higher ratings than Kate, $t(215) = -6.93, p < .001$. Besides having lower ratings than Kate, Meghan also had significantly lower ratings than William: $t(215) = -8.13, p < .001$; Harry: $t(215) = -15.04, p < .001$; and Diana: $t(215) = -26.72, p < .001$. There were no other significant differences for Kate or Meghan.

Our correlation analysis had already indicated how Prior Knowledge, SDO and RWA varied for each Royal family member so there was no need for further exploration for any of these variables. Contrary to hypotheses, there were no effects for Experimental Group and that prior knowledge was a more important predictor.

Discussion

As discussed in the introduction, there has been a striking bias in the British tabloid press whereby Kate Middleton has been presented in a positive light in particular contexts, whereas Meghan Markle has been presented in a negative light in exactly the same contexts (Brookes, 2020; Mahfouz, 2018). It seems plausible that this consistent variation between the representations of these royal members may have impacted readers' perceptions. Nonetheless, no scientific study had examined how media framing has influenced attitudes toward these two royal family members. We examined the effect of picture caption framing in our experimental study by pairing pictures of Kate Middleton and Meghan Markle with either positive or negative text (taken from actual news stories). We found that picture caption manipulation had no effect on attitudes toward Kate Middleton or Meghan Markle, at least after a one-sitting exposure like in this experiment.

Arguably, in a real-life setting, a single exposure on social media is near impossible. Due to the algorithms, every search over successive days leads to several others pointing in the same direction (Druckman et al., 2012). This suggests that there is almost always repeated exposure to similar information. Although we tried to reinforce a particular viewpoint in our experiment by using six image-caption pairs all slanted consistently in either a positive or negative direction, our exposure was still limited to a single sitting within a few minutes. Future studies should look at how information reinforced repeatedly over successive days may impact media consumers' attitudes.

Interestingly, our results indicated that general social attitudes – SDO and RWA – were also related to attitudes towards royal family members. SDO was negatively correlated with attitudes towards Meghan Markle and Prince Harry. While it is understandable that Meghan Markle could be seen as an outgroup member getting ‘more than she deserves’ by people high in SDO, it was interesting that the same pattern was observed for Prince Harry. There seem to be spill-over effects for Prince Harry due to his relationship with Meghan Markle or perhaps because he was the point of entry for Meghan Markle into the British royal family.

RWA positively correlated with evaluations for Prince Charles as people high in RWA have a strong regard for authority figures (Atemeyer, 1998) and, likewise, a strong support for monarchy as well. These results make sense given that RWA focuses on in-group submission whereas SDO emphasizes dominance over outgroup (Altemeyer, 1998; Sidanius & Pratto, 1999). That is, RWA can be understood as a need for inter-group cohesion by submission to authority (Prince Charles) whereas SDO is a motive for out-group dominance. Plausibly, since Meghan Markle (and Prince Harry) violated the social hierarchy by allowing Meghan to join the Royal family, both Meghan and Harry were rated negatively by people high in SDO. It is possible that participants high in SDO were rating Meghan Markle based on her racial background or her strong leadership skills. In either case, they felt that Meghan was not deserving to be a part of the Royal family.

In sum, our study indicates that prior knowledge and ideological beliefs are stronger predictors of attitudes than positively or negatively framed captions, at least for political celebrities and in a one-time setting. It is noteworthy that long term exposure of biased media was so ingrained in the audience that a single exposure was not sufficient to cause any change. This is reflected by the fact that Meghan Markle consistently received lower ratings across all four experimental groups. Therefore, it is likely that long term media exposure had already formed rigid opinions regarding her. It is also important to note that our respondents were all undergraduate students, and this could be a limitation in terms of the generalizability of the results across other groups in the society.

Future studies can look at how, if at all, repeated exposure over a period of time can sway audience into a predicted direction. Further studies could also explore how individuals high in SDO and RWA select what news to be exposed to.

References

- AMIR, Y. (1969). Contact hypothesis in ethnic relations. *Psychological Bulletin*, 71(5), pp. 319–342. DOI: 10.1037/h0027352
- ARDIFA, M. F., & YAMIN, H. M. A. (2020). 'The construction of Meghan Markle's identity as a biracial woman in media reports', *The International University Symposium on Humanities and Arts (INUSHARTS)*, Depok, Indonesia, 23 – 25 July, 2019. DOI:10.2991/assehr.k.200729.029
- ATEMEYER, B. (1998). The other "authoritarian personality". *Advances in Experimental Social Psychology*, 30, pp. 47-92. DOI: 10.1016/S0065-2601(08)60382-2
- ATTIAH, K. (2018, May 18). No, Meghan Markle is not the 'modernizing' force Britain truly needs. *The Washington Post*. Available at: <https://www.washingtonpost.com>
- ATWELL SEATE, A., & MASTRO, D. (2016). Media's influence on immigration attitudes: An intergroup threat theory approach. *Communication Monographs*, 83(2), pp. 194–213. DOI: 10.1080/03637751.2015.1068433
- BAKER, S. A. (2014). *Social tragedy: The power of myth, ritual, and emotion in the new media ecology*, New York, NY: Palgrave Macmillan.
- BEHM-MORAWITZ, E., & ORTIZ, M. (2013). Race, ethnicity, and the media. In: Dill, K. (Ed.), *The Oxford handbook of media psychology*, New York, NY: Oxford University Press. DOI: 10.1093/oxfordhb/9780195398809.013.0014
- BROOKES, E. (2020). Side-by-side headlines make it starkly clear: The tabloids had it in for Meghan. *Stuff*. Available at: <https://www.stuff.co.nz/life-style/life/118811544/sidebyside-headlines-make-it-starkly-clear-the-tabloids-had-it-in-for-meghan>.
- BROWN, W. J., BASIL, M. D., & BOCARNEA, M. C. (2003). Social Influence of an International Celebrity: Responses to the Death of Princess Diana. *Journal of Communication*, 53(4), pp. 587–605. DOI: 10.1111/j.1460-2466.2003.tb02912.x
- CHO, J., GIL DE ZUNIGA, H., SHAH, D. V., & MCLEOD, D. M. (2006). Attitudes toward Target Minority Groups Measure. PsycTESTS Dataset. DOI:10.1037/t27392-000
- CLANCY, L. (2019). "Queen's Day – TV's Day": The British monarchy and the media industries. *Contemporary British History*, 33(3), pp. 427–450. DOI:10.1080/13619462.2019.1597710
- COOLEY, E., BROWN-IANNUZZI, J. L., BROWN, C. S., & POLIKOFF, J. (2017). Black groups accentuate hypodescent by activating threats to the racial hierarchy. *Social Psychological and Personality Science*, 9(4), pp. 411-418. DOI:10.1177/1948550617708014.
- COULDRY, N. (2003) *Media rituals: A critical approach*, London, Routledge.

CRANDALL, C. S., MILLER, J. M., & WHITE, M. H. (2018). Changing Norms Following the 2016 U.S. Presidential Election. *Social Psychological and Personality Science*, 9(2), pp. 186–192. DOI: 10.1177/1948550617750735

DAYAN, D., & KATZ, E. (1992). *Media events: The live broadcasting of history*. Cambridge, MA: Harvard University Press. <https://doi.org/10.1080/00224545.1993.9712181>

DIXON, T. L., & LINZ, D. (2000). Overrepresentation and Underrepresentation of African Americans and Latinos as Lawbreakers on Television News. *Journal of Communication*, 50(2), pp. 131–154. DOI: 10.1111/j.1460-2466.2000.tb02845.x

DRAGOJEVIC, M., SINK, A., & MASTRO, D. (2016). Evidence of Linguistic Intergroup Bias in U.S. Print News Coverage of Immigration. *Journal of Language and Social Psychology*, 36(4), pp. 462–472. DOI: 10.1177/0261927x16666884

DUCKITT, J. (1993). Right-wing authoritarianism among white South African students: Its measurement and correlates. *Journal of Social Psychology*, 133, pp. 553-563.

DUNAWAY, J., BRANTON, R., & ABRAJANO, M. (2007). Agenda Setting, Public Opinion, and the Issue of Immigration Reform. *SSRN Electronic Journal*. DOI: 10.2139/ssrn.1017846

EBERHARDT, J. L. (2019). *Biased: Uncovering the Hidden Prejudice That Shapes What We See, Think, and Do*, New York, Viking.

ENTMAN, R. M. (1991). Framing U.S. coverage of international news: Contrasts in narratives of the KAL and Iran air incidents. *Journal of Communication*, 41, pp. 6–27.

ENTMAN, R. M. (1993). Framing: Towards clarification of a fractured paradigm. *Journal of Communication*, 43, pp. 51–58.

ERIKSSON, F. (2020). *Constructing a Princess: Evaluation of Meghan Markle and Kate Middleton in a British Tabloid* [Independent thesis Basic level (degree of Bachelor)]. Stockholm University, Faculty of Humanities. Available at: <http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-182491>

FRAMPTON, B. (2015). Is clickbait changing journalism? *BBC*. Available at: <https://www.bbc.com/news/uk-wales-34213693> (Accessed: 30 August 2020)

FREDERICK, D. A., TOMIYAMA, A. J., BOLD, J. G., & SAGUY, A. C. (2020). Can she be healthy at her weight? Effects of news media frames on antifat attitudes, dieting intentions, and perceived health risks of obesity. *Stigma and Health*, 5(3), pp. 247–257. DOI: 10.1037/sah0000195

FÜRST, S. (2020) “The Whole World Watching”? How News Media Create the Myth of an Audience of Billions and Foster Imagined Communities. *International Journal of Communication* 14, pp. 1524–1541.

GOFFMAN, E. (1974). *Frame analysis: An essay on the organization of experience*, New York, NY et al.: Harper & Row. Available at: <https://is.muni.cz/el>

GOSLING, S. D., RENTFROW, P. J., & SWANN, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*(6), pp. 504–528. DOI: 10.1016/s0092-6566(03)00046-1

GRUNIG, J. E. 1993. Image and substance: From symbolic to behavioral relationships. *Public Relations Review, 19*(2), pp. 121–139.

GWARJANSKI, A. R., & PARROTT, S. (2017). Schizophrenia in the news: The role of news frames in shaping online reader dialogue about mental illness. *Health Communication, 33*(8), pp. 954–961. DOI: 10.1080/10410236.2017.1323320

HANSON-EASEY, S. & AUGOUSTINOS, M. (2010) Out of Africa: Accounting for refugee policy and the language of causal attribution. *Discourse & Society 21*(3), pp. 295–323. DOI: 10.1177/0957926509360744

HUBER, G. A., LAPINSKI, J. S. (2006). The “race card” revisited: Assessing racial priming in policy contests. *American Journal of Political Science, 50*, pp. 421–440. DOI: 10.1111/j.1540-5907.2006.00192.x

HUNTER, J., STRINGER, M., BANKS, M., KAFKA, S., IVERSEN, G., SCOBIE, O., HU, Q., HAYHURST, J. (2015). Collective Identity and Intergroup Discrimination: Outcomes in Contexts that Emphasize and do not Emphasize Intergroup Relations. *International Journal of Psychology & Behaviour Analysis, 1*(1). DOI: 10.15344/2455-3867/2015/105

JACOBS, L., & VAN DER LINDEN, M. (2017). Tone Matters: Effects of Exposure to Positive and Negative Tone of Television News Stories on Anti-Immigrant Attitudes and Carry-Over Effects to Uninvolved Immigrant Groups. *International Journal of Public Opinion Research, 30*(2), pp. 211–232. DOI: 10.1093/ijpor/edw036

JOHNSON, M., STEIN, R. M., & WRINKLE, R. (2003). Language Choice, Residential Stability, and Voting Among Latino Americans. *Social Science Quarterly, 84*(2), 412–424. DOI:10.1111/1540-6237.8402012

LEVY, M. R. (1979). Watching TV news as para-social interaction. *Journal of Broadcasting, 23*(1), pp. 69–80. DOI:10.1080/08838157909363919

LINENTHAL, E. T. (2001) *The unfinished bombing: Oklahoma City in American memory*, New York: Oxford University Press.

Lukes, S. (1975). Political ritual and social integration. *Sociology, 29*, pp. 289-305.

Mahfouz, I. M. (2018). The Representation of Meghan Markle in Facebook Posts: A discourse historical approach (DHA). *International Journal of Language & Linguistics, 5*(3). DOI:10.30845/ijll.v5n3p24

MASTRO, D., & TUKACHINSKY, R. (2011). The influence of exemplar versus prototype-based media primes on racial/ethnic evaluations, *Journal of Communication*, 61 (5), pp. 916–937. DOI: 10.1111/j.1460-2466.2011.01587.x

MCCOMBS, M., & SHAW, D. (1972). The agenda-setting function of mass media. *The Public Opinion Quarterly*, 36(2), pp. 176-187. Available at: <http://www.jstor.org>

MCNAMARA, K. (2011). The paparazzi industry and new media: The evolving production and consumption of celebrity news and gossip websites. *International Journal of Cultural Studies*, 14(5), pp. 515–530. DOI: 10.1177/1367877910394567

MYERS, G. (2000). Entitlement and sincerity in broadcast interviews about Princess Diana. *Media, Culture & Society*, 22(2), pp. 167–185.

OLIVER, W. (1994). *The violent social world of black men*, New York, Lexington.

PAYNE, J. G. (2000). Preface to an era of celebrity and spectacle. In: G. Payne (Ed.), *An era of celebrity and spectacle: The global rhetorical phenomenon of the death of Diana, Princess of Wales*, Boston, Center for Ethics in Political and Health Communication, Emerson College.

PRATTO, F., SIDANIUS, J., STALLWORTH, L. M., & MALLE, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67(4), pp. 741–763. DOI: 10.1037/0022-3514.67.4.741

PUIJK, R. (2009). Intense media coverage. *Communications*, 34(1), pp. 1–20.

RAMASUBRAMANIAN, S., DOSHI, M. & SALEEM, M. (2017). Mainstream versus ethnic media: How they shape self-esteem and ethnic pride among ethnic minorities. *International Journal of Communication*, 11(1–21), pp. 1879–1899. Available at: <https://ijoc.org>

RIBOT, A. F. (2019). *A linguistic analysis of the representation of Kate Middleton and Meghan Markle in the British press: A corpus-based study*. Available at: <https://dspace.uib.es/>

SIDANIUS, J., & PRATTO, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*, New York, Cambridge University Press.

STAPLES, R. (2011). White Power, Black Crime, and Racial Politics. *The Black Scholar*, 41(4), pp. 31–41. DOI: 10.1080/00064246.2011.11413574

THOMAS, J. (2008). From people power to mass hysteria: Media and popular reactions to the death of Princess Diana. *International Journal of Cultural Studies*, 11(3), pp. 362–376.

TUKACHINSKY, R., MASTRO, D., & YARCHI, M. (2015). Documenting portrayals of race/ethnicity on primetime television over a 20-year span and their association with national-level racial/ethnic attitudes. *Journal of Social Issues*, 71(1), pp. 17–38. DOI: 10.1111/josi.12094

Royally represented or royally shafted? Effect of positive and negative captions and ideological beliefs on readers' evaluations of Kate Middleton and Meghan Markle

TVERSKY, A., & KAHNEMAN, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, pp. 453–458.

VAN DIJK, T. A. (2006). Discourse and manipulation. *Discourse & Society*, 17, pp. 359–383.

WEAVER, D. H. (2007). Thoughts on Agenda Setting, Framing, and Priming. *Journal of Communication*, 57(1), pp. 142–147. DOI: 10.1111/j.1460-2466.2006.00333.x

Why can't Meghan Markle keep her hands off her bump? Experts tackle the question. (2019). Available at: <https://www.dailymail.co.uk/news/article-6636233/Why-Meghan-Markle-hands-bump-Experts-tackle-question.html> (Accessed: August 24, 2020)

WILSON, M. S., & SIBLEY, C. G. (2012). Social Dominance Orientation and Right-Wing Authoritarianism: Additive and Interactive Effects on Political Conservatism. *Political Psychology*, 34(2), pp. 277–284. DOI: 10.1111/j.1467-9221.2012.00929.x

Appendix A SDO and RWA

Instruction: Show how much you favour or oppose each idea below by selecting a number from 1-7 on the scale below. You can work quickly, your first feeling is generally best.

1	2	3	4	5	6	7
Strongly	Somewhat	Slightly	Neutral	Slightly	Somewhat	Strongly
Oppose	Oppose	Oppose		Favor	Favor	Favor

SDO Short version

1. It is OK if some groups have more of a chance in life than others.
2. Inferior groups should stay in their place.
3. To get ahead in life, it is sometimes okay to step on other groups.
4. We should have increased social equality.
5. It would be good if all groups could be equal.
6. We should do what we can to equalize conditions for different groups.*

RWA Short version

1. It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.

2. It would be best for everyone if the proper authorities censored magazines so that people could not get their hands on trashy and disgusting material.

3. Our country will be destroyed someday if we do not smash the perversions eating away at our moral fibre and traditional beliefs.

4. People should pay less attention to The Bible and other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.*

5. Atheists and others who have rebelled against established religions are no doubt every bit as good and virtuous as those who attend church regularly.*

6. Some of the best people in our country are those who are challenging our government, criticizing religion, and ignoring the «normal way» things are supposed to be done.*

*Reversed

Appendix B Experimental Conditions

<p>Group 1 (Pro-Kate)</p>	<ol style="list-style-type: none"><li data-bbox="310 305 1114 402"><p>1. Kate Revealing her Maternal Side Pregnant Kate tenderly cradles her baby bump while wrapping up her royal duties ahead of maternity leave.</p><li data-bbox="310 411 1114 535"><p>2. Proud of her post-baby bump Kate is reminding everyone that women's bodies, while, yes, miraculously creating life, shouldn't be hidden away the moment the miracle is over.</p><li data-bbox="310 546 1114 711"><p>3. The Royal Christening The Queen and Prince Charles missed Kate's son's christening. The decision is understood not to have been taken on health grounds, and to have been mutually agreed by the Queen and Kate Middleton some time ago.</p><li data-bbox="310 722 1114 846"><p>4. We see a woman in her prime: stylish, confident and positively radiant, nailing outfit after outfit in the style stakes — and it's a joy to witness... "Sarah Vine on the Kate Middleton's secrets to looking sizzling 24/7".</p><li data-bbox="310 857 1114 980"><p>5. Royal author claims that Princess Diana would have absolutely adored Kate Middleton as she would have recognised how good Kate is for Prince William because he's very 'emotional and difficult'.</p><li data-bbox="310 991 1114 1148"><p>6. The Queen understood and endorsed Kate Middleton's decision not to spend Christmas Day with her. A Royal Source said: 'Her Majesty understands that it is a dilemma that many young couples face and acknowledges how close Kate's relationship is with her mum.'</p>
-------------------------------	--

Group 2 (Anti-Kate)	<ol style="list-style-type: none"><li data-bbox="340 160 1145 323">1. Why can't Kate Middleton keep her hands off her bump? As Kate was expecting her third child, she placed her hands on her bump numerous times. Experts tackle the question that has got the nation talking: Is it pride, vanity, acting - or a new age bonding technique?<li data-bbox="340 342 1145 433">2. Why does Kate still look pregnant? Days after Prince Louis was born, the world was still so shocked by Kate Middleton's post-baby belly.<li data-bbox="340 451 1145 660">3. No Respect for the Queen At Louis' Christening, some senior staff at Buckingham Palace felt that Kate should have planned her son's Christening better. Her Majesty was already scheduled for prior engagement at the weekend. Kate should have been more accommodating about the date and more respectful for the Queen.<li data-bbox="340 678 1145 797">4. In 2020, Twitter was flooded with remarks like 'Someone show Kate how to keep the kids safe before George smashes himself and Charlotte!' after the Duchess of Cambridge (Kate Middleton) went for picnic with her kids.<li data-bbox="340 815 1145 915">5. At one of Kate's solo engagements, the Queen is said to have been 'baffled' when Kate turned up without a hat as Kate didn't realize she was supposed to wear one too.<li data-bbox="340 933 1145 1021">6. Kate Middleton snubbed the Queen to spend Christmas with her mom, Carole Middleton, while the rest of the Royals spend time together in Sandringham with the Queen.
------------------------	--

Royally represented or royally shafted? Effect of positive and negative captions and ideological beliefs on readers' evaluations of Kate Middleton and Meghan Markle

<p>Group 3 (Pro-Meghan)</p>	<ol style="list-style-type: none"> <li data-bbox="310 165 1119 260"> <p>1. Meghan Revealing her Maternal Side Pregnant Meghan tenderly cradles her baby bump while wrapping up her royal duties ahead of maternity leave.</p> <li data-bbox="310 278 1119 402"> <p>2. Proud of her post-baby bump Meghan is reminding everyone that women's bodies, while, yes, miraculously creating life, shouldn't be hidden away the moment the miracle is over.</p> <li data-bbox="310 420 1119 593"> <p>3. The Royal Christening The Queen and Prince Charles missed Meghan's son's christening. The decision is understood not to have been taken on health grounds, and to have been mutually agreed by the Queen and Meghan Markle some time ago.</p> <li data-bbox="310 611 1119 735"> <p>4. We see a woman in her prime: stylish, confident and positively radiant, nailing outfit after outfit in the style stakes — and it's a joy to witness... "Sarah Vine on the Meghan Markle's secrets to looking sizzling 24/7.</p> <li data-bbox="310 753 1119 877"> <p>5. Royal author claims that Princess Diana would have absolutely adored Meghan Markle as she would have recognised how good Meghan is for Prince Harry because he's very 'emotional and difficult'.</p> <li data-bbox="310 895 1119 1053"> <p>6. The Queen understood and endorsed Meghan Markle's decision not to spend Christmas Day with her. A Royal Source said: 'Her Majesty understands that it is a dilemma that many young couples face and acknowledges how close Meghan's relationship is with her mum.'</p>
---------------------------------	--

Group 4 (Anti-Meghan)	<ol style="list-style-type: none"><li data-bbox="342 171 1134 323">1. Why can't Meghan Markle keep her hands off her bump? As Meghan was expecting her first child, she placed her hands on her bump numerous times. Experts tackle the question that has got the nation talking: Is it pride, vanity, acting - or a new age bonding technique?<li data-bbox="342 342 1134 438">2. Why does Meghan still look pregnant? Days after Archie was born, the world was still so shocked by Meghan Markle's post-baby belly.<li data-bbox="342 456 1134 657">3. No Respect for the Queen At Archie's Christening, some senior staff at Buckingham Palace felt that Meghan should have planned her son's Christening better. Her Majesty was already scheduled for prior engagement at the weekend. Meghan should have been more accommodating about the date and more respectful for the Queen.<li data-bbox="342 675 1134 802">4. In 2020, Twitter was flooded with remarks like 'Someone show Meghan how to use a baby carrier before Archie drops out!' after the Duchess of Sussex (Meghan Markle) went hiking with baby son and her dogs.<li data-bbox="342 820 1134 917">5. At Meghan's first solo engagement, the Queen is said to have been 'baffled' when Meghan turned up without a hat as Meghan didn't realize she was supposed to wear one too.<li data-bbox="342 935 1134 1022">6. Meghan Markle snubbed the Queen to spend Christmas with her mom, Doria Ragland, while the rest of the Royals spend time together in Sandringham with the Queen.
--------------------------	--

Appendix C Royal Family Evaluation

On the whole, how would you rate Kate Middleton, Duchess of Cambridge on the following dimensions?

	1	2	3	4	5	6	7	8	9	
Competitive	<input type="radio"/>	Co-operative								
Helpful	<input type="radio"/>	Unhelpful*								
Unintelligent	<input type="radio"/>	Intelligent								
Weak	<input type="radio"/>	Strong								
Warm	<input type="radio"/>	Cold*								
Rigid	<input type="radio"/>	Flexible								
Unselfish	<input type="radio"/>	Selfish*								
Manipulative	<input type="radio"/>	Sincere								
Fair	<input type="radio"/>	Unfair*								
Honest	<input type="radio"/>	Dishonest*								
Unfriendly	<input type="radio"/>	Friendly								
Trustworthy	<input type="radio"/>	Untrustworthy*								
Consistent	<input type="radio"/>	Inconsistent*								
Loud	<input type="radio"/>	Soft-spoken								
Pushy	<input type="radio"/>	Reticent								
Humble	<input type="radio"/>	Arrogant*								
Confident	<input type="radio"/>	Shy*								
Aggressive	<input type="radio"/>	Non-aggressive								
Ignorant	<input type="radio"/>	Well informed								
	<input type="radio"/>	Straightforward Hypocritical*								

*Reversed

The same scale was repeated to obtain ratings for Princess Diana, Meghan Markle, Prince William, Prince Harry and Prince Charles as well.

Appendix D Prior Knowledge Quiz

Britain is one of a number of countries today that is a monarchy - in other words, the head of state isn't elected like the Presidents of the United States or France, but inherits the job from their parents. It sounds like an old-fashioned system, and it is - kings and queens have ruled in Britain for around 1600 years. This study is about the Royal Family. You will be required to examine some reading material with images and later answer questions related to it. But first, let's see how well you know the Royal Family already...

1. What is the name of the current queen?
 - Mary III
 - Elizabeth II
 - Georgiana
 - Anna
2. Who is married to Queen Elizabeth II?
 - Prince Phillip, Duke of Edinburgh
 - Prince Henry of Wales
 - Prince Edward, Duke of Kent
 - Prince William, Duke of Cam
3. The famous Princess Diana was the princess of:
 - Cornwall
 - Cambridge
 - Wales
 - York
4. What is the official title for Prince Harry?
 - Duke of Wales
 - Duke of Edinburgh
 - Duke of Sussex
 - Duke of Cambridge
5. Which Royal Baby was born in April 2018?
 - Prince Harry
 - Prince Louis
 - Prince George
 - Prince Andrew

6. How many children do William and Kate have?

- Four
- Twins
- Three
- One

7. What colour clothes to the royals always have on hand?

- Brown
- Red
- Navy
- Black

8. What food are the royals generally forbidden from eating?

- Chicken.
- Shellfish.
- Pasta.
- Goose.

9. Who is next in line for the throne?

- Prince Charles
- Princess Charlotte
- Prince Edward
- Prince Harry

10. What is the royal family's nickname for Kate?

- They simply call her Kate.
- They call her Catherine, as nicknames are not permitted.
- Katie!
- Katy-did!

Appendix E Media Exposure

1	2	3	4	5
Never	Once a year	Once a month	Once a week	Daily

How frequently do you read these newspapers/magazines? Just enter the number of hours on average.

Daily Mail
The Sun
Daily Express
Daily Mirror
The People
Metro
Morning Star
Daily Star
The Times
The Telegraph
The Observer
The Independent
The Daily Record
The Guardian
BBC News
The Australian Women's Weekly (NZ)
That's Life
New Zealand Woman's Weekly.
Woman's Day

ARTICLES

COVID-19 and online education: Digital inequality and other dilemmas of rural students in accessing online education during the pandemic

Malini Srinivasan

Jishnu D.

Shamala R.¹

Central University of Tamil Nadu, India

To cite this article: Srinivasan, M., Jishnu D., & Shamala R. (2021). COVID-19 and online education: Digital inequality and other dilemmas of rural students in accessing online education during the pandemic. *World of Media. Journal of Russian Media and Journalism Studies* 4: 34-54. DOI: 10.30547/worldofmedia.4.2021.2

Abstract

It is widely assumed among academicians that the COVID-19 pandemic has negative implications for the education of school students. However, institutions tried to balance that limitation by using online education, and there exist some inequalities among students. Most of the studies conducted during COVID-19 on online education focused on urban school students and their access to online education. In particular, rural school students and their online education remain an open question. Twenty in-depth interviews with rural student respondents determine the fundamental problems and challenge the rural school students' face in online education during the COVID-19 pandemic lockdown. The study identifies six major problems of rural students: inadequate technology, unacquainted academic atmosphere, digital disconnect, physical well-being, the distractions inherent with the medium, and digital illiteracy. The identified constraints draw inferences to a critical concept in online learning that is digital inequality. Digital inequality refers to the disparity in the access, distribution of technology, information because of various socio-economic and cultural factors.

The study also discusses the suggestions of rural students regarding the betterment of online education. The recommendations from the rural students include providing appropriate technological infrastructure, facilitating technical

¹ **Corresponding author:**

Shamala R., Central University of Tamil Nadu, Thiruvavur, CUTN Bridge,
Neelakudy, Tamil Nadu 610005, India.

Email: shamala@cutn.ac.in

assistance and providing a convenient academic atmosphere. The suggestions are pointing towards the idea of digital inclusion that is vital in online education. Digital inclusion is defined as the ability of individuals or groups of people to access and use information and communication technologies. It is not only about access in a broader sense the opportunities of using innovative hardware and software technology, content and services, getting proper digital literacy pieces of training and the effective use of these services. The findings of the study will help to bridge the disparities in online education. These findings will help the academic community to identify the needs of rural children. It will help build infrastructure for online learning and give extensive support to the school children of rural communities. These findings are also vital for the communication scholars as the disparity in the distribution of information and knowledge is a prime concern for them.

Keywords

COVID-19, online education, rural students, problems, solutions, digital inequality, digital inclusion.

Introduction

COVID-19 has negatively influenced all sorts of human life (Jena, 2020). Education is one of the most affected areas. Due to the pandemic, schools, colleges and universities are closed for an indefinite period (Mishra, 2020). The present situation of COVID-19 has worsened the inequalities in education all around the world. This COVID-19 pandemic adversely impacted over 290 million students across the 22 Asian countries due to the closure of schools (Muthuprasad et al., 2020). An estimate of 1.59 billion students is facing an education gap due to COVID-19. It has forced educational institutions across India to shift to online learning. Online learning is defined as an instructive method propagated to students through the internet, using computers, laptops and mobile phones, etc. (Singh & Thurman, 2019). Even though many scholars opinionated that online classes cannot substitute classroom learning (Kumar, 2020). For example, Pumptow and Brah (2020) studied the inadequacy of online education in students' academic achievement. Yet, we quickly adjust and adapt to the new way of online learning. But this sudden shift from classroom learning to online learning has created confusion among the teachers and students. De la Varre, Irvin, Jordan, Hannum and Farmer (2014) studied the various puzzles of online education that led to the dropout of K12 students in rural USA. The study identified scheduling and time constraints, academic rigor

and motivation, technology problems, problems with the online medium, lack of teacher immediacy and parental influences as the primary reasons for dropout. Lembani, Gunter, Breines and Dalu (2020) study the geographical limitations to access to technology and accessing online education. The study's findings implied that students from urban areas have better educational experience than students in rural areas. The study also points out the lack of access to technology among rural students. Besides, the digital divide between urban and rural students is discussed in the study. Mahmood S. (2021) examined the strategies for online education during the COVID-19 pandemic. The study suggested making collaborations with telecommunication industries for a better online experience, flexible teaching and assessment policies, recording online lectures and facilitating technical support as the strategies to be followed in online education during the COVID-19. Adedoyin and Soykan (2020) examined the challenges of online learning during the pandemic. They have categorised challenges as technological, socio-economic, digital competence, heavy workload and compatibility.

School students in rural India are primal to the digital education scenario. Moreover, many rural parents are not aware of the concept of online education and facilitate it. Rural students face so many problems relating to geography, education, and technology (de la Varre et al., 2014). Besides, there are high chances of disparities between the privileged, affluent students and the deprived rural students. Students, especially those from a poor socio-economic background in India, face a considerable amount of stress relating to online education. All these factors are pointing towards the problem of digital inequality.

Digital inequality is an economic and social inequality concerned with the access, use and impact of modern ICT's. It can be seen in macro-level between countries, the developed and underdeveloped and micro-level in between the students of the same class. There are various determinants of the digital inequalities, namely infrastructure, digital skills, geographic location and economic stability ('The digital divide – information, people, and technology,' n.d.).

There are multiple student suicides after failing to cope with online classes in Tamil Nadu². It is vital to address the issue of student suicides occurring in rural areas. The basic right of students – right to education – cannot be hampered

² EMMANUEL, G. (2020). Tamil Nadu: 14-year-old dies by suicide after father could not buy smartphone for online classes. *Bangalore Mirror*, 1st August, 2020. Available from: <https://bangaloremirror.indiatimes.com/news/india/tamil-nadu-14-year-old-dies-by-suicide-after-father-could-not-buy-smartphone-for-online-classes/articleshow/77303306.cms>

due to inadequate infrastructure and ill-conceived implementation of online education. In the pilot study, we identified that rural students have modest facilities for their online education. Most rural students can be seen as a digital underclass as they are first-time users of the internet.

The digital underclass is a disadvantaged section of society that faces many difficulties in making connections with the digital world. Rural students' problems in online education must be resolved. Government and other NGOs should help rural children to achieve their basic right to education. In this regard, through qualitative in-depth interviews with high school and higher secondary school children of Thiruvavur, one of the most backward districts of Tamil Nadu, we tried to find out the real problems faced by rural students in online education and their proposed solutions for the issues. The study's findings will help to understand the difficulties of rural children, especially high school and higher secondary students, their expectations from online education and their suggestions regarding the betterment of online education. The answers to these vital questions will be instrumental to the education policymakers, academic experts, and teachers to devise suitable educational techniques suitable for rural students' needs.

RQ 1. What problems are rural students facing in online education?

RQ 2. What are the suggestions of rural students for the betterment of online education?

Literature review

Digital divide is a buzz word used to explain the social implications of discrepancies in access to ICT between socioeconomic groups and to the achievement of the necessary skill set (Cronin, 2002). Gaillard (2001) asserted that the digital divide is the line that separates those who have computer access, along with corresponding skills and use the internet, from those who neither have access to computer technology nor the internet. The term digital inequality refers to the disparities in accessing knowledge and skills of using digital technologies between various groups or within groups. It is evident among developed and underdeveloped countries, poor and rich, rural and urban, young and old, etc. (Miroshnichenko, Morozova, & Meshcheryakova, 2021). Numerous studies have focused on the digital inequalities during the COVID-19 pandemic lockdowns (Nguyen, Hargittai, & Marler, 2021). Online education is considered one of the most concerning areas relating to digital inequalities. COVID-19 lockdowns have forced the digitisation of education which in turn increases the digital inequalities among the students (González-Betancor, López-Puig, & Cardenal, 2021)

Aboagye et al. (2020) study states that the learners' intention to study via online showed that the students were not ready to study via online means. Koh et al. (2020) findings suggest that students' current experiences in online education influences their desire to use e-learning systems. In order to encourage student-centered digital learning experience, upgradation of technological features and faculty preparation have to be considered.

The implementation of online education during COVID-19 pandemic has altered the teaching-learning process widely across the country. There were lots of difficulties in adapting online education. Volery and Lord (2000) argued that the lecturer plays a central role in online education, because their effort and contribution become the learning catalyst and act as a knowledge navigator. E-learning is gradually becoming more used in universities to enhance the teaching and learning process more effectively. It predominantly requires instructors' contribution to design a motivating e-learning environment to engage students actively in their learning and boost motivation.

Almazova et al. (2020) elaborated the challenges faced by university faculty members in teaching via online education. They are a computer literacy level, technological infrastructure of the university, readiness of the students and academic staff for online learning. The teaching methods and techniques adopted by the faculty differ from traditional teaching methods to digital teaching methods. The teacher's support is more important for the student to adapt for the online learning environment and it also ensures efficient online education.

In the era of technological advancement, digital literacy is very important as its implication prevails in all the sectors. Zulkarnain et al. (2020) findings illustrated the importance of digital literacy as it has a high impact on knowledge gaining, understanding and using media. During the pandemic, social media was adopted widely for dissemination of information for the public as well as for the student communities. The students used social media for interaction with their peers and academicians. Vishkaie (2020) asserted that power of digital technology can be utilised for educational purposes, but it needs intensive training and qualified staff, only then the technologies can be promoted to make the best use of it. Only with digital literacy can we acquire additional resources. The knowledge of digital literacy is more important in the future for an inclusive, collaborative and sustainable environment.

Though the communication technology has evolved to a very great extent, still it is not accessed by all. The geographical, economic and social factors are paving the way for digital divide. There are various other factors underlying the

cause of the digital divide. There is a huge gap between the rural and urban areas in accessing the resources. Mpungose (2020) states that Short Message Service (SMS) bridges the digital divide, because of the affordable network packages. Students have adopted SMS for interactive and collaborative learning, it also gives them personal and social experience in knowledge acquisition. Gaurav (2020) results indicated rural-urban disparity plays a major role in digital divide. Inclusive educational policy has to be implemented to eradicate the digital divide.

Aydin (2020) asserted that curricula are school syllabus for developing computer skills, but still the digital divide exists with various socio-demographic characteristics. Aswathi and Mohamed Haneefa K. (2020) illustrated that attitude towards information technology, digital competence and frequency of internet use play a significant role in the prevalence of digital divide. The unequal access to the use of information and communication technologies is termed as digital exclusion. This exclusion will hinder them from participation in society. There are various reasons for digital exclusion, like affordability, technological infrastructure, gender gap, etc. Ullah (2020) study shows that the elite community enjoy the privilege of accessing the information and communication technologies, whereas the poorer groups have very limited access to the digital services and they are deprived from their participation in the society.

Raza et al. (2020) asserted a few issues faced by students in the overall learning experience through online education. They are the following: absence of physical presence of the faculty members, lack in student-teacher relationship, lack of satisfaction in learning process and perceived learning. Tartavulea et al. (2020) states that the adoption of e-learning processes by students and academic institutions was high, and they used synchronous and asynchronous assessment and interaction methods. It led to the passive delivery of lectures, and it has reduced the interaction between the student and the teacher.

The dynamics of digital literacy and its actual application to everyday life – education, work, leisure, politics, social engagement – that is closely related to education, especially when we focus on higher education and lifelong learning. Exposure to information and communication technologies are changing the way students learn, how they are engaged and their attitudes (Prensky, 2001a; 2001b; 2005). Reinforcing only physical access to ICT will not help in bridging the digital divide, rather required digital skills have to be imparted in order to reduce the digital divide gap. The digital divide in education is not a matter of physical access but a matter of digital skills and how competent students

(and teachers) are at computer and internet usage (Peña-López, 2010). Carvin (2000), Hargittai (2002), Warschauer (2004) research illustrated the crucial importance of digital competencies. It is the key factor between infrastructures (hardware, software and connectivity) and their expected output and impact (digital content and services, and effective usage for specific purposes).

Pearson (2002) emphasised the importance of usability in the digital divide. Providing public access to the internet gives definite groups the opportunity to advance by providing them with the required technical skill set which are needed to compete in the digital economy. Peña-López (2010) mentioned that beyond attitudes, there is a whole constellation of strategic digital competences that are most needed. Only with the help of digital competencies, the mix of ICTs in education can have an impact, both in terms of digital literacy and in terms of academic performance.

Gladkova et al. (2020) study states that ethnicity plays a major role in defining the digital capital. People belonging to the ethnic majority of the respective country and those living in metropolitan or cosmopolitan cities tend to have a higher level of digital capital. The study mentioned that ethnicity solely does not define the level of users' digital capital, but it still remains an important and understudied issue. Bamezai et al. (2020) findings suggested that epistemological and ontological perspectives in teaching and research programmes remain insufficient in maintaining a consistent gendered approach and are universally sporadic. The study also states that mapping of gender mainstreaming in journalism education would hold a promise of ushering in affirmative policies and actions in changing the media discourse pertaining to exploitation, disempowerment and marginalisation of women. Vartanova et al. (2021) findings mentioned the difficulties in converting analogue content into digital form. The study stated that it is important to understand the competencies of the journalistic community within the analogue and digital generations, which are in demand in the production of content in 'digital form.' Many experts in this field recognise the need to adapt the analogy generation of journalists to work in the digital information environment, where the complexity of the transformation of journalists' competencies is concretized, summarized and analysed in the project.

Pearson (2002) study states that those who have access to technology are being offered more opportunities than ever before. On the other hand, those who cannot afford or use the ICT tools are restricted from participating in the digital world. Cronin (2002) illustrated that access to computers and the internet, and the facility to effectively make use of this technology, are becoming increasingly

important for full participation in social, political and economic life. Access to digital technologies is essential for ensuring equity in access to the information economy, for enabling governments to achieve e-service delivery objectives, and for allowing people to capitalize on the opportunities for economic growth offered by the information age.

Van Deursen et al. (2019) research emphasised other scholars' conclusions. Many scholars of the second-level digital divide have concluded that the divides in internet skills and type of use continue to expand even after physical access is universal. That study finding – indicates that the first-level digital divide remains a problem in one of the richest and most technologically advanced countries in the world. By extending basic physical access combined with material access, the study finds that a diversity in access to devices and peripherals, device-related opportunities, and the ongoing expenses required to maintain the hardware, software, and subscriptions affect existing inequalities related to internet skills, uses, and outcomes. Ragnedda (2018) asserted that those who do not access the internet (first level of digital divide), or do not use it 'effectively' (second level of digital divide), or are not able to transform the online experience into something concrete and tangible (third level of digital divide), lose noteworthy opportunities in the economic, political, cultural, personal, and social spheres. By contrast, those who access the internet, have elaborated a high level of digital capital and use the internet in an 'effective' and 'productive' way, tend to broaden their opportunities, improving the quality of their life and reinforce personal position in society, their wellbeing and their general quality of life.

Nieminen (2016) illustrated that economic emphasis linked to digital information and communication technologies will widen the digital divide, which in turn will potentially sharpen social inequalities in the global scale. The study also clearly mentioned that technology as such is not causing the social problem within the digital communications technology, but the problem is in the ways how it has been applied, reflecting unequal power relations in our societies. Tarman (2003) mentioned that the digital divide is a social problem which is caused by inequalities in the ability to access and to use ICT tools. The digital divide is a threat to social and economic justice as well as to education. Selwyn et al. (2001) stated that to curb the existing digital divide gap, the greatest possible changes could be in the institutional barriers to participation, lack of appropriate opportunities locally, including the current lack of flexibility in courses, lack of credit for informal prior learning, poor guidance, and lack of basic skills. Istance and Rees (1995) study asserted that interrupted patterns of participation would lead to high non completion rates. Trappel (2019) stated that inequalities are the

unwanted companions of media and communication. Although the digital divide is often seen as an individual problem, it undoubtedly requires collective solutions (Selwyn et al., 2007).

Research objectives

The prime objective of the study is to find out the problems of rural school students in online education as well as their proposed solutions for the issues.

The specific objectives are:

- *To find out the problems rural students are facing in online education.*
- *To know about the suggestions of rural students for the betterment of online education.*

Research methodology

To analyse the objectives, the research paper uses a qualitative research approach. In-depth interviews (IDIs) with semi-structured questionnaires (all open-ended questions) were used to collect primary data from 20 rural students attending online classes. Through the open-ended questions, the issues, challenges and problems of the rural school students faced while online education during the pandemic can be analysed. The respondents were between the age group of 14-17. All the respondents were chosen from the Thiruvarur district of Tamil Nadu, India. Of the total, 13 respondents were female and 7 were male. They are high school and higher secondary school students. The in-depth interviews of the respondents were audio-recorded, transcribed from the Tamil language to English, and later used grounded theory (Glaser & Strauss, 1967) to analyse the data. The researcher first conducted open coding – marking several categories that developed from participants' words, which were later classified into more specific categories and themes – and in vivo coding – in this, the researcher noted the participants' comments that are indicative of the language of users. The researcher engaged in axial coding in the next step by collapsing the open codes into relevant subcategories (Strauss & Corbin, 1998). The final coding process was selective coding, in which the researcher refined the categories to produce theories and central themes that are formed and explained the data (Cresswell, 2013; Strauss & Corbin, 1998).

Theoretical framework

Researchers have focused on the challenges and opportunities of online education during the COVID-19 pandemic (Adedoyin & Soykan, 2020). However, most of the research is conducted on the higher education sector in an urban setting. Thus, there are comparatively fewer chances of studying digital inequalities. Our

study, on the contrary, examines in-depth the digital inequalities faced by rural high school and higher secondary school students. The scope of our research is further supplemented as our sample was from Thiruvarur, one of the most rural districts in Tamil Nadu state in South India. Studying the digital inequalities among the school students in the rural setting is vital as the extensive magnitude of the problem insists on a comprehensive insight of the problem and significant research in the areas concerned.

Data analysis and interpretation

Table 1

Participant's demographic information

Student Number	Age	Gender	Class	Length of the interview (MINS)
Student 1	15	Male	VII	30.21
Student 2	17	Female	IX	10.25
Student 3	16	Male	X	15.00
Student 4	14	Female	XI	14.30
Student 5	15	Male	XII	18.35
Student 6	15	Female	XI	20.05
Student 7	14	Female	X	24.08
Student 8	17	Male	XI	10.36
Student 9	17	Female	X	09.32
Student 10	16	Female	IX	14.05
Student 11	16	Female	X	18.30
Student 12	15	Male	XII	25.02
Student 13	14	Female	X	08.02
Student 14	15	Female	X	09.58
Student 15	16	Female	XII	24.05
Student 16	17	Male	X	29.12
Student 17	14	Female	XII	24.21
Student 18	16	Female	X	25.47
Student 19	14	Male	X	24.12
Student 20	15	Female	XII	09.02

After carefully reading and understanding the interview transcripts, the researcher employed the coding process, and the following themes have emerged for getting a notion of each research question. Through an open coding procedure, the study identifies the problems, issues and challenges faced by rural school students while attending online education. Then the responses based on the themes were grouped and presented below. The main challenges identified by the researchers are lack of adequate technology, lack of academic atmosphere, the issue with the novelty of the medium, health issues, internet distraction and lack of digital literacy.

RQ 1: Problems faced by rural students in online education.

Interviewees discussed six problems they are facing in attending online education.

1. Inadequate technology

This theme delineates issues like poor internet, no power back up, the problem with range, issues with devices, content clarity issues, lack of availability. All the participants reported at least one of these issues during the conversion.

Narratives such as

‘I miss the classes due to the poor internet connection. The bandwidth is not proper in my locality. When I attend classes, the video content keeps on buffering for a very long time. Due to an inadequate internet connection, I cannot attend the online lecture continuously. When I miss a lecture, it is difficult for me to cope with the content and syllabus taught in the lecture’ (Students 1, 5, 8, 10, 11 and 19 expressed).

The lack of adequate devices is the next issue. Though the students have an internet connection, the incapacity of the devices hinders online education. The disruption in the devices also makes students miss their lectures.

‘My device got hung up. I have an adequate internet connection in my locality. I use my parents’ mobile for accessing online education. The smartphone they own is a very basic model, and it is very old. It does not have the required capacity to access my online classes. When I try to use the mobile continuously, it gets hung up and it will be very difficult for me’ (Students 3, 9 and 10 highlighted).

The next issue is also related to the problem of the device, which hinders the rural students from attending the online lectures.

‘They have online classes daily. I attend online classes through my mother’s mobile. The phone battery usually exhausts during online class hours. The online classes are conducted continuously in daytime for a minimum of four to five hours. There would be very little break time. After attending online lectures, teachers would give assignments and tests, and we are monitored daily. I use the same

mobile for attending online lectures, for doing homework and assignments. The battery capacity is not enough for me to attend class and do homework. So, I have to keep the mobile for charging in regular intervals to attend lectures. If the battery gets low during my class hours, I have to skip the lecture to get the mobile charged' (Students 4, 8 and 15 shared the problems). Student 7 reported the additional challenge in attending online education through inadequate devices. The interrupted power supply makes it even more difficult for students to participate in online classes. 'In my locality, there is an interrupted power supply most of the time. Due to which I cannot attend my online class properly. The mobile that I use to attend online lectures has poor battery capacity. If there is an interrupted power supply, then it doubles the problem in attending online lectures.'

The next challenge in attending online education is video and audio clarity, which in turn result in a lack of content clarity. Student 20 says:

'I can't see the video content properly. At times the audio clarity is also not good. For maths and science, I find it difficult to attend an online class. My teacher owns a blackboard in her house. She solves the sums on the blackboard in the online lecture. But the video clarity will not be good. Understanding the algorithms of the solution would be very difficult. She has to explain every time very slowly; only then we can follow up. It consumes a lot of time to understand a single concept or theory. We find it difficult to cover the syllabus on time. The same goes for the science subject. When attending lectures in schools, we have practical sessions, through which we learn the concept and working of certain equipment. It was easy for us in offline education. For subjects like biology, teachers do not have to model human organs. So understanding the mechanism of each body part is very difficult.'

The next challenge in attending online education, as stated by Student 6, is connected with the lack of availability of devices in her home for online education.

'I have two siblings. All three of us are attending online education. But we have only one mobile phone to attend the lecture. All our classes are scheduled only during the day hours. If my sister has an online class, then my brother and I have to miss the lecture. If one is attending the lecture, then the other two of us have to miss our lectures. Due to this, we lack consistency in understanding the concept, coping with the syllabus and we also fail to submit our assignments and tests on time. I'm finding it very difficult to attend the online classes.'

2. Unacquainted academic atmosphere

This theme discusses concerns like physical noise, family chores that would affect the online education process. The shift from classroom learning to home causes these constraints. The majority of the participants reported these issues.

'I live in a joint family. I have siblings at home, and they are less than five years old. When I'm attending online classes, they play happily. They make a lot of noise when playing. Due to the pandemic, our parents will not allow them to go out of the home, so they will be playing inside the home. Their noise distracts me, and I can't concentrate while others are playing' (Students 16 and 17 mentioned). 'We are in a joint family pattern. People in the house will be watching television, or they will be talking with one another. In that case, I cannot hear or listen to the online lecture properly' (Students 2, 9, 15 shared). 'When I'm attending online lectures, my family members will call me to help them with the household chores. They don't understand the importance of online education. I miss my lectures, and it would be difficult for me to take from my teachers for these reasons' (Students 5, 8, and 18 said). Student 19 expresses his concern about studying on the balcony for getting a better mobile network where the vehicle noise-causing trouble for his concentration. 'My locality has a poor internet connection, so I use to sit in my balcony to attend lectures, where I get proper network bandwidth.' Student 9 expresses her concern about taking care of her small baby sister while attending online education as her parents are working labourers. 'My parents are daily wage workers. During the pandemic, they lost their job. So they started selling vegetables. My sister is two years old, as my parents have to go to work daily, I babysit. I cannot attend the lectures regularly.'

3. Digital disconnect

This theme takes up obstacles like lack of peer discussion, inability to grasp concepts, difficulty to clarify doubts, difficulty in real-time interaction. Most of the participants reported the above issues which have occurred due to the novelty of the medium and the participants are not used to it.

Narratives like 'I can't understand some concepts in online lectures, due to the technical error and other challenges in accessing online education' (Students 3, 7 and 10 mentioned). 'I cannot clarify doubts in online lectures. Raising questions and clarifying the doubts with the teachers is closely impossible. Many of us would ask a question at the same time. The teacher will not understand the question properly. When she calls our name, we can ask questions, but calling every name in the class and clarifying the doubts in online sessions is very difficult. I miss the interaction with teachers in class' (Students 5, 17 and 20 highlighted). Student 8 expresses his concern for missing the peer academic discussion. 'In offline classes, we used to sit in groups and study. When there is any doubt in concepts, we use to discuss and help each other in understanding. But in an online class, it is not possible. I miss the peer discussion badly' – Student

5 signifies his difficulty communicating in the real-time online environment. 'In online class hours, discussing with friends or clarifying doubts with the staff is very difficult for me.'

4. The problem of physical wellbeing

This theme deals with health problems caused by continuously attending online classes.

'My eyes are stressed out. I'm not used to attending online lectures before the pandemic. This is the first time for me to attend online classes. My online classes are about four to five hours daily. Continuously watching the mobile screen for hours together, my eyes are stressed out. I'm getting headaches and neck pain as well. These online classes are very difficult for me.' (Students 10, 13 and 18 mentioned). 'I am feeling uncomfortable with the learning posture, sitting all day in front of the mobile phone or laptop is very difficult. I feel numb. At night I could not sleep properly.' (Students 11, 13 and 17 are prevalent).

5. The distractions inherent with the medium

This theme concerns the distractions because of the internet like unwanted advertisements and pop-up games on the internet.

'I attend online classes conducted by school teachers. When I cannot attend the class, or when I have double in some concepts, in self-interest I watch videos online. The advertisements that pop up during online lessons are disturbing, and it deviates my thinking process' (Students 3, 5, 9 and 14 have mentioned). Students 8 and 9 said their problems with pop up games in between the online classes. 'When I watch videos online, to clarify doubts, many game ads pop up and distract me.'

6. Digital illiteracy

This theme discusses the inability of the rural students and their parents in using technological apparatus. The lack of Information and communication skills prevents them from using the internet.

'I don't know how to join in online classes. I hadn't heard about online education before the pandemic. Online classes are very new to me. I need external help in starting the classes. Even in class, I don't know how to operate the interface. Online classes are challenging for me' (Students 6, 8 said in common). Student 20 discussed her problem with using devices. She is a first-time user of a smartphone, and she didn't know how to use it properly. 'My teacher usually sends pdf and modules for learning. But I don't know how to use the smartphone and access those materials. In my home also no one can support me in technical issues. It is very difficult for me to study online.'

RQ 2. The suggestions of rural students for the betterment of online education.

Interviewees discussed three significant suggestions for the betterment of their online education.

1. Providing appropriate technological infrastructure

Most of the participants opinionated that they need proper technological infrastructure for pursuing their education.

‘I need a laptop that works smoothly’ (Students 4, 8). ‘I need a mobile phone and a good internet connection’ (Students 9, 19) are frequent. Student 10 discusses her need for a sound mobile network for pursuing online education. Few students could not afford a mobile phone or laptop. They said, ‘During the time of the pandemic it was very difficult for me and my friends to attend online lectures. Few people who are pursuing higher education or who are working in the field of education volunteered and extended their support. They gave us their laptops and mobile phones to attend the online education. They arranged the availability of the gadgets class wise. If one volunteer takes care of class eight students in the locality, others would help the class ninth students and so on. This is how we study through online education.’ All the students who couldn’t attend online classes said, ‘I couldn’t attend the scheduled online classes regularly due to various reasons. So my class teacher has created a WhatsApp group and she uses it to send pdf and modules so that those who miss the online class can make use of the notes.’

2. Facilitating technical assistance

Most of the participants observed that they need technical assistance in online education. Narratives like ‘I need someone who can help me connect to the online classes’ (Student 12). ‘I need some external support if my device gets hanged’ (Student 3) is common. Student 15 discusses providing a facilitator to take care of online education for every class.

3. Providing a convenient academic atmosphere

Most participants reckoned that they need a proper academic atmosphere for studying. Attending online classes at home is not possible in rural areas. Most of the students stated that ‘I could not attend online class because of poor bandwidth in my locality,’ ‘no proper study atmosphere at home,’ ‘parents could not afford us a laptop or mobile phone or tablet to attend an online class.’ Student 11 viewed that providing a library and reading rooms in each village can help to solve the problem. ‘If there is any common study area for the students in rural areas, like a library, study centres, we can concentrate on academics very well.’

Discussion

The goal of the present study was to identify the problems faced by rural students in accessing the online education and to find out the suggestions of students regarding the betterment of online education. The current study identified six major problems of rural students in online education: inadequate technology, unacquainted academic atmosphere, digital disconnect, the problem of physical wellbeing, the distractions inherent with the medium, digital illiteracy.

Among these six problems, digital illiteracy, inadequate technology and digital disconnect are directly related to the issue of digital inequality ('The digital divide – information, people, and technology,' n.d.). Rural students are not equipped with proper devices, and they lack basic connectivity. These technological imbalances lead to the concept of the knowledge gap, information-rich and information poor (Gaillard, 2001). As Pearson (2002) study says, the information-rich have access to modern technologies, proper connectivity, and they know how to use the technologies and get the information required to them. Still, the poor do not have access to modern technologies, and they lack basic connectivity. Therefore, they are unable to get the information they want. Knowledge gap can provide severe imbalances in the information reach between the affluent urban students and the rural students. Therefore, it is crucial to address these issues.

Peña-López (2010) mentioned that beyond attitudes, there is a whole constellation of strategic digital competences that are most needed. Only with the help of digital competencies, the mix of ICTs in education can have an impact, both in terms of digital literacy and in terms of academic performance. The present study findings state that, among other matters, an unacquainted academic atmosphere may hinder the free flow of educational information to rural students. It will have severe implications in the students' education and knowledge gathering process. Other issues like the problem of physical wellbeing and the distractions inherent with the medium are also important because of the far-reaching consequence of these issues in the rural school students' education. Our study also proposed three suggestions from the rural students for the betterment of their education, providing appropriate technological infrastructure, facilitating technical assistance and providing a convenient academic atmosphere. Providing proper infrastructure and technology in rural areas helps not only the rural students but also a larger rural community. Facilitating technical assistance to the students can be a good practice since rural students are new to the online education scenario. Rural students and their parents should be given technical assistance in accessing online education. Rural students can be facilitated with a convenient academic atmosphere by

arranging the classes in local libraries and reading rooms. This will not only help them to concentrate on their studies but also help to build a habit of reading.

Conclusion

After the outbreak of the COVID-19 pandemic, the academic institutions in the country have shifted to the online mode of teaching. The shift from the traditional method to the online method of teaching has created many problems in both the teaching community and the student community. Twenty interviews have been conducted with the rural school students to find out their problems in accessing online education and to find out their proposed solutions. All the respondents reported at least one sort of technological inadequacy while accessing online classes. Inadequate technology includes poor internet connectivity, lack of gadgets like mobiles phones or laptops. The next problem is the unacquainted academic atmosphere while attending online classes. Almost all the respondents are attending online classes from their homes, but they lack a proper study atmosphere. The respondents lack concentration due to the noisy atmosphere and they would be interrupted by the family members in between the online class hours. The next issue is digital disconnect. Most of the respondents have reported that they lack peer discussion, unable to grasp concepts, difficulty in clarifying doubts, and difficulty in communicating in real-time interaction. The next concern is the problem of physical wellbeing. Respondents are having various health issues caused by continuous online classes. The distractions inherent with the medium is the next problem faced by the respondents. Unwanted advertisements, pop-ups, game ads and other ads irrelevant to academics are disturbing the students. Then comes the problem of digital illiteracy. Most of the respondents are first time users of smartphones or laptops. They lack the information and communication skills that are required to access online education. These are identified as the major problems faced by rural school students during online education. Due to the above-mentioned issues, the students are finding it difficult to keep pace with online classes. The respondents proposed a few solutions to the problems. They need proper infrastructure and technology to attend online education. Most of the rural areas in India are ill-equipped with technological infrastructure. They are facing digital disconnect, due to which they are excluded from the digital world. The students also lack technical assistance and sufficient technical knowledge to attend online education. The problem of digital illiteracy also excludes the students from the digital world. There should be proper training sections for the students in using

and accessing online education services. The students should also be facilitated with proper technical assistance and a suitable academic atmosphere to mitigate their problems in online education. The problems of the rural students in attending online education have to be looked upon and have to be resolved. The involvement of civil society in providing the digital infrastructure to rural students will help to bridge the gap of digital divide, since today's students are tomorrow's citizens who help for better prospects of the nation.

References

- ABOAGYE, E., YAWSON, J. A., & APPIAH, K. N. (2020). COVID-19 and E-learning: The challenges of students in tertiary institutions. *Social Education Research*, 1–8.
- ADEDOYIN, O. B., & SOYKAN, E. (2020). COVID-19 pandemic and online learning: The challenges and opportunities. *Interactive Learning Environments*. Available from: <https://doi.org/10.1080/10494820.2020.1813180>
- ALMAZOVA, N., KRYLOVA, E., RUBTSOVA, A., & ODINOKAYA, M. (2020). Challenges and opportunities for Russian higher education amid COVID-19: Teachers' perspective. *Education Sciences*, 10(12).
- ASWATHI, P. & MOHAMED HANEEFA K. (2020). Attitude towards information technology and digital divide: A study among students in universities in Kerala, India. *Library Philosophy and Practice*, 4437.
- AYDIN, M. (2020). Does the digital divide matter? Factors and conditions that promote ICT Literacy. *Telematics and Informatics*, 101536.
- BAMEZAI, G., ROY, A., ROY, AN., CHHETRI, S. (2020). Gender mainstreaming as an essential part of journalism education in India. *World of Media. Journal of Russian Media and Journalism Studies*, 3, pp. 5–33. DOI: 10.30547/worldofmedia.3.2020.1
- CARVIN, A. (2000). More than just access: Fitting literacy and content into the digital divide equation. *Educause Review*, 35(6), pp. 38–47.
- CRONIN, B. (2002). The digital divide. *Library Journal*, 127(3).
- DELA VARRE, C., IRVIN, M. J., JORDAN, A. W., HANNUM, W. H., & FARMER, T. W. (2014). Reasons for student dropout in an online course in a rural K–12 setting. *Distance Education*, 35(3), pp. 324–344. Available from: <https://doi.org/10.1080/01587919.2015.955259>
- EMMANUEL, G. (2020). Tamil Nadu: 14-year-old dies by suicide after father could not buy smartphone for online classes. *Bangalore Mirror*, 1st August, 2020. Available from: <https://bangaloremirror.indiatimes.com/news/india/tamil-nadu-14-year-old-dies-by-suicide-after-father-could-not-buy-smartphone-for-online-classes/articleshow/77303306.cms>

GAILLARD, F. D. (2001). *Understanding the digital divide as it relates to electronic commerce*. Unpublished doctoral dissertation, Old Dominion University.

GAURAV, K. (2020). Magnitude and determinants of digital divide among the users of online education in Kerala. *Dogo Rangsang Research Journal*, 10(6), pp. 259–266.

GLADKOVA, A., VARTANOVA, E., & RAGNEDDA, M. (2020). Digital divide and digital capital in multiethnic Russian society. *Journal of Multicultural Discourses*, 15(2), pp. 126–147. DOI: 10.1080/17447143.2020.1745212

GONZÁLEZ-BETANCOR, S. M., LÓPEZ-PUIG, A. J., & CARDENAL, M. E. (2021). Digital inequality at home. The school as compensatory agent. *Computers and Education*, 168(March). Available from: <https://doi.org/10.1016/j.compedu.2021.104195>

HARGITTAI, E. (2002). Second-level digital divide: Differences in people's online skills. *First Monday*, 7(4).

ISTANCE, D., & REES, G. (1995). *Lifelong learning in Wales: A programme for prosperity* (NIACE Cymru policy discussion paper). Leicester, UK, NIACE.

JENA, P. K. (2020). Impact of pandemic COVID-19 on education in India. *International Journal of Research in Commerce and Management*, 5(10), pp. 7–11. Available from: <https://doi.org/10.24941/ijcr.39209.07.2020>

KOH, J. H. L., & KAN, R. Y. P. (2020). Students' use of learning management systems and desired e-learning experiences: Are they ready for next generation digital learning environments? *Higher Education Research & Development*, 1–16.

KUMAR, P. (2020). Reference based study on impact of COVID-19 on education systems. *International Journal of Current Research*, 12(7), pp. 12582–12586.

LEMBANI, R., GUNTER, A., BREINES, M., & DALU, M. T. B. (2020). The same course, different access: The digital divide between urban and rural distance education students in South Africa. *Journal of Geography in Higher Education*, 44(1), 70–84. <https://doi.org/10.1080/03098265.2019.1694876>

MAHMOOD, S. (2021). Instructional strategies for online teaching in COVID-19 pandemic. *Hum Behav & Emerg Tech*, 3, pp. 199–203. Available from: <https://doi.org/10.1002/Hbe2.218>

MIROSHNICHENKO, I., MOROZOVA, E., & MESHCHERYAKOVA, E. (2021). Policy for overcoming digital inequality: Structure, actors and technologies. *Proceedings of the 6th International Conference on Economics, Management, Law and Education (EMLE 2020)*, 165, pp. 401–405. Available from: <https://doi.org/10.2991/aebmr.k.210210.065>

MISHRA, S. V. (2020). COVID-19, online teaching, and deepening digital divide in India. *SocArXiv*. Available from: <https://doi.org/10.31235/osf.io/wzrak>

MPUNGOSE, C. B. (2020). Are social media sites a platform for formal or informal learning? Students' experiences in institutions of higher education. *International Journal of Higher Education*, 9(5), pp. 300–311.

MUTHUPRASAD, T., AISWARYA, S., ADITYA, K. S., & JHA, G. K. (2020). Students' perception and preference for online education in India during COVID-19 pandemic. *SSRN Electronic Journal*. Available from: <https://doi.org/10.2139/ssrn.3596056>

NGUYEN, M. H., HARGITTAI, E., & MARLER, W. (2021). Digital inequality in communication during a time of physical distancing: The case of COVID-19. *Computers in Human Behavior*, 120. Available from: <https://doi.org/10.1016/j.chb.2021.106717>

NIEMINEN, H. (2016). Digital divide and beyond: What do we know of information and communications technology's long-term social effects? Some uncomfortable questions. *European Journal of Communication*, 31(1), pp. 19–32.

PEARSON, T. (2002) Falling behind: A technology crisis facing minority students. *Tech Trends*, 46(2), pp. 15–20.

PEÑA-LÓPEZ, I. (2010). From laptops to competences: Bridging the digital divide in education. RUSC. *Universities and Knowledge Society Journal*, 7(1), pp. 21–32.

PRENSKY, M. (2001a). Digital natives, digital immigrants. Part 2: Do they really think differently? *On the horizon*.

PRENSKY, M. & BERRY, B. D. (2001b). Do they really think differently? *On the horizon*, 9(6), pp. 1–9.

PRENSKY, M. (2005). Engage me or enrage me. *Educase Review*, 40(5), pp. 61–64.

PUMPTOW, M. & BRAHM, T. (2020). Students' digital media self-efficacy and its importance for higher education institutions: Development and validation of a survey instrument. *Technology, Knowledge and Learning*. Available from: <https://doi.org/10.1007/s10758-020-09463-5>

RAGNEDDA, M. (2018) Conceptualizing digital capital. *Telematics and Informatics*, 35, pp. 2366–2375.

RAZA, S. A., KHAN, K. A., & RAFI, S. T. (2020). Online education & MOOCs: Teacher self-disclosure in online education and a mediating role of social presence. *South Asian Journal of Management*, 14(1), pp. 142–158.

SELWYN, N., GORARD, S., & WILLIAMS, S. (2001). Digital divide or digital opportunity? The role of technology in overcoming social exclusion in US education. *Educational Policy*, 15(2), pp. 258–277.

SELWYN, N. & FACER, K. (2007). *Beyond the digital divide*. Futurelab, UK.

SINGH, V. & THURMAN, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, 33(4), pp. 289–306. Available from: <https://doi.org/10.1080/08923647.2019.1663082>

TARMAN, B. (2003). The digital divide in education. Online submission, Paper presented at the Annual International Standing Conference for the History of Education (ISCHE XXV) (25th, Sao Palo, Brazil, Jul 2003).

TARTAVULEA, C. V., ALBU, C. N., ALBU, N., DIEACONESCU, R. I., & PETRE, S. (2020). Online teaching practices and the effectiveness of the educational process in the wake of the COVID-19 pandemic. *Amfiteatru Economic*, 22(55), pp. 920–936.

The digital divide – information, people, and technology (n.d.). Available from: <https://psu.pb.unizin.org/ist110/chapter/9-3-the-digital-divide/>

TRAPPEL, J. (2019). *Digital media inequalities: Policies against divides, distrust and discrimination*. Nordicom.

ULLAH, M. S. (2020). ICTs, power prejudice and empowerment: Digital exclusion of the poor in rural Bangladesh. In: *Digital inequalities in the global south*, Palgrave Macmillan, Cham.

VAN DEURSEN, A. J. & VAN DIJK, J. A. (2019). The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New Media & Society*, 21(2), pp. 354–375.

VARTANOVA, E., GLADKOVA, A., LAPIN, D., SAMORODOVA, E., & VIKHROVA, O. (2021). Theorizing Russian model of the digital divide. *World of Media. Journal of Russian Media and Journalism Studies*, 1, pp. 5–40. DOI: 10.30547/worldofmedia.1.2021.1

VISHKAIE, R. (2020). The pandemic, war, and sanctions: Building resilience for the digital divide in education. *Interactions*, 27(4), pp. 36–37.

VOLERY, T. & LORD, D. (2000). Critical success factors in online education. *International Journal of Educational Management*, 14, pp. 216–223. DOI:10.1108/09513540010344731

WARSCHAUER, M. (2004). *Technology and social inclusion: Rethinking the digital divide*. MIT press.

ZULKARNAIN, Z., HELENI, S., & THAHIR, M. (2020). Digital literacy skills of math students through e-learning in COVID-19 era: A case study in Universitas Riau. *Journal of Physics: Conference Series*, 1663(1).

Information sources, knowledge and compliance to COVID-19 safety protocol in Borno State, Nigeria

Joseph Wilson¹

University of Maiduguri, Nigeria

Chima Onuekwe

WHO Emergency Preparedness and Response

North-East Nigeria, Maiduguri, Borno State

Abdulmutallib Ado Abubakar

University of Maiduguri, Nigeria

Collins Owili

Henry Okoro-Nwanja

WHO Emergency Preparedness and Response

North-East Nigeria, Maiduguri, Borno State

To cite this article: Wilson, J., Onuekwe, C., Abubakar, A.A., Owili, C., & Okoro-Nwanja, H. (2021). Information sources, knowledge and compliance to COVID-19 safety protocol in Borno State, Nigeria. *World of Media. Journal of Russian Media and Journalism Studies* 4: 55-82. DOI: 10.30547/worldofmedia.4.2021.3

Abstract

Borno State, Nigeria has experienced active COVID-19 with quite a number of cases and mortalities. The extensive global campaign to create awareness about the pandemic and safety measures through various stakeholders appeared to have worked, especially when it became obvious that people in Borno keyed into safety protocols and observed the lockdown. They wore face masks, routinely applied hand sanitizers and handwashing in public places. It was observed, at some points however, there was obvious nonadherence to these protocols. Therefore, this study examines adherence to COVID-19 safety protocol issues in the state. Could the noncompliance be by those not aware or knowledgeable about the pandemic? Are there issues with the sources of information? The objectives of the study are to determine: the sources of information/knowledge on COVID-19; the effectiveness of the sources of information/knowledge on COVID-19; level of compliance to

¹ **Corresponding author:**

Joseph Wilson, Department of Mass Communication, University of Maiduguri, 1069 Bama - Maiduguri Rd, 600104, Maiduguri, Nigeria.

Email: wilson@unimaid.edu.ng

COVID-19 preventive/safety measures, and to identify challenges in complying with COVID-19 safety/preventive measures. The study used knowledge, attitude and practice theory employed survey method as well as convenience and purposive sampling techniques to select 2949 respondents across three LGAs in the state. The study found that people are aware and knowledgeable about the pandemic. The mass media, especially radio are the major sources of information. The noncompliance to COVID-19 safety protocol is largely due lack of fund to purchase and use face mask and hand sanitizer. It concludes that there are diverse sources of knowledge and information with poor compliance to the safety protocols in Borno State.

Keywords

COVID-19, Borno, safety protocol, compliance

Introduction

Since the outbreak of COVID-19, nations have taken steps to create awareness and ensure that people are knowledgeable about how to protect themselves and prevent further spread of the disease. The World Health Organization working with other relevant stakeholders at national and local levels ensured there was consistency in the level of awareness and risk communication messages available to the population. Messages were shared through different media platforms and other sources of information around the world to create awareness and reduce the spread of the virus. It was found in countries such as Ethiopia and the USA that people who had access to multiple informal and formal sources of information such as radio, television and Internet as well as health workers and peer groups have better understanding of the virus, trust the information and more willing to comply with the safety protocols (Awake et al., 2020; Maykrantz et al., 2020). Similarly, Ali and Bhatti (2020) discovered in Asia that media and other sources of information played fundamental roles in informing and triggering willingness among general public and health workers to believe and comply with safety issues of COVID-19. Consequently, the positive connection between media, information sources and motivation to comply with measure of addressing the pandemic had been established in many countries and communities around the world such Portugal, Germany, and Sweden (Arriaga et al., 2021). These scholars established that media could be used for effective health communication during COVID pandemic; the diffusion of fake information about COVID-19 through the media especially social media platforms and willingness of some people to accept, believe or act based on fake information; information as one factor that contributes to compliance on the

safety measures; and the role of media in making people connected during the pandemic period.

It is based on the WHO's efforts and what was obtainable in other parts of the globe that Borno State in north-eastern Nigerian also keyed into the campaign, trained, and engaged stakeholders such as the media practitioners, health workers, religious and community leaders to boost awareness and knowledge about the pandemic in Borno State, even before the state recorded its index case. While this was ongoing, Borno State confirmed its COVID-19 index case on 18 April, 2020 and ever since, it has continued to record cases as testing continues. At some point Borno State topped the list of the number of cases in the North-east region².

As indicated, the state has been proactive in putting measures to contain the pandemic even before it recorded its index case and this effort has continued to minimize the spread or increase in COVID-19 cases. For instance, it established the State Task Force on COVID-19 Response and activated the Public Health Emergency Operations Center (PHEOC). The WHO trained state and local government areas Rapid Response Teams (RRT), decontaminating health facilities where the index case in Borno State was admitted and hitherto providing technical support to ministry of health in Borno in active surveillance, risk communication, contact tracing, setting up isolation Centre for treatment of COVID-19 patients, sensitization/education on importance of preventive measures^{3&4}.

Like other 36 states in Nigeria, the Borno State Task Force on COVID-19 Response enforced both intra and interstate restriction of movement (the lockdown) and encouraged residents to maintain social distancing, use of local hand sanitizers and face masks as part of nonpharmaceutical preventive behaviour⁵.

During the early lockdown days, it was observed that there was high-level compliance among residents of the state on safety and preventive measures, especially maintaining social distancing, use of local hand sanitizers and face

² *Nairametrics (2020)*. COVID-19 update in Nigeria. Available from: <https://nairametrics.com/2020/07/15/covid-19-update-in-nigeria/>

³ *WHO (2020)*. WHO scales up support as Borno State confirms COVID-19 outbreak. Available from: <https://www.afro.who.int/news/who-scales-support-borno-state-confirms-covid-19-outbreak>.

⁴ *CRC (2020)*. ICRC response to COVID-19 in Nigeria. ICRC.

⁵ No face mask, no entering markets in Borno. *Today*, 25th April, 2020. Available from: <https://www.today.ng/news/nigeria/face-mask-entering-markets-borno-294382>

masks as part of preventive behaviour. For example, residents observed social distancing in the use of tricycles, in worship places, handshakes were minimised, face masks were visibly seen among vehicle passengers, gathering and shopping centres. Water and liquid soaps/hand sanitizers were distributed and visibly seen as well as used in public/commercial building with a good number of residents having same in their houses.

Despite some success on the compliance with the preventive measures among the high and middle classes in the state, the same cannot be said among the people who are considered as lower class who resided in more congested settlements on their level of compliance to preventive behaviours. Among the 'lower' and indeed high and middle classes, it was also observed that there was decline in adhering to social distancing, use of face masks, washing of hands with soap and use of hand sanitizer lately and people have been observed to have reverted to the usual handshake. Hence, there is no empirical evidence that show the information sources and compliance with COVID-19 protocols in Borno State, which might have contributed, like other parts of the world, to increase or sudden decline in the compliance to COVID-19 safety and preventive behaviours as noticed in Borno State, especially considering that there are daily reported cases both in the state and in the North-east region of the country. Furthermore, considering the centrality of information and knowledge on issues of no pharmaceutical preventive measures, this study examined the sources of information and knowledge on COVID-19 as well as the effectiveness of these sources among the target population. The research focused on residents of the Maiduguri Municipal Council, Gwoza town in Gwoza LGA and Monguno town in Monguno Local Government Areas. Although the population of these areas could not be ascertained because of the insurgency that had displaced people or residents, there were available figures based on 2006 Nigerian Census and projections based on the census figure. It had been reported that 2.7 million internally displaced persons (IDPs) in north-eastern. Therefore, this study contributes immensely to understanding the connection between information source and behaviour change on COVID-19 issues. It would help policy makers in the state to understand the reasons for the sudden decline in COVID-19 safety and preventive behaviour among residents and provide innovative ways to encourage or enforce compliance by the state and development partners. Further, this study would be a useful government to enhance its efforts to minimize the increase in the spread of the pandemic and it would further guide the stakeholders on COVID-19 campaign strategies.

The objectives of this research are to determine the sources of information/knowledge on COVID-19; to determine the effectiveness of the sources of

information/knowledge on COVID-19; to determine COVID-19 preventive/safety measures compliance status; and identify information sources and challenges in complying with COVID-19 safety/preventive measures.

Knowledge and sources of pandemic and compliance to prevention measures

Knowledge and sources of information on pandemic and health issues determine how people perceive and believe about a pandemic and act in order to prevent themselves and others from it. Al-Hanawi et al. (2020) argued that knowledge of pandemic like COVID-19 centres on knowing and understanding 'the causes and transmission sources of a disease, increases the likelihood that people will become more aware of the spread of communicable diseases, and of the preventive measures to slow transmission' (Al-Hanawi et al., 2020). This requires many information sources such as mass media especially in developing societies like Borno State where there is a humanitarian crisis that has affected women and children for over a decade. This crisis might have affected access to information.

The Nigeria's Demographic and Health Survey NDHS (2019) stated that the percentage of women and men who accessed information through newspaper, radio and television on a weekly basis in Borno State as 76.8%. The report disaggregates the figure as 2.2%, 18.4%, 13.3% and 1.4% for newspaper, radio, television and combination of three media respectively. This however has given clear picture of access to sources of information because the survey did not cover 11 local governments out of 27 because of Boko Haram insecurity (NDHS, 2019). The findings suggest that many women and girls had little access to information about HIV/AIDS and GBV and by extension COVID-19 pandemic.

The NDHS (2019) report further stated that sources of knowledge and information for men and women in Borno State were different. On family planning issue, the survey discovered that out of 1,469 women interviewed only 8.5%, 2.7%, 0.7%, and 1.6% had radio, television, newspaper/magazine, and mobile phone respectively as sources of information. Social media, poster, leaflet/brochure, town crier and mobile public announcement as sources of information had 1.8%, 4.7%, 0.5% and 0.3% respectively. This shows that more than 80% of people sourced information from other sources than mass media. The figure for men was relatively higher with over 61.0% radio, 46.7% television and 30.7% newspaper/magazine. Thus, media together with other sources provided public health campaigns against poliomyelitis, immunization,

malaria control, HIV/AIDS pandemic, and Ebola Virus Disease (Odorume, 2015). Media is a significant instrument that serves as source of knowledge, understanding, dissemination and influencing perception, opinions, favourable attitudes, and right behaviours of public on many issues that included public health emergencies like COVID-19 (CDC, 2014; Odorume, 2015; Pan American Health Organisation, PAHO, 2020; WHO, 2005).

The media help in reaching out communities with knowledge and evidence-based messages for behaviour change messages that is achieved through use of appropriate media as sources of information and partnership with social media and technology companies to spread information about COVID-19 and mitigate fake information and generate knowledge and compliance (Tangcharoensathien et al., 2020). Thus, poor knowledge of health and access to health information can affect compliance with COVID-19 safety and preventive measures. Hence media is fundamental to control and eradication of the disease (Padidar, Liao, Magagula, Mahlaba, Nhlabats, & Lukas, 2020).

According to Kayrite, Hailu, Tola, Adula, and Lambyo (2020), there was poor compliance to the prevention and safety protocols in Ethiopia due to poor access to information. Other reasons for lack of compliance might be associated to challenges related to income, poor political governance, and knowledge. According to Al-Hanawi (2020), however, people in Saudi Arabia had good knowledge, positive attitudes, and good practices toward COVID-19 protocols, which might be linked to level of development that can affect compliance. Therefore, the same cannot be the same in developing societies like Borno State.

Information sources and challenges in complying with safety/preventive measures

Complying or otherwise with safety protocols on pandemic is associated with access to information, knowledge, exposure, social status income and belief system. But information sources, such as media, are more central to the compliance dynamics in the COVID-19 context. According to Maykrantz, Gong, Petrolino, Nobiling and Houghton (2020), people who have access to information on COVID-19 through formal sources, such as radio, television and social media, were more prompt in complying with preventive measure. The information provided though unofficial sources of information is hard to believe, and people act accordingly. Media as a watchdog of the society set the public agenda on health matters, inform, educate, persuade people on public health emergencies and serve as a forum for discourses related to public health (Oyama & Okpara,

2017). This demonstrates that media provide leadership to the community, empowered society about potential health risks, physical education, and health literacy, and persistently advocating for adequate measures that can improve public health such as COVID-19 issues. Olubunmi, Ofurum, and Tob (2016) stated that information sources, particularly media, were effective in reaching a larger audience but less effective in enforcing behavioural changes. Television has been found to be instrumental in reaching teenagers and adolescents and radio seems to be the most operational broadcast option in reaching out to rural communities besides other interpersonal communication channels (Olubunmi, Ofurum, & Tob, 2016). Many sources of information, especially conventional media, try to stop the spread of fake information that may affect compliance with preventive protocols because they care about credibility and reputation and adherence to professionalism as universal convention. The bulk of fake information on the pandemic that may affect compliance is disseminated on social media and is based on it. Cinelli et al. (2020) argued that questionable information about COVID-19 was spread on social media platforms like *Twitter*, *Instagram*, *WhatsApp* and *Facebook*. This will likely affect adhering to messages received on social media.

On the other hand, studies have shown there are different positions on the impact of income and health. Some have argued that it is difficult to isolate the impact of income on health because of the linkage between income and other social risk factors. Moreover, it has been shown that people with higher incomes tend to live in healthier⁶. Similarly, people with low income are likely to be unable to have knowledge on how afford care and use fewer preventive care services⁷. Although a limited view, others argue that societies that high level of income inequality could have poor average health for reasons other than income distribution⁸. Although income is a factor, the COVID-19 pandemic have a number of alternative preventive measures that are cheap, affordable and effective by respective of income level or class. For example, social distancing, handwashing, stay-at-home and use of face mask (varieties) are affordable

⁶ CHOKSHI, D. A. (2018). Health, income, & poverty: Where we are & what could help. Available from: <https://www.healthaffairs.org/doi/10.1377/hpb20180817.901935/full/>

⁷ CUNNINGHAM, P. J. (2018). Why even healthy low-income people have greater health risks than higher-income people. Available from: <https://www.commonwealthfund.org/blog/2018/healthy-low-income-people-greater-health-risks>

⁸ MARMOT, M. (2002). The influence of income on health: Views of an epidemiologist. *Health Affairs*, 21(2). Available from: <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.21.2.31>

practices⁹. Padidar, Liao, Magagula, Mahlaba, Nhlabats and Lukas (2020) stated that people with higher level of education and income were more aware of the pandemic but there was challenge related to compliance to the safety measures.

Theoretical framework

This study is based on the arguments of knowledge, attitude and practice theory. This theory, which is also referred to knowledge, attitude and behaviour, is attributed to studies in health and other development interventions. The theory, which is associated to Schwartz (1976), states that level of knowledge on health issues like COVID-19 that are shared and sourced on media or other information platforms could impact on how people perceive the issue and possibly behave towards it or against it. The behaviour encompasses compliance or otherwise to an idea sourced from media or any information source. Thus, people can conform to safety and prevention protocols on COVID-19 because of the knowledge they accumulate through media or other sources of information. On the other hand, people could refuse to comply with guidelines despite the high level of knowledge due to preexisting cultural, traditional and religious (Al-Hanawi, 2020; Kayrite et al., 2020).

Methods

The research drew its study population (sample) from the target population using the multistage approach. The Stage one involved categorizing the state into the three senatorial districts of the state (Borno North, Borno Central and Borno South). The Stage two purposively selected one LGA from each of the senatorial districts, based on the LGA with the highest number of recorded COVID-19 cases. The selected LGA were: Maiduguri Metropolitan Council, Monguno and Gwoza. In Stage three, respondents were selected for administration of questionnaires and FGD meetings, based on residents of the LGAs from the period of confirmed cases of COVID-19 in Borno State to when the fieldwork started and ended (April to September 2020). The confirmed case in Borno marked the beginning of official observation of safety measures for residents. 3240 questionnaires were administered equally among the respondents in three LGA (proportional sampling fraction: MMC 1080, Gwoza 1080 and Monguno 1080) and Six FGD sessions made up Eight participants were

⁹ YAMEY, G. (2020). We have a cheap, effective way to keep ourselves safer from COVID-19. Why are we fighting about it? *TIME*, 29th June, 2020. Available from: <https://time.com/5861295/masks-covid19-spread-fighting/>

conducted in each of the selected LGAs. Thus, a total of 3240 questionnaires were administered to respondents and retrieved, 2949 were found usable, which represent 91 percent return rate. 291 representing 9 percent were not found usable, largely because of the respondents' claim of lack of knowledge of the COVID-19 pandemic. The usable sample consists of 2949 respondents that cut across the three selected Local Government Areas (Maiduguri Municipal Council (MMC) 930, Gwoza 984 and Monguno, 1035. The FGD consisted of a total of 144 discussants participated in the FGD 18 session across the three LGAs. 6 FGD sessions each for MMC, Gwoza and Monguno were conducted. Each session was made up of 8 participants. The fieldwork took place between August 25, and September 8, 2020. The demographic characteristics relation to gender, age and educational background were considered in data collection. The gender of the respondents was 1858 (63%) males and 1091 (37%) females. For the FGD, participants for MMC, Gwoza and Monguno LGAs included 24 males and 24 females. The demographic age of respondents included 20 – below years 619 (21%) respondents, 21 – 30 years, 1003 (34%) respondents, 31 – 40 years, 708 (24%) respondents, 41 – 50 years, 354 (12%) respondents, 51 – 60 years, 206 (7%) respondents, and 61 – above years, 59 (2%) respondents. Most of the FGD respondents across the three LGAs were predominantly within the ages of 31 to 40 and 21 to 30 age categories. The broader picture of educational attainment of the respondents considered in this study indicated that there were more respondents with Diploma and National Certificate of Education in respect of educational attainment. Most of the participants across the three LGAs have attained diploma or National certificate of education level, which is an indication of more educated participants across the three LGA. The result is a pointer that most survey respondents and FGD participants have attained the tertiary level of education, which should ordinarily translate to more knowledge on the COVID-19 pandemic, perhaps issues of compliance and healthier status¹⁰. As a rule, among the population studied there are more of those who have achieved one level of education than those who have not. This demographic information adequately represented the population of reported COVID cases, but it only relatively represented the general population in selected areas that are populated and inaccessible to researchers due to the Boko Haram insurgency and lack of internet connectivity.

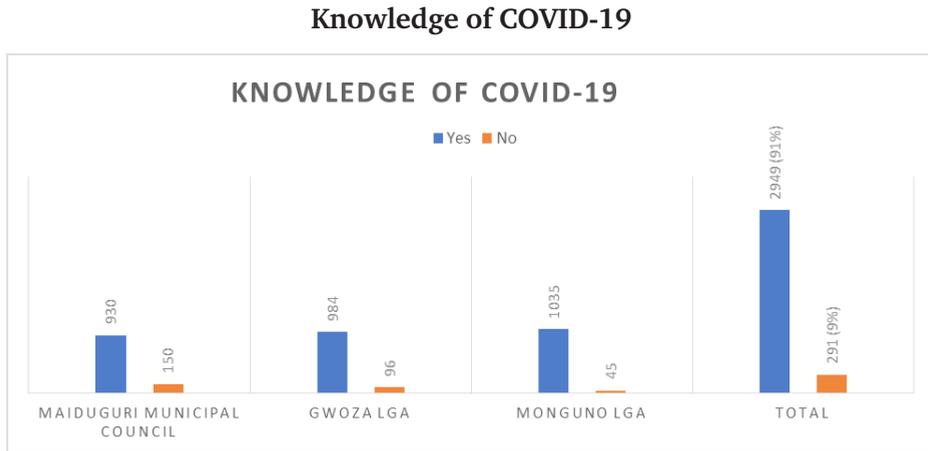
¹⁰ *UoPeople (n.d)*. Benefits of education are societal and personal. Available from: <https://www.uopeople.edu/blog/benefits-of-education-are-societal-and-personal/>

Findings

Knowledge of COVID-19

The knowledge of respondents on the COVID-19 pandemic acquired through various information sources that could determine the compliance to safety measures in the three LGAs is presented below.

Figure 1



Source: Field work 2020

Respondents were asked to indicate whether they have knowledge of COVID-19. Figure 1 shows that most of the respondents in the three LGAs have knowledge of COVID-19. However, there were respondents that claimed they did not know of COVID-19. The result for Borno indicates that 91% of the respondents know of COVID-19, while 9% do not know about COVID-19.

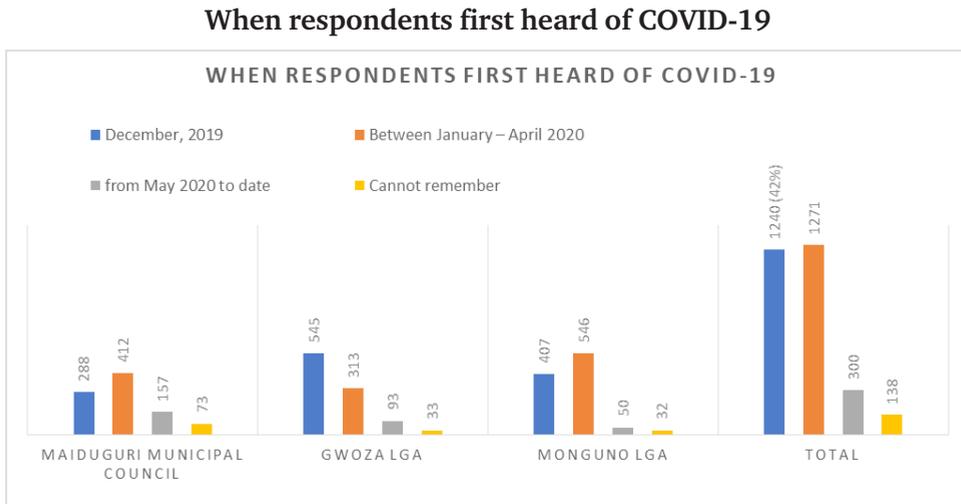
Most of the FGD participants across the three LGAs noted that they know of COVID-19 pandemic. However, the few who did not know joined the discussion when they finally understood the issues under discussion. It indicates that some respondents did not know what COVID-19 is but had ideas about the pandemic and were able to make contributions in the discussion. For example, some of the participants claimed: ‘We don’t have knowledge about it, but we heard what is on the radio, TV, hospital, NGOs, relatives, religious leaders, community leaders’¹¹. The participants across the three LGA went on to even identify the mode of transmission of the disease, such as transmission through droplets

¹¹ FGD participants explanation on knowledge of COVID-19.

from sneezing, and coughing from a person having coronavirus; through direct contact with somebody who is carrying the virus; through contaminated objects and surface.

Obviously, you will hardly find residents of the selected local government and possibly Borno State that would claim a total ignorance of the pandemic, provided they are furnished with further explanation on COVID-19, as is the case with the FGD.

Figure 2



Source: Field work 2020

Result in respect of when the respondents first heard of COVID-19 is shown in Figure 2. In MMC and Monguno LGA, most of the respondents first found out about the pandemic between January to April 2020. In Gwoza most of the respondents knew about it in December 2019. It is further indicated that for Borno State most of the respondents, representing 43% first heard of the pandemic between January to April, 2020. This is a further indication that most of the respondents have heard of the pandemic for over four or five months before this research and could have possibly sought or been exposed to further knowledge on the pandemic.

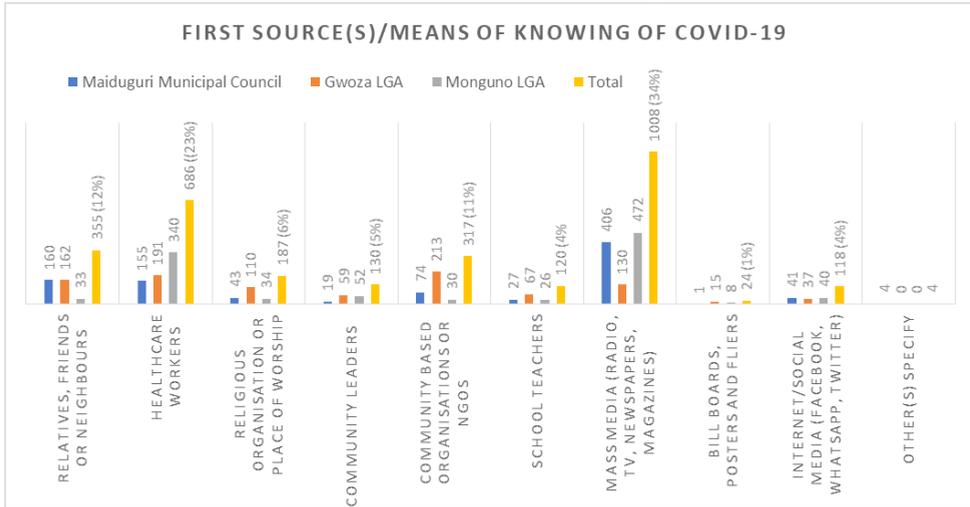
Sources of information and knowledge on COVID-19

Sources of information and knowledge is a vital element in the information and knowledge management value chain. The effectiveness of these sources

is equally important for proper information and knowledge delivery. Hence, respondents were asked to indicate their sources of knowledge on COVID-19 issues and the effectiveness of these sources in the selected LGAs.

Figure 3

First source of information and knowledge on COVID-19



Source: Field work 2020

Figure 3 shows that most of the respondents in MMC and Monguno LGA indicated mass media as the first source of information about COVID-19. For Gwoza LGA, most of the respondents, their first information and knowledge of COVID-19 Community based organisations and NGOs. Generally, for Borno State the first source of information about the pandemic is mass media (34%). It is followed closely by Health Worker 23%. This is to show that while other sources are important, the centrality of mass media as the first source of information and knowledge to wider reach is important.

Although the FGD participants did not put emphasis on the first source of information and knowledge on COVID-19, they identified various sources, such as the social media, radio, friends and relatives, health workers, religious leaders, community leaders and NGOs. Interestingly, mass media as the popular and first source of information and knowledge on COVID-19 as identified in the survey result is reinforced by the FGD finding, especially as most of the participants across the LGAs identified the mass media as their source of information (radio and television), especially radio as a point of interest for the

FGD participants in Gwoza LGA, who pointed out that the main advantage of radio is airing nonstop daily. Health workers are also important sources and means of delivering health information. Therefore, utilization of healthcare professionals for health information has been associated with meeting recommendations for health behaviours¹², which is the focus of COVID-19 safety compliance. Since the discussion on information and knowledge on COVID-19 focused on the sources of information, the FGD finding in respect sources, as earlier pointed out, participants identified various sources, but emphasis on the mass media, especially, radio as a vital source of information and knowledge. This FGD position is a pointer to sources of information and knowledge on the pandemic.

Effectiveness of sources of information and knowledge on COVID-19

Table 1
Rating of effectiveness of sources of information and knowledge on COVID-19

Maiduguri Municipal Council: Sources of information about COVID-19	Very Effective	Effective	Don't Know	Ineffective	Highly Ineffective
Relatives, friends or neighbors	179	170	75	39	59
Healthcare workers	244	154	48	127	151
Religious organization or place of worship	140	157	90	42	67
Community leaders	103	125	87	53	60
Community based organizations or NGOs	123	170	70	57	50
School or teacher	121	125	82	47	69
Mass media (radio, TV, newspapers, magazines)	264	202	58	36	58

¹² REDMOND, N., BAER, H. J., CLARK, C. R., LIPSITZ, S., & HICKS, L. S. (2010). Sources of health information related to preventive health behaviors in a national study. *American Journal of Preventive Medicine*, 38(6), pp. 620–627. DOI: <https://doi.org/10.1016/j.amepre.2010.03.001>

Internet/social media (Facebook, WhatsApp, Twitter, etc.)	181	76	113	75	66
Others	0	0	0	0	0
Gwoza LGA: Sources of information about COVID-19	Very Effective	Effective	Don't Know	Ineffective	Highly Ineffective
Relatives, friends or neighbors	219	159	34	48	57
Healthcare workers	255	141	11	31	26
Religious organization or place of worship	268	162	17	46	48
Community leaders	113	201	15	19	30
Community based organizations or NGOs	304	171	34	51	52
School or teacher	235	205	43	61	89
Mass media (radio, TV, newspapers, magazines)	252	244	59	31	34
Internet/social media (Facebook, WhatsApp, Twitter, etc.)	202	146	56	40	39
Others	6	13	14	0	1
Monguno LGA: Sources of information about COVID-19	Very Effective	Effective	Don't Know	Ineffective	Highly Ineffective
Relatives, friends or neighbors	37	27	42	520	71
Healthcare workers	352	196	22	26	27
Religious organization or place of worship	283	71	304	45	25
Community leaders	99	261	39	188	19
Community based organizations or NGOs	279	79	28	58	21
School or teacher	69	130	143	228	14
Mass media (radio, TV, newspapers, magazines)	341	43	100	211	115
Internet/social media (Facebook, WhatsApp, Twitter, etc.)	179	56	224	212	19
Others	8	27	6	8	9

Source: Field work 2020

Respondents in the selected LGAs rated the effectiveness of the sources of information and knowledge on COVID-19. *Table 1* shows that mass media are very effective among the sources of information and knowledge on COVID-19 for most of the MMC respondents. Most of the respondents indicated the community-based organizations or NGOs as very effective and health care workers the very effective source for Monguno LGA respondents.

Furthermore, the summary of the rating of various sources effectiveness indicates mass media as a very effective source (858 entries) followed closely by health workers (851 entries) by the study population. It means that both sources could be effective for disseminating general health information and specifically the pandemic in Borno State.

The FGD's conclusion on the effectiveness of sources of information and knowledge about the pandemic does not differ from a broader perspective from the results of the survey, which determined that the media is very effective and closely monitored by health professionals. While several participants identified other sources such as health professionals, the internet, religious leaders, community leaders, and NGOs, the media is most effective for the majority of the participants. Some of the reasons advanced for their source choices are:

'The reason for choosing the health workers is [that] health workers have credible information on the virus compared to any other sources.'

'The internet is the most effective. My phone is always with me to browse and check for updates on the disease. Sometimes, I receive messages from NCDC on WhatsApp.'

'Religious leaders are the most effective because they are trusted by us, the people.'

'The mass media are the most effective because they have always been our source of information on almost everything, the information from the mass media is processed by very credible people. We always have our radio handy.'

Most of them identified the media as the most effective source of information with a focus on radio because of its availability and accessibility at all times. The FGD result underpins the survey finding in respect of the rating of the effectiveness of sources of information and Knowledge on COVID.

The finding in respect of the effectiveness rating of the sources of information and knowledge on COVID-19 braces the position that the media improve communication about health by reaching a wide audience, and radio and television are effective channels for convincing target audiences of behavior change, as well as for conveying important information and knowledge.¹³

¹³ NAVEENA, N. (2015). Importance of mass media in communicating health messages: An analysis. *IOSR Journal of Humanities and Social Science*, 20(2), pp. 36–41.

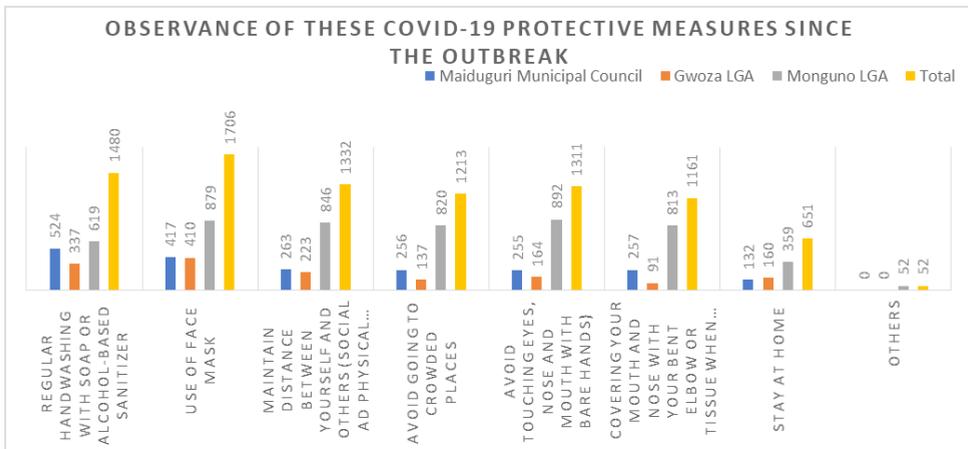
COVID-19 preventive and safety measures compliance status

Observance of the preventive/safety measures is central to addressing the spread of the virus. Respondents were asked to indicate their observance attitude towards COVID-19 preventive and safety advice (Use of face mask, maintaining social distance and frequent handwashing among others). The quantitative data in this study have shown that all the safety measures (regular handwashing with soap or alcohol-based sanitizer; use of face mask; maintaining social and physical distance; avoiding crowded places; avoiding touching eyes, nose and mouth with bare hands; covering of mouth and nose with bent elbow or a tissue when coughing or sneezing and staying at home) were observed by the respondents but the regular handwashing is the most observed protective measure in MMC. In Gwoza and Monguno, respondents indicated the face mask as the most observed COVID-19 protective measure.

The FGD participants across the three LGAs pointed out that they know about the COVID-19 safety. They observed and identified some of the measures to prevent COVID-19 and they went further to give some reasons for the compliance.

Figure 4

Observance of COVID-19 protective measures since the onset of the outbreak



Source: Field work 2020

MMC participants:

‘Because it was a directive from the government.’

‘I complied to protect myself and love ones from the disease.’

‘I was scared of contracting the virus.’

‘I complied because of the way the media reported the pandemic.’

Gwoza LGA participants:

‘Because Government directives.’

‘To avoid contracting the disease.’

‘I feared contracting the disease, based on what we have been hearing on the radio.’

Monguno LGA participants:

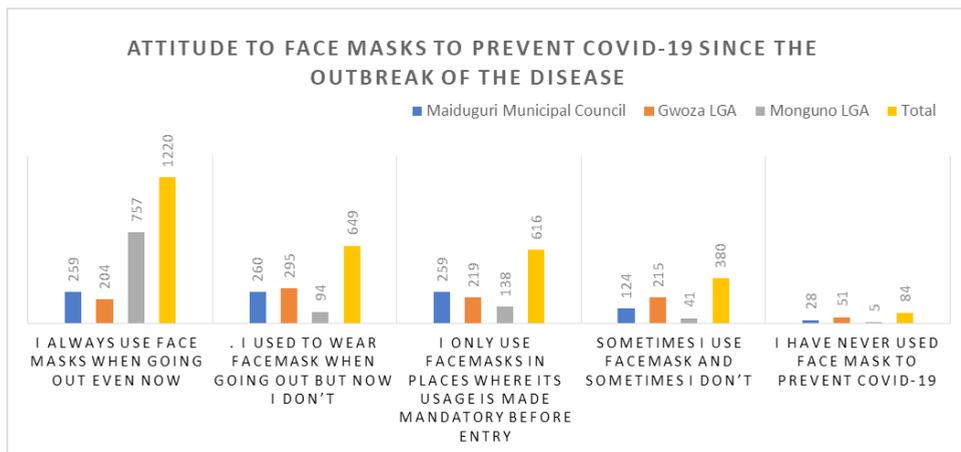
‘Because we are afraid of the deadly disease.’

‘Government has taken serious action about the disease.’

This finding points the common observed and reported issues at the outbreak of the pandemic. The measures put in place received a wide compliance. Individuals and organizations ensured compliance to the safety measure.¹⁴

Figure 5

Attitude to the use of face masks to prevent COVID-19 since the outbreak



Source: Field work 2020

¹⁴ OLAPGEBBA, P.O., AYANDELE, O., KOLAWOLE, S.O., OGUNTAYO, R., GANDI, J.C., DANGIWA, A.L., OTTU, F.A., IORFA, S.K. (2020). A preliminary assessment of novel coronavirus (COVID-19) knowledge and perceptions in Nigeria. DOI: <https://doi.org/10.1101/2020.04.11.20061408>

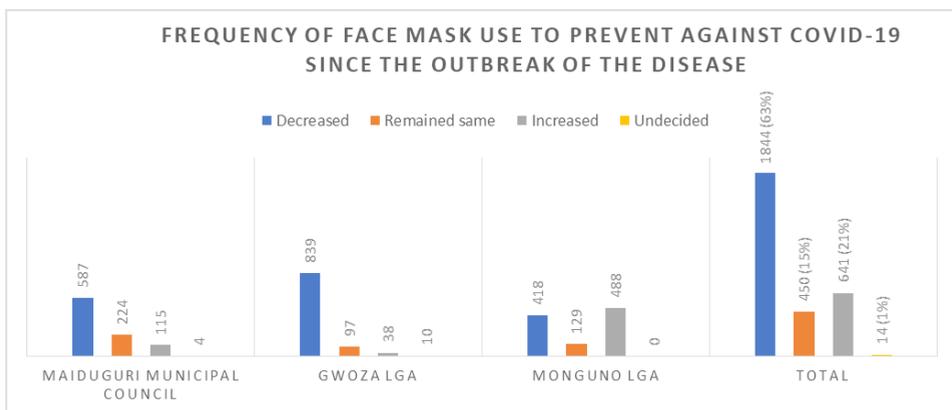
Respondents were asked to indicate their disposition to the use of face mask as a preventive measure to COVID-19 since the outbreak in the state. Most of the respondents in MMC and Gwoza LGA indicated that they used to wear face mask when going out but now they don't. In Monguno LGA, most of the respondents indicated that they always use face masks when going out even now. The general perspective in respect of Borno State (MMC, Gwoza and Monguno LGAs) as indicated in *Figure 5*, is that most of the respondents used face masks. There is still an adherence to use of a face mask as a preventive measure. The broader perspective is not unrelated to the use of face masks in places where it is made compulsory and could be linked to the high compliance level, especially in Monguno LGA, which resulted in 62% response rate in respect of those who always use face masks when going out. However, the general perspective of the survey result, which showed that face masks are the most used, is closely followed by respondents who noted that they have stopped using face masks when going out.

The FGD result is not different from that of the survey respondents as most of the FGD participants across the selected LGAs noted that they observed the use of face masks along with other COVID-19 safety measures.

However, *Figure 6* indicates that there is a decrease in the use of face mask across the selected LGAs. The decrease in the use of face masks more in MMC and Gwoza while there is a slight increase in Monguno. Nevertheless, most of the respondents (63%) indicated that there is a decrease in face mask use.

Figure 6

Frequency of face mask usage now to prevent against COVID-19

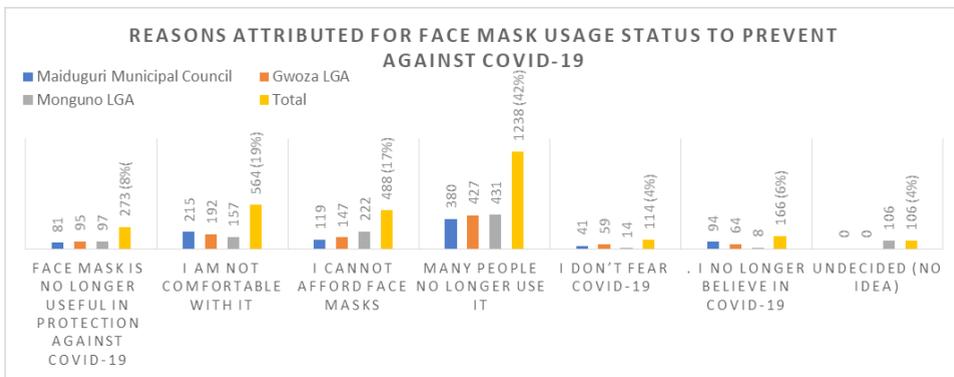


Source: Field work 2020

The FGD participants across the selected LGAs noted that they have stopped observing some of the safety measures for COVID-19 prevention, While MMC and Gwoza indicated the use of a face mask as one of the safety protocols they have stopped observing. Participants in Monguno identified the following: ‘Staying at home, observing social distancing except in most cases such as banks and hospitals.’ The finding in respect of the decrease in face masks reinforces the position that Nigerians are abandoning the use of face masks and other safety protocols on COVID-19.¹⁵

Figure 7

Reasons attributed for face mask usage status now to prevent against COVID-19



Source: Field work 2020

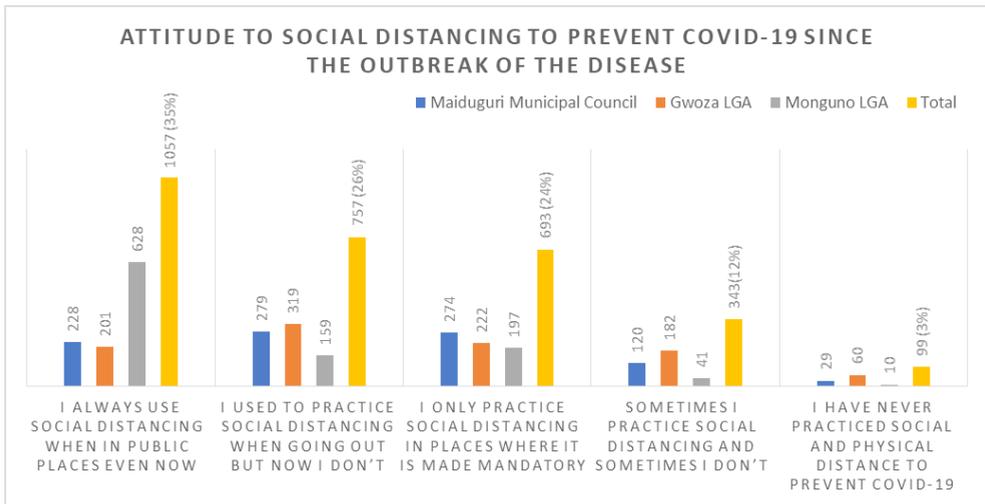
Respondents were asked to identify reasons for the decrease in the use of face mask as one of the COVID-19 preventive measures. Most of the respondents (42%) across the selected LGAs indicated that the reason of the decrease is the bandwagon effect, that is those who use face masks have joined many other people who no longer use face masks. The FGD participants, especially in MMC and Gwoza noted that they have stopped the use of face masks and other COVID-19 and safety protocols because they have not seen any infected person, government no longer enforced the measures and the virus was scam. However, participants in Monguno did not indicate the stoppage of the use of face masks

¹⁵ OJERINDE, D. (2020). COVID-19: Experts warn of second wave as Nigerians shun face masks. *Healthwise*, 7th September, 2020. Available from: <https://healthwise.punchng.com/covid-19-experts-warn-of-second-wave-as-nigerians-shun-face-masks/>

because ‘people no longer observe the measures, the disease doesn’t seem to be true and government lifted the lockdown rule.’

Figure 8

Attitude to social distancing to prevent COVID-19 since the outbreak

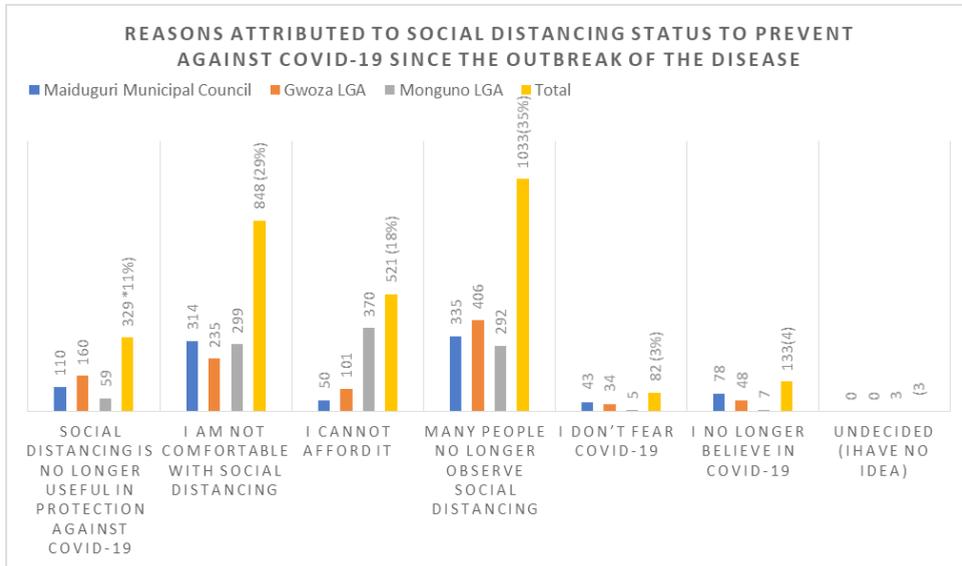


Source: Field work 2020

Attitude of respondents in respect of observing social distancing in public places varied. Monguno respondents indicated that they observe social distancing when in public. For Gwoza most of the respondents indicated that they used to practice social distancing, but no longer observe it. For MMC, most of the respondents only observe social distancing in places where it is made mandatory. Across the selected LGAs, most of the respondents (35%) observed social distancing since the outbreak followed by respondents (26%) that only observe or practice it where it is mandatory. On the other hand, most of the FGD participants noted that they practiced all the COVID-19 safety protocol, including maintaining social distance in public places before they stopped. This finding is an indication that all had been fine in respect of the compliance with the safety protocol before the decrease.

Figure 9

Reasons attributed for social distancing status against COVID-19



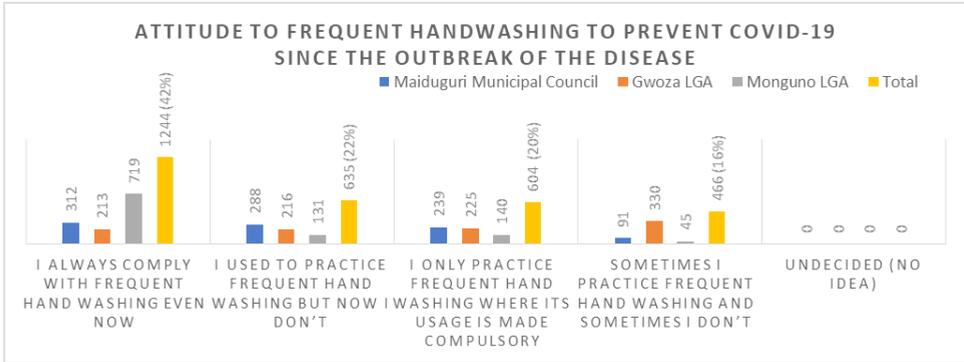
Source: Field work 2020

The reasons for the decrease in observing social distancing COVID-19 safety protocol is predominantly the same reason advanced for the decrease in the use of face masks, which is many people stopped observing social distancing because they joined the others who stopped or do not observe social distancing. It is shown that 35% of respondents have indicated the decrease because many people no longer observe social distancing. Other respondents indicated that they are not comfortable with social distancing (29%). This finding goes to explain that observing social distancing is challenging. It has been pointed out that people around the world have not taken the observance of social distancing COVID-19 safety protocol seriously, which seems to be in Nigeria. There was a time, at the onset of the pandemic, social distancing was not one of the measures being required by government advisories in a place like Italy¹⁶.

¹⁶ Nigeria Health Watch (2020). Coronavirus: Time to take social distancing seriously in Nigeria. Available from: <https://medium.com/@nigeriahealthwatch/coronavirus-time-to-take-social-distancing-seriously-in-nigeria-8a059c881870>

Figure 10

Attitude to handwashing to prevent COVID-19

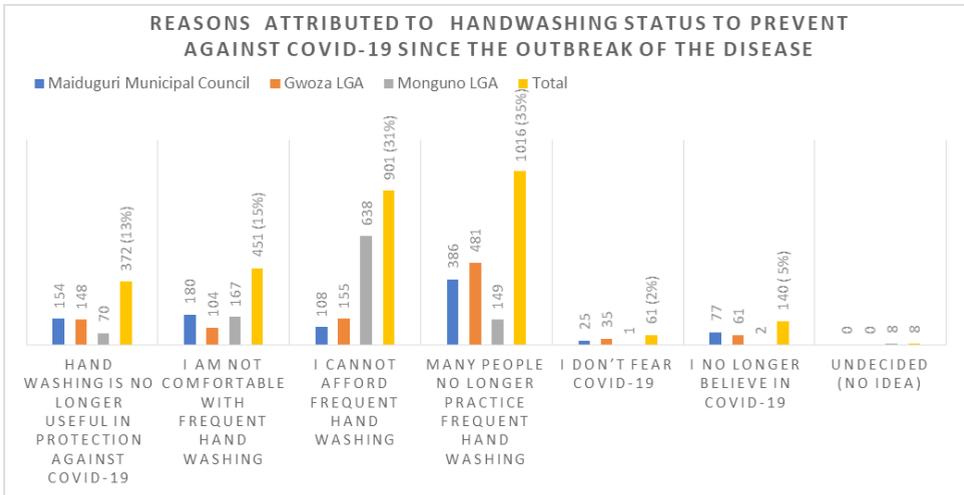


Source: Field work 2020

Most of the respondents (42%) across the LGA practice handwashing as COVID-19 safety protocol. In spite the compliance, 22% of respondents no longer observe the handwashing practice and 20% practice it where and when it is compulsory.

Figure 11

Reasons attributed to handwashing status to prevent against COVID-19



Source: Field work 2020

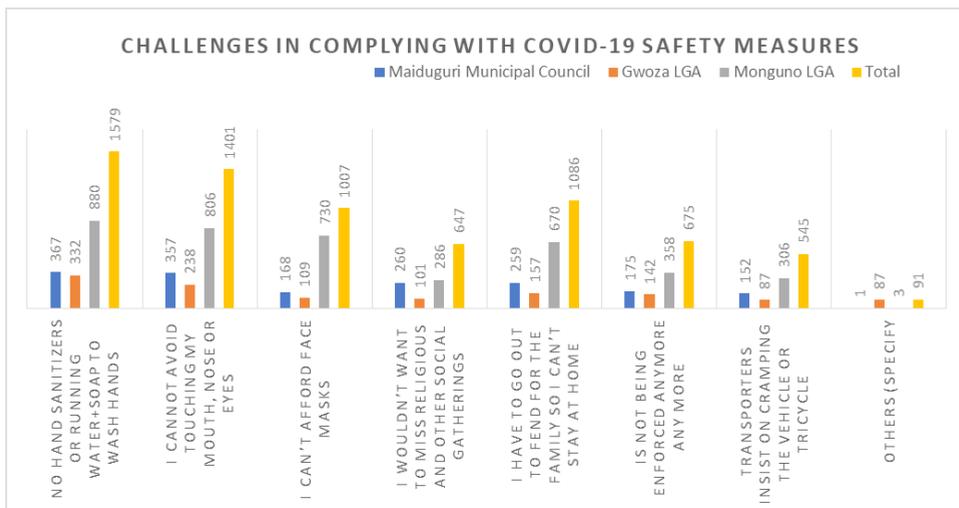
Respondents were asked to indicate the reason for the decrease in observing regular handwashing as one of the COVID-19 safety protocols. It is shown that most respondents (35%) across LGA indicated that many people no longer practice regular handwashing as they joined the others who no longer practice frequent handwashing. 32% of the respondents indicate that they cannot afford the regular handwashing. It seems simple, though there are arguments that many Nigerians would not be able to practice simple, cost-effective, life-saving protocol of frequent handwashing because of lack of access to clean water. WaterAid Nigeria has revealed that 55 million Nigerians lack access to safe pump water.¹⁷

Challenges in complying with COVID-19 safety and preventive measures

Complying with the COVID-19 safety protocol is desirable. However, it comes with its challenges. Hence the research sought to identify challenges associated with compliance with the safety protocols in Borno State.

Figure 12

Challenges in complying with COVID-19 safety measures



Source: Field work 2020

¹⁷ ONWUZOO, A. (2020), COVID-19: Why regular handwashing is a challenge in Nigeria. *Healthwise*, 29th April, 2020. Available from: <https://healthwise.punchng.com/covid-19-why-regular-hand-washing-is-a-challenge-in-nigeria/>

Most of the respondents identified the lack of running water and hand sanitizer to comply to frequent handwashing. It followed by the inability to avoid touching mouth, nose and eyes. The FGD participants identified similar challenges as that of the survey respondents. Some of the challenges are:

'No running water to wash hands, I don't have money to buy hand sanitizer.'

'Motorists don't care about these measures – keke (tricycle) and buses will always want to overload.'

'If I stay at home, will the government come and feed my family? I have to go and look for what my family will eat.'

'Lack of provision of preventive and safety measure equipment by the Government.'

'Staying at home has become a hunger strike.'

'Most of the people cannot afford the equipment such as hand sanitizers and face mask.'

The FGD participants recommended government should reintroduce enforcement of compliance with the safety measures; it should make available face masks at affordable prices; it should enhance public sensitization and campaigns on compliance; and community and religious leaders should enhance their commitment to encouraging people to comply.

Conclusion

The research concludes that there are information sources which have not been utilized to stem the challenges in respect of compliance with the safety protocols of COVID-19. The study concluded that mass media is a very effective source (858 entries) followed closely by health workers (851 entries) in the study location. These challenges have manifested in the decrease in compliance across local communities in the state. Although residents are informed and have knowledge on COVID-19 and are aware of the safety protocols but there is decline in the use of face masks, observance of social distancing and regular handwashing, largely because many people no longer observe the protocols, as such, those who observe the protocol continue to abandon the safety measures. It is also clear that the respondents are still aware of the need to protect themselves against COVID-19 but compliance may be difficult due to factors such as access and affordability of some of the safety protocols, such as face masks, hand sanitizers and the economic reality would not allow them to stay at home because they have to go out to fend for survival. Furthermore, there are several sources of information and knowledge on the pandemic as well as the safety measures, however, the mass media, especially the radio medium stood out as the most effective source.

Recommendations

Based on the findings and conclusion, this study, therefore, recommends that:

- The WHO and other stakeholders with the help of the most effective information sources, need to enhance and intensify sensitization and reorientation on the fact that COVID-19 is not over yet and that there is increasing need to spread information to ensure comply with the safety practices, especially the realistically affordable practices such as frequent handwashing and social distancing.
- Stakeholders should consider maximum use of the mass media, especially radio for enhanced sensitisation and reorientation effort.
- The underutilized sources, especially community leaders should be fully utilized to promote the safety compliance through community dialogue.
- Develop or continually update inclusive response and risk communication and community engagement (RCCE) plans and strategies in all the LGA in Borno State.
- Introduce or boost inter-personal communication and community participatory approaches platforms for reorientation effort to comply with the safety measures by identifying and engage the services of community opinion leaders and influencers, peer educators and mentors for interpersonal communication approach.
- Intensify the use of digital tools and platforms, especially SMS and WhatsApp to buttress the need for compliance.
- There is also a need to improve the adaptation of behaviour change communication (SBCC) strategy to:
 - 1) Increase knowledge by providing or ensuring exposure to high quality information about the pandemic and safety compliance by engaging health experts in media programmes and community dialogue and events.
 - 2) Introduce edutainment in the SBCC approach, for example popular music artists could be used to enhance knowledge on COVID-19 and safety measures, especially the affordable but effective ones identified earlier.
 - 3) Stimulate community dialogue and events on COVID-19 safety compliance through community-based social and biological groups (youth, elders, community leaders and gender-based fora/forums).
 - 4) Evaluate the present media messages on safety compliance for possible change in the way information is framed. Since the media is a major source of information in Borno on the pandemic, media messages should be evaluated and reconsidered.

References

- AL-HANAWI, M. K., ANGAWI, K., ALSHAREEF, N., QATTAN A. M. N., HELMY, H. Z., ABUDAWOOD, Y., ALQURASHI, M., KATTAN, W. M., KADASAH, N. A., CHIRWA, G. C., & ALSHARQI, O. (2020). Knowledge, attitude and practice toward COVID-19 among the public in the Kingdom of Saudi Arabia: A cross-sectional study. *Frontiers in Public Health*, 8(217), pp. 1–10. DOI: 10.3389/fpubh.2020.00217.
- ALI, M. Y. & BHATTI, R. (2020). COVID-19 (coronavirus) pandemic: Information sources channels for the public health awareness. *Asia Pacific Journal of Public Health*. Available from: <https://doi.org/10.1177/>.
- ARRIAGA, P., ESTEVES, F., PAVLOVA, M. A., & PIÇARRA, N. (2021). Editorial: Coronavirus disease (COVID-19): The impact and role of mass media during the pandemic. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2021.729238.
- AWEKE, Z., JEMAL, B., MOLA, S., & HUSSEN, R. (2020). Knowledge of COVID-19 and its prevention among residents of the Gedeo zone, South Ethiopia. Sources of information as a factor. *Current Medical Research and Opinion*, 36(12). Available from: <https://doi.org/10.1080/03007995.2020.1835854>
- CDC (2014). Risk emergency + risk communication: CERC working with the media. Available from: <https://emergency.cdc.gov/cerc/manual/index.asp>.
- CHOKSHI, D. A. (2018). Health, income, & poverty: Where we are & what could help. Available from: <https://www.healthaffairs.org/doi/10.1377/hpb20180817.901935/full/>
- CINELLI, M., QUATTROCIOCCHI, W., GALEAZZI, A., VALENSISE, C. M., BRUGNOLI, E., SCHMIDT, A. L., ZOLA P., ZOLLO F., & SCALA, A. (2020). The COVID-19 social media infodemic. Available from: <https://arxiv.org/pdf/2003.05004.pdf>
- City Population (2020). Gwoza local government area in Nigeria. Available from: <https://www.citypopulation.de/php/nigeria-admin.php?adm2id=NGA008011>
- CRC (2020). ICRC response to COVID-19 in Nigeria. ICRC.
- CUNNINGHAM, P. J. (2018). Why even healthy low-income people have greater health risks than higher-income people. Available from: <https://www.commonwealthfund.org/blog/2018/healthy-low-income-people-greater-health-risks>
- KAYRITE, Q. Q., HAILU, A. S., TOLA, T. N., ADULA, T. D., & LAMBYO, S. H. (2020). Compliance with COVID-19 preventive and control measures among food and drink establishments in Bench-Sheko and West-Omo Zones, Ethiopia. *International Journal of General Medicine*, pp. 1147–1155.
- MARMOT, M. (2002). The influence of income on health: Views of an Epidemiologist. *Health Affairs*, 21(2). Available from: <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.21.2.31>

MAYKRANTZ, S. A., GONG, T., PETROLINO, A. V., NOBILING, B. D., & HOUGHTON, J. D. (2020). How trust in information sources influences preventative measures compliance during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(5867). Available from: <https://doi.org/10.3390/ijerph18115867>.

Nairametrics (2020). COVID-19 update in Nigeria. Available from: <https://nairametrics.com/2020/07/15/covid-19-update-in-nigeria/>

NAVEENA, N. (2015). Importance of mass media in communicating health messages: An analysis. *IOSR Journal of Humanities and Social Science*, 20(2), pp. 36–41.

NDHS (2019). *Nigeria: Demographic and health survey*. Abuja, National Population Commission.

Nigeria Health Watch (2020). Coronavirus: Time to take social distancing seriously in Nigeria. Available from: <https://medium.com/@nigeriahealthwatch/coronavirus-time-to-take-social-distancing-seriously-in-nigeria-8a059c881870>

No face mask, no entering markets in Borno. *Today*, 25th April, 2020. Available from: <https://www.today.ng/news/nigeria/face-mask-entering-markets-borno-294382>

ODORUME, A. (2015). Mass media health communication: Imperative for sustainable health development in Nigeria. *Mgbakoigba: Journal of African Studies*, 4(1).

OLAPEGBA, P. O., AYANDELE, O., KOLAWOLE, S. O., OGUNTAYO, R., GANDI, J. C., DANGIWA, A. L., OTTU, F. A., & IORFA, S. K. (2020). A preliminary assessment of novel coronavirus (COVID-19) knowledge and perceptions in Nigeria. DOI: <https://doi.org/10.1101/2020.04.11.20061408>

OLUBUNMI, A. P., OFURUM, O., & TOB, L. E. (2016). Analysis of case studies in public health communication strategies in Nigeria. *Research Journal of Mass Communication and Information Technology*, 2(2), pp. 19–30.

ONWUZOO, A. (2020). COVID-19: Why regular handwashing is a challenge in Nigeria. *Healthwise*, 29th April, 2020. Available from: <https://healthwise.punchng.com/covid-19-why-regular-hand-washing-is-a-challenge-in-nigeria/>

OYAMA, O. & OKPARA, N. (2017). Health communication: The responsibility of the media in Nigeria. *Specialty Journal of Medical Research and Health Science*, 2(3), pp. 1–4.

PADIDAR, S., LIAO, S., MAGAGULA, M. MAHLABA, T. A. M., NHLABATS, N. M., & LUKAS, S. (2020). Assessment of early COVID-19 compliance to and challenges with public health and social prevention measures in the Kingdom of Eswatini, using an online survey. *PLoS ONE*, 16(6) Available from: <https://doi.org/10.1371/journal.pone.0253954>

PanAmericanHealthOrganisation (2020). COVID-19 an informative guide: Advice for journalists. Available from: <https://iris.paho.org/handle/10665.2/52392>.

REDMOND, N., BAER, H. J., CLARK, C. R., LIPSITZ, S., & HICKS, L. S. (2010). Sources of health information related to preventive health behaviors in a national study. *American Journal of Preventive Medicine*, 38(6), pp. 620–627. DOI: <https://doi.org/10.1016/j.amepre.2010.03.001>

SCHWARTZ, N. E. (1976). Nutrition knowledge, attitudes and practices of Canadian public health nurses. *Journal of Nutrition Education*, 8(1), pp. 28–31.

TANGCHAROENSATHIEN, V., CALLEJA, N., NGUYEN, T., PURNAT, T., D'AGOSTINO, M., GARCIA-SAISSO, S., LANDRY, M., RASHIDIAN, A., HAMILTON, C., ABDALLAH, A., GHIGA, I., HILL, A., HOUGENDBLER, D., VAN ANDEL, J., NUNN, M., BROOKS, I., SACCO, P. L., DE DOMENICO, M., MAI, P., GRUZD, A., ALAPHILIPPE, A., BRIAND, S. (2020). Framework for managing the COVID-19 infodemic: Methods and results of an online, crowdsourced WHO technical consultation. *Journal of Medical Internet Research*, 22(6), pp. 1–9. DOI: 10.2196/19659.

UNHCR (2020). Compliance status and over 2.7 million internally displaced persons (IDPs) in north-eastern Nigeria. Available from: <https://www.unhcr.org/nigeria-emergency.html>

UoPeople (n.d). Benefits of education are societal and personal. Available from: <https://www.uopeople.edu/blog/benefits-of-education-are-societal-and-personal/>

WHO (2005). Effective media communication during public health emergencies: A WHO handbook. Geneva: World Health Organisation.

WHO (2020). WHO scales up support as Borno State confirms COVID-19 outbreak. Available from: <https://www.afro.who.int/news/who-scales-support-borno-state-confirms-covid-19-outbreak>.

YAMEY, G. (2020). We have a cheap, effective way to keep ourselves safer from COVID-19. Why are we fighting about it? *TIME*, 29th June, 2020. Available from: <https://time.com/5861295/masks-covid19-spread-fighting/>

Aims & Scope

The journal *World of Media. Journal of Russian Media and Journalism Studies* appears on a quarterly basis (4 times a year).

World of Media represents a collection of original research in the field of media and journalism studies conducted by authors from diverse cities and institutions. The journal is aimed at promoting the development of media and journalism studies in both national and global contexts, and stimulating a wider public interest in the journalism theories, methods, findings and applications generated by research in communication and allied fields.

The journal seeks to publish original research articles of the highest standard in the fields of:

- Media studies
- Journalism studies
- Communication theories
- Intercultural communication
- International communication
- Media policy and regulation
- Media sociology
- Media psychology
- Regional studies
- Digital media
- Media communication

While the manuscript is open to all methodological approaches, all submissions are expected to be theoretically grounded.

Submitting your paper

The editors of *World of Media* are now inviting submissions. Submitted papers should be no longer than 5 000 words, accompanied by a short abstract, up to 200 words, and contain 5-7 key words. The title page should include the title of the paper, the name of the author(s), full title and the affiliation of the author(s) (full name of the institution and department, city, country, e-mail address).

List of references should include only publications cited in the article. Citations in the text should be accompanied by round brackets containing last name(s) of the author(s), year of publication and page(s). Example: (Johnes, 2008: 115).

The manuscript should be typed in 1,5-spacing on one side of the paper only, using Times New Roman 14 font. Margins are 2 cm on all sides. Tables and figures (illustrations) should be embedded into the text.

The paper should contain the following parts: abstract (230+ words), keywords (5-7 words), main text (4000-5000 words) and references.

For more information, check *For Authors* section at www.worldofmedia.ru

Reviewing policy

World of Media supports a strict policy of publishing only peer-reviewed articles. All submitted articles are first evaluated by the editors to ensure the paper is original, written within the aims and scope of the journal, has clear academic structure and is written in good English language (all accepted papers will have to be later proofread by a native speaker after formal acceptance). Manuscripts that meet the minimum criteria are normally passed on to two expert referees for reviewing. Reviewers are selected among editorial board members and external reviewers based on their professional knowledge and expertise in the topic. The review period usually takes 1-2 months.

Open access statement

World of Media journal is committed to real and immediate open access for academic work. All *World of Media* 's articles starting from 2013 are free to access immediately from the date of publication without charge to the user or his/her institution. According to Budapest Open Access Initiative, the journal allows to read, download, copy, distribute, print, search, or link to the full texts of its articles and allows readers to use them for any other lawful purpose, without asking prior permission from the publisher or the author. Reference to the journal, title of the paper and the authors are required in all cases.

Charges

There are no article submission, article processing charges or any other charges, and no charge for any reader to download articles for their own scholarly use.

Note

The authors' opinion and standpoint may not coincide with the editors'.

If you have any queries, please, contact the editors at worldofmedia@mail.ru



ISSN 2307-1605



9 772307 160138

ISSN 2686801



9 772686 80100

