

Original Article

## Assessment of the quality of coronavirus-related online information in Hausa language

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### ABSTRACT

**Objectives:** To examine the quality of coronavirus related online information being posted in Hausa language.

**Materials and Methods:** On 11<sup>th</sup> September, 2021, Google search engine was used to search the terms “Cutar Coronavirus” “Murar Mashako” “Cuta mai sarkafe Numfashi. Two raters rate the retrieved websites that met inclusion criteria and the data was validated by another independent researcher. Thereafter, inter rater reliability was computed using Pearson correlation in SPSS V20 at alpha level of 0.05.

**Results:** A very good inter rater reliability of 0.83 was found. None of the websites belongs to an educational institution. The websites have quality information on the basic information of coronavirus such as definition, origin, mode of transmission 4.82 (0.36), but poor information on prevention and treatment effects 1.68 (0.84).

**Conclusion:** In conclusion, coronavirus related online information being posted in Hausa Language are not reliable. There is need to educate online health information seekers on how to evaluate the genuineness of the information they are receiving.

**Keywords:** West Africa, Google, COVID-19, DISCERN, Hausa

### INTRODUCTION

COVID-19 caused a worldwide social and economic disruption discovered in Wuhan city of China in December 2019 and hence the name.<sup>[1]</sup> The virus was declared a pandemic by the WHO on March 11, 2020.<sup>[2]</sup> The first case of the virus was confirmed in Africa in February in Egypt.<sup>[3]</sup> Since then, efforts were made in the form of capacity building such as increasing the workforce, testing laboratories, isolation centers, movement restrictions, and other government decisions based on expert advice.<sup>[4]</sup> Part of the effort being made is regular public enlightenment mainly on preventive strategies. These altogether led to success in mitigating the spread of the virus in the continent.<sup>[5]</sup>

There has been a rise in social media usage globally; people now seek information online health information inclusive. Therefore, people might be seeking information on coronavirus-related information online. It is noteworthy that not all information posted online is genuine,<sup>[6,7]</sup> it may contain facts, misleading information, or entirely false information.<sup>[7]</sup>

The Hausa language is the second most spoken language in Africa after Swahili and it is the most spoken language in West African countries.<sup>[8]</sup> It is spoken by about 65 million people both native and non-native.<sup>[8]</sup> Due to the high number of Hausa Facebook users, Mark Zuckerberg decided

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to add it as one of the 100 Facebook languages.<sup>[9]</sup> Recently, Saudi Arabia recognized the Hausa language as one of the 10 languages to translate the pilgrimage sermon for better comprehension of the native speakers of the languages.<sup>[10]</sup> A prior study conducted on English language websites showed that the majority are of poor quality.<sup>[7]</sup>

The fact that people prefer reading information in their native language,<sup>[6]</sup> the nature of quality of online information,<sup>[7]</sup> and the number of Hausa speakers, there is a need for an assessment of the quality of the websites providing information on coronavirus in Hausa and hence the aim of this study.

**MATERIALS AND METHODS**

Google was used as the search engine as it was shown to be the most search engine by online information consumers.<sup>[11]</sup> Because of the importance of the first three pages of the search result,<sup>[12]</sup> only the three pages were considered. The Hausa words for COVID-19 “Cutar coronavirus,” “Murar Mashako,” “Annobar corona,” and “Cuta mai Sarkafe Numfashi” were used as the search terms. A modified version of DISCERN to suit the study adopted from Joshi *et al.*<sup>[7]</sup> was used to obtain the data and is described below. The 16 items DISCERN tool was collapsed into six domains: Relevance, objectives, information credibility, treatment choices, treatment effect, and prevention and management [Table 1]. Each category was scored on a 5-point Likert scale of 1–5. A higher score indicates that the website contains reliable and sufficient information while a lower score indicates a lack of useful information. The search terms were four and the results of the first three pages (30 results) were considered making 120 websites. After excluding any language other than Hausa, non-operational links, videos, pdf files, and journal websites, 22 websites met the inclusion criteria. The search was done on September 11, 2021, by DGM. The websites were then independently assessed by the two assessors (a healthcare professional and a non-health professional Hausa speaker) MYS and IBU and validated by DGM. Data analysis was done in SPSS V20. Mean and standard deviation was used to summarize the data and frequency and percentage for categorical data. Inter-rater reliability was computed using Pearson’s correlation and ANOVA was used to check differences in quality information among the various website extensions.

**RESULTS**

There was a very good inter-rater reliability (0.83) between the two raters [Table 2]. [Figure 1] shows that the majority of the websites 12 (54.6%) belong to the .com category with 5 (22.7%) belonging to .org and others each. [Table 3] shows that the highest qualitative information was found in

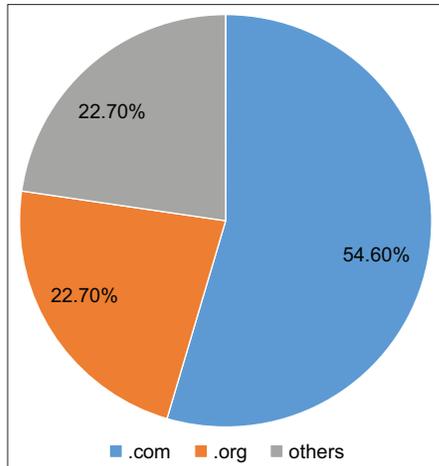
**Table 1:** Modified DISCERN checklist.

S No.	Items	Items description	1	2	3	4	5
1	Objectives	Was the aim to describe any related to COVID-19?					
2	Relevance	Were information on Introduction of coronavirus, diagnosis/ assessment of coronavirus risk factors/causes/ ethology, symptoms of coronavirus provided?					
3	Information credibility	Was citations/reference material to the information presented and date of publication provided? Any element of bias					
4	Treatment choices	Was information on coronavirus treatment and various treatment approaches, how to self-manage coronavirus, who to consult or refer to in case of coronavirus provided?					
5	Treatment Effect	Was information on what are the best approaches evident for coronavirus treatment, the new treatment approaches that are currently being explored and the benefits of each treatment modality clearly illustrated? Complications of coronavirus					
6	Prevention and management	Was who to consult or refer to information provided?					

**Table 2:** Inter-rater reliability of the websites between the two raters.

Rater 1	r	P-value
Rater 2	0.83	0.00

objectives 4.82 (0.36), followed by information credibility 3.57 (0.81) and the least in treatment effect 1.68 (0.84), prevention and management 2.07 (1.27), and treatment choice for coronavirus 2.30 (1.33), respectively. There were no any significant differences in the quality of information across all the website categories (F = 3.14 and P = 0.07) as can be seen in [Table 4].



**Figure 1:** Distribution of website category.

**Table 3:** Mean score of the various DISCERN group.

Variables	Mean	Std. dev.
Objectives	4.82	0.36
Relevance	2.59	1.30
Credibility	3.57	0.81
Treatment choices	2.30	1.33
Treatment effect	1.68	0.84
Prevention	2.07	1.27

**Table 4:** ANOVA for differences in the quality of information among various websites extension.

	Sum of squares	Df	Mean square	F	P-value
Between groups	130.18	2	65.09	3.14	0.07
Within groups	394.06	19	20.74		

**DISCUSSION**

The study was aimed at examining the quality of COVID-19-related online information available in the Hausa language. The information could be on the origin of the virus, mode of transmission, mortality, and preventive measures among others. To address the gap of the subjective nature of the DISCERN scale, two raters that are frequent users of the internet rated the websites and the validation was done by a third party. This yielded a very good inter-rater reliability which implies that both raters perceive the websites the same way.

Most of the websites are commercial websites. This is similar to the findings of Ansari *et al.*<sup>[6]</sup> and Joshi *et al.*<sup>[7]</sup> In addition, none of the websites is owned by a university or government. This signal for an alarm to the quality of the coronavirus information being consumed online every day because the information from government or universities is considered more reliable than from commercial websites. To add to this,

Joshi *et al.*<sup>[7]</sup> found out that qualitative information is found more from .gov, .edu, and .org websites.

The spread of the pandemic might be worsened by an infodemic.<sup>[7]</sup> The study recorded poor quality information on treatment effects, prevention, and management and treatment choices for coronavirus being disseminated. This implies that the majority of the websites do not give reliable information on the evidence-based treatment of coronavirus and the benefits of the treatment. Likewise, the information on preventive strategies is also of poor quality. This kind of information led some individuals to seek unorthodox health care that is detrimental to their health.<sup>[7]</sup> These all together might account for the negative attitudes of the Hausa people toward coronavirus and of course the hesitancy toward a vaccine for the coronavirus. This is because the information we possess may influence the way we behave. However, the websites mostly contain good information on the origin, risk factors, and transmission mechanism of coronavirus which is commendable.

Governmental- and education-based websites might contain qualitative information compared to commercial and other ones. However, no significant differences in the level of quality of information were found among different website domains. This is in contrast to the findings of Joshi *et al.*<sup>[7]</sup> that better information are obtained from the government- and education-based websites. This could be due to the fact that the websites in their study contain.gov and.edu extensions, unlike the present study.

**CONCLUSION**

The Hausa language-based websites on coronavirus contain poor quality information, especially on the means of preventing and treating the disease. It can be recommended that Hausa language being the second most spoken language in Africa, a government- or university-based website in the Hausa language should be created to ensure the dissemination of qualitative information. As recommended by Ansari *et al.*,<sup>[6]</sup> the consumers of Hausa online information should be educated on the use of evaluation tools while accessing the websites.

**Declaration of patient consent**

Patient consent not required as there are no patients in this study.

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Nil.

**Conflicts of interest**

There are no conflicts of interest.

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