



**"It is better in the everyday language"**  
**Gender, Displacement and COVID-19: Vaccination Challenges in Sudan's**  
**Information Ecosystem**

Rooted in Trust 2.0

Information Ecosystem Assessment

August 2023

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# I. LIST OF ACRONYMS

## ■ CBS

Central Bureau of Statistic

## ■ CBO

Community-based Organization

## ■ FGD

Focus Group Discussion

## ■ FFC

Forces of Freedom and Change

## ■ HFPSH

High-Frequency Phone Survey of Households

## ■ IEA

Information Ecosystem Assessment

## ■ IDPs

Internally Displaced Persons

## ■ IFSPC

Integrated Food Security Phase Classification

## ■ JPA

Juba Peace Agreement

## ■ KIIs

Key Informant Interviews

## ■ MENA

Middle East and NorthAfrica

## ■ MoH

Ministry of Health

## ■ PM

Prime Minister

## ■ RiT

Rooted in Trust

## ■ SRH

Sexual and Reproductive Health

## ■ SYPEN

Sudan's Youth Peer Education Network

## ■ SJU

Sudanese Journalists Union

## ■ SC

Sovereign Council

## ■ SNBC

Sudan National Broadcasting Corporation

## ■ TWB

Translators Without Borders

## ■ WHO

World Health Organization



## II. EXECUTIVE SUMMARY



**T**he focal concern of this Information Ecosystem Assessment (IEA) is three-fold. In the first instance, the report provides an analysis of how political instability has transformed information dynamics in Sudan. Secondly, the report examines how the information landscape, language and literacy levels impinged on COVID-19 vaccine uptake among women and men in three regions of West Darfur, South Kordofan and Kassala states. Lastly, the report analyses the role of gender in COVID-19 risk communication with a specific focus on how sexual and reproductive health rumours inform the

acceptance of the COVID-19 vaccine. The report is anchored on and seeks to address gaps and issues identified in the 2021 IEA. The political context in Sudan has changed significantly with a military takeover of the government in October 2021, and ongoing political instability. Sudan's health system has also struggled to cope with the COVID-19 pandemic, exacerbating existing economic and humanitarian challenges. The modular update includes findings and recommendations for improving gender-sensitive risk communication and addressing misinformation about COVID-19 vaccines and sexual and reproductive health.

### **METHODOLOGY**

The IEA used a human-centered research design and a qualitative research approach to put the community at the core of the research. The methodology included a desk review, 31 key informant interviews (KIIs), 27 focus group discussions (FDGs) with 240 individuals, and comprehension testing of communication material focused on COVID-19 vaccines. The study was conducted between September and December 2022 in nine research sites in West Darfur, South Kordofan, and Kassala states, focusing on communities impacted by conflict and



## II. EXECUTIVE SUMMARY

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displacement with low vaccination rates. The data collectors were trained members of Sudan's Youth Peer Education Network (Y-PEER Sudan), a UNFPA funded network of youth volunteers that focus on the promotion of healthy habits across Sudan.

### FINDINGS

#### *Information landscape*

This study found out that traditional information sources like media, were less available and trusted post the military take over. Evidence shows that changes in the information landscape of Sudan from March 2021 to December 2022, was

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### Journalists who covered news on the streets or spoke to international media about the situation were targeted for arrest and harassment.

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characterized by the military takeover and subsequent crackdown on media and journalists. The military leaders made changes to the management of state-owned television and radio stations to propagate a narrative that justified the takeover. Broadcasting institutions supported the repressive

regulations and actions undertaken by the coup leaders, leading to internet interruptions, news website blockages, and censorship. Print and digital media platforms were also affected, with all print newspapers suspended for a fortnight in October 2021, and several arrests made, including that of journalists and media employees. Journalists who covered news on the streets or spoke to international media about the situation were targeted for arrest and harassment. The repressive actions of the military regime towards both media houses and journalists negatively impacted the finances of the print media, and most entities struggled to stay

afloat as citizens could barely afford the rising prices of newspapers. Many newspapers adopted different measures to adapt to the situation and revive their operations, such as reducing daily print runs, skipping publishing an issue on Fridays, changing the frequency of publishing, and shifting to digital platforms.

#### *Language and Literacy*

The study found a need to provide COVID-19 information and vaccines in languages and formats that are understood by the target audience. Many people in Sudan are not literate and hence preferred receiving spoken information in local

## II. EXECUTIVE SUMMARY



languages, rather than written classical Arabic. Findings suggest that graphic representations of the virus and vaccine were widely misunderstood, and that women, older people, and non-literate individuals were least likely to understand textual information. It was critical to use locally familiar forms of non-standard, spoken dialects of Arabic and to replace images that were perceived scary by the participants (such as big needles) with acceptable ones to increase the uptake of vaccines.

Gender roles in COVID-19 risk communication

Men and women in our

research tended to trust different sources of information, with men more likely to trust experts and authorities, while women more often trust friends and family. Perceptions of access to information also differed between genders, with men finding it more accessible and trustworthy than women. Men expressed a greater need for learning more about COVID-19 than women. Men and women also differed in their approaches to rumor verification. Overall, it was found that gender can influence how people access and perceive COVID-19 information, and factors such as age, race, and socioeconomic status also play a role.

### Men's acceptance of the vaccine was influenced by societal pressure

#### *Sexual and reproductive health rumors and COVID-19 vaccine*

The study found that sexual and reproductive health (SRH) rumors related to the COVID-19 vaccine were a significant concern and source of fear across most communities in Sudan. Prevalent rumors suggested that the vaccine caused infertility in men and women, decreased libido in men, and caused early and late pregnancy losses. These

rumors led to vaccine hesitancy, especially among women who relied on social media for their information and were distrustful of the information they received. Men's acceptance of the vaccine was influenced by societal pressure, which shaped their beliefs and attitudes towards the vaccine. The study also found that men were more fearful than women of societal pressure, which was a powerful force in shaping their decisions. Women had concerns related to their value in society, and the study highlighted men's negative experiences of childlessness within society, which have not been extensively researched in





## II. EXECUTIVE SUMMARY

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*Africa (van Zandvoort et al., 2021).*

*User centered recommendations*

The recommendations made by men and women for improving communication and information services about COVID-19 and COVID-19 vaccines include using images and spoken communication, using simple colloquial Arabic, avoiding scary images of big needles, providing information about vaccine availability, inquiring about the participants' language and communication platform preferences, and using pictures that can represent information so that people

### Communicators should use a variety of channels to reach both women and men

with hearing disability can understand it too. Members of community-based organizations called for partnerships to be made with all organized bodies to raise awareness across a wider region, focus on the role of health centers in the neighborhood level, and include refugees and humanitarian migrants in all COVID-19 services. The

participants also stressed the importance of data management during crises, building a network of organizations for information sharing, and strengthening the role of media outlets.

*IEA Recommendations*

Effective risk communication regarding COVID-19 and vaccines requires a thoughtful approach that considers the language and literacy levels and preferences of the audience. It is important to test comprehension of COVID-19 messages and images before dissemination and to address concerns about vaccine side-effects on fertility.

Communicators should use a variety of channels to reach both women and men, involve both genders in the planning and design process, address inequalities that increase vulnerabilities to risks, and help community members develop skills to verify COVID-19 news. Additionally, the study recommends combatting sexual and reproductive health rumors by providing accurate information about COVID-19 vaccines' impact on reproductive health, encouraging dialogue, sharing personal experiences of men who have received the vaccine and their reproductive health, and advocating for vaccination.

# 1. BACKGROUND

## 1.1 Scope of the Modular Update

In March 2021, Internews under its Rooted in Trust (RiT) project published Sudan's first Information Ecosystem Assessment (IEA) (Internews, 2021), entitled "Sudan's centralisation problem & the pandemic. An Information Ecosystem Assessment". The IEA documented how information about the COVID-19 pandemic was produced, consumed, and shared. It also outlined recommendations to improve the ongoing COVID-19 response. One of the recommendations tackled the need for gender analysis in risk communication and the need to develop gender-sensitive pathways that would allow women greater access to information and enable them to disseminate accurate information.

This study aims to fill this evidence gap. Specifically, the study was organised around the following questions:

- How and in what ways did the military takeover of October 2021, impinge, and transform information dynamics and people's access to accurate information?
- How and in what ways does language and literacy mediate access to reliable and correct information on COVID-19 and COVID-19 vaccines?
- What role does gender play in COVID-19 risk communication?
- How have Sexual and Reproductive Health (SRH) rumors informed acceptance of the COVID-19 vaccine?

Contemporary Sudan has undergone significant political upheaval heralded by a military takeover in 2021. The coup not only led to conflict and violence but the displacement of an estimated 314,000 people (OCHA, 2023). At one and the same time, the political changes transformed information dynamics during a global pandemic, COVID-19, itself dominated by the rapid spread of rumours, misinformation, and disinformation. Cast against this contextual background as well as the identified gaps, this report firstly discusses the political situation in Sudan and how it changed the information dynamics.

Secondly, the report details how and in what ways the information landscape, language and literacy levels impinged on COVID-19 vaccine uptake among women and men within three geographical regions namely, West Darfur, South Kordofan and Kassala states. The overarching goal of the report is to provide a nuanced analysis of the information sharing practices and dynamics among the targeted population with a view to ensure that both women and men in diverse communities can produce, access and share reliable and trustworthy information and that they can make informed decisions about their health needs.



# 1. BACKGROUND

## 1.2 Political Context

	2021	2022
Press related index		
Civil liberties (including freedom of expression) Source civil rights: freedom house global freedom status	15/60	10/60
Press freedom index Source index ranking: Reporters without border	159	151
Freedom on the net Source: Freedom house freedom on the net		
Obstacles to access	6/25	5/25
Limits on content	15/35	13/25
Violation of user rights	12/40	11/40
Freedom on the net score	33	29
ICTs Source: Freedom house <a href="https://freedomhouse.org/country/sudan/freedom-net/2022">https://freedomhouse.org/country/sudan/freedom-net/2022</a> <a href="https://freedomhouse.org/country/sudan/freedom-net/2021">https://freedomhouse.org/country/sudan/freedom-net/2021</a>		
Internet penetration rate	30.9	30.9

Table 1

# 1. BACKGROUND

Sudan has been embroiled in protracted political conflict and instability whose origins and compounding factors are as complex as they are multiple. In the first instance, there was a popular uprising in December 2018, which was the third revolution in the country's history. However, the envisaged transition to civilian rule was thwarted when the military seized power from the Sovereign Council (SC) - a governmental body comprising civilian and

military representatives, that had been mandated to manage the transition to civilian rule in the aftermath of the 2018 revolution - in October 2021 (Reuters, 2021a). General Abdel Fattah Al-Burhan, former Chairperson of the Sovereign Council and Commander-in-Chief of the Sudanese Armed Forces announced the dissolution of the Sovereign Council (SC). Al-Burhan declared a state of emergency and described the takeover as a "corrective step".

Civilian politicians including Prime Minister (PM) Abdalla Hamdok were arrested sparking widespread protests in the capital, Khartoum. On the 2nd of January 2022, Hamdok resigned after the agreement he signed with the military failed to restore civilian governance (Reuters, 2022a). In December 2022 a Framework Political Agreement was signed between a considerable number of Sudanese stakeholders, laying the groundwork towards a final accord and the formation of a new civilian government (Diez, 2022). The political situation is worsened by and in turn further compounds the economic situation in the country.

The country's economic situation has been characterised by increases in the prices of fuel, basic commodities, and taxes (Reuters, 2021b). The country's currency, the Sudanese pound, has severely depreciated while exports have plummeted (UN, 2023). According to data from the Central Bureau of Statistics in Sudan, the inflation rate increased significantly in the months following the coup, reaching a peak of 412% in October 2021. This was the highest inflation rate in Sudan in over three decades. Since then, the annual inflation rate in Sudan eased reaching 63.3% in February 2023 (Sudan Central Bureau of Statistics).



## 1. BACKGROUND

### 1.3 COVID-19 situation

The country's health delivery system has struggled to cope with the COVID-19 pandemic and the situation has been exacerbated by seasonal and sporadic outbreaks of diseases such as malaria, dengue, hemorrhagic fevers, and acute watery diarrheas. In collaboration with Sudan's Central Bureau of Statistic (CBS), the World Bank conducted a High-Frequency Phone Survey of Households (HFS) in August 2022, to help monitor the COVID-19 crisis and its impacts on households in Sudan (Osman et al., 2022). This study found that the pandemic and measures aimed at curbing the spread of the virus, such as

lockdowns and reduced working hours, worsened living conditions, particularly among the poor and the vulnerable. It also hampered access to food and medicines. Access to health and education services was limited and many families were faced with income loss. As of March 7, 2023, the country recorded 63,829 confirmed cases of COVID-19, with 5,017 deaths (WHO, 2023). As of March 4, 2023, 18,495,743 vaccine doses had been administered, with 12,628,561 (28.69%) individuals having received at least one dose and 10,576,238 (24.03%) persons fully vaccinated (WHO, 2023). The Internews' Rooted in Trust (RiT) Project collected



rumours relating to COVID-19 during the pandemic. The project reported that between January 17, 2022, and January 31, 2023, 248 rumors out of a total of 4,807 rumors, highlighted the perceived harmful effects of the COVID-19 vaccine on sexual and reproductive health (SRH) (Internews, n.d.a). A common rumour, for example, was that: "the vaccine has an

effect on sexual power by killing the masculinity hormone". This was shared in North Darfur, Al Fasher, Zam Zam camp, by a man between the ages of 26-35 years. Additionally, SRH rumors were among the top three themes recorded from the online rumor tracking data that Internews gathered from social media networks as part of the project (Internews, 2023).



## 1. BACKGROUND

### 1.4 Humanitarian situation

Humanitarian needs across Sudan are at an all-time high (Reliefweb, 2023). The country currently hosts 1.12 million refugees in addition to at least 3.7 million Internally Displaced Persons (IDPs) (UNHCR, 2022). In 2022, about 314,000 people were newly displaced by conflict and violence (UNOCHA, 2023). Additionally, over 990 people were killed and almost 1,200 injured (UNOCHA, 2023). The majority of the displaced are from Blue Nile (127,961), West Darfur (93,779), South Darfur (33,976) West Kordofan (31,089) and North Darfur (14,733) (UNOCHA, 2023). Floods affected about 349,000 people in 2022, and this further negatively

affected the economy (UNOCHA, 2023). The number of acutely food insecure people continued to increase for the third year in a row, reaching a record 11.7 million people. The health situation in Sudan is also alarming, and the situation has been further exacerbated by the COVID-pandemic. The country faces several challenges in terms of healthcare, including a shortage of medical supplies and equipment, inadequate healthcare infrastructure, and a shortage of healthcare workers. Sudan has one of the highest rates of maternal mortality in the world (295 deaths per 100,00 live births (Reliefweb, 2020) and infant mortality rates are also high

(54.9 per 1000 live births (UNICEF, 2023). Malnutrition is also a major issue, with an estimated 15.8 million people facing food insecurity (WFP, 2023). The country has also experienced outbreaks

of diseases such as cholera and malaria, which have been difficult to contain due to the country's limited healthcare resources (Charani et al., 2019).



## 1. BACKGROUND

### 1.5 Literacy and language

#### **Literacy**

Sudan has the largest number and the highest rate of out-of-school children in the Middle East and North Africa (MENA) region. Up to 3.6 million children aged 5 to 13 years are out-of-school, and more than half are girls (UNICEF, 2020). An estimated 40% of the population is illiterate, with women more likely to be illiterate (44%) than men (35%) (UNESCO, n.d). Literacy rates amongst young women remain particularly low: overall, some 45% of girls and women aged 15-24 are illiterate (UNESCO, n.d).

#### **Language**

Since Turco-Egyptian rule, the official language in Sudan

is standard Arabic (UNESCO, n.d). In the late 1960s, standard Arabic became the official language of instruction in government schools throughout the country (UNESCO, n.d). However, not everyone understands standard Arabic, and some people prefer to receive information in a different language. People living in Sudan speak at least 135 distinct languages belonging to three different language families: Afroasiatic, Niger-Congo, and Nilo-Saharan (Mugaddam et al., 2006; Abu Manga, n.d.; Sikainga, 2009). Indigenous languages, like Sudanese creole Arabic and other spoken variants, are better understood than the Standard Arabic from Khartoum and are used

mainly within their immediate communities (Sikainga, 2009).

Refugees, IDPs, cattle herders, migrants and other “communities on the move” also bring their own languages and dialects (Reliefweb, 2009; Joshua Project, 2009). In some communities, West African languages, such as Hausa, Fulani, and Borno, are spoken, often by traders and travellers (Sikainga, 2009). Such communities may not be able to understand humanitarian aid providers and government officials who are not conversant in their own local dialects and languages. A long history of internal migration and intermarriages have, collectively, created

remarkable ethnic and language fluidity (Sikainga, 2009). Most people can switch to the national language (or another important regional lingua franca) for daily communication, particularly in urban areas like Khartoum but less so in rural areas and areas where other languages are the common denominator (Sikainga, 2009). There are also differences in language attitudes between the different generations (Mugaddam et al., 2006). There is, for example, a clear tendency among second-generation speakers to use Arabic as the first language (Mugaddam et al., 2006).



## 1. BACKGROUND



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### ***COVID-19 and gender***

Numerous studies have shown that several factors account for the level of vaccine acceptance when a new vaccine is introduced (Mohammed et al., 2022). These include the (perceived) safety and efficacy of the vaccine and related health outcomes, perceptions about the need for vaccination, levels of trust in the health system, and knowledge among the community about vaccine-

preventable diseases. Gender may also play a role. According to Internews bulletins on COVID-19, people fear that the Johnson & Johnson vaccines are fatal, and that they affect menstrual cycles and pregnancy (Internews, 2023)' (Mohammed et al., 2022).



## 2. METHODOLOGY AND RESEARCH APPROACH

**A**n Information Ecosystem Assessment (IEA) aims to map out the dynamic between information supply and demand from the position of the user who seeks, creates, and shares the available information to make better informed decisions. This IEA modular update was based on the following key principles that are at the core of the Internews IEA methodological approach: (1) putting the community at the core of the research, (2) employing a human centered research design, (3) integrating research and action. The principles of voluntary participation, informed consent, anonymity, confidentiality, potential for harm, and results communication were among this IEA's ethical considerations. This IEA was conducted between September and December 2022. It adopted a qualitative methodological research design approach that combined a desk review, 31 key informant interviews (KIIs) and 27 focus group discussions (FGDs).

### 2.1 Data collection tools

#### **Desk Review**

A desk review was conducted to highlight the national information supply landscape that emerged after the October 2021 military takeover. Eight Key Informant Interviews (KIIs) with media professionals and journalists were also conducted to complement the information obtained from the desk review. The review relied on sources such as reports and news articles.

#### **Key Informant Interviews (KIIs)**

Fifteen KIIs were conducted with government officials, journalists and other representatives of local and national media organizations, humanitarian actors, community leaders, members of community-based organizations (CBOs) and other trusted voices. The KII interview guide included

questions on how COVID-19 rumors, misinformation and disinformation, and literacy levels and language impinged on information dynamics among different categories of individuals with a specific focus on gender dynamics.



**September 2022  
to December 2022**

### key principles

- Putting the community at the core of the research
- Employing a human centered research design
- Integrating research and action

**▶ 31 KIIs**  
**▶ 27 FGDs**

## 2. METHODOLOGY AND APPROACH

### **Focus Group Discussion (FGDs)**

A total of 27 FGDs were conducted, three in each of the nine study sites, by a researcher and note-taker. In these FGDs, the researchers sought to determine how and in what ways reproductive and other health-related decisions have been informed by information on COVID-19, trusted sources of information, and communities' preferred languages. Each group had between eight to ten participants and the discussions were facilitated by a researcher and assistant. The FGDs were balanced in terms of gender and age categories (see Table 1).

### **Comprehension testing**

CLEAR Global/Translators Without Borders (TWB), a partner in this research study, developed comprehension testing using selected images from communication materials

used by the Ministry of Health (MoH) and UNICEF in Sudan for COVID-19 vaccination campaigns, aiming to increase the uptake of COVID-19 vaccines. These images were shared with participants and questions were asked about their comprehension of the images, with and without the descriptive text printed on the images. See more information on the partnership for this study in the acknowledgement section.

### **Tracking misinformation through the RiT Project**

Through a variety of conversations with communities across Sudan that included social media listening, feedback from humanitarians and local media outlets, RiT 2.0 and Y-PEER tracked questions, concerns, and rumors in a database (Internews, n.d.b). For validation purposes, information from this database is reported alongside qualitative results.

Rumor tracking data was collected regularly through online and offline listening sources from January 2022 to March 2023.

### **Data collectors**

This study was conducted in partnership with Sudan's Youth Peer Education Network (Y-PEER Sudan), a nationwide network of youth volunteers active in promoting health and youth participation, funded by UNFPA. The principal researcher delivered training sessions to members of Y-PEER Sudan on the data collection tools and on how to facilitate FGDs and KIIs. Y-PEER volunteers supported also did the transcription.



## 2. METHODOLOGY AND APPROACH

### 2.2 Study population and sites

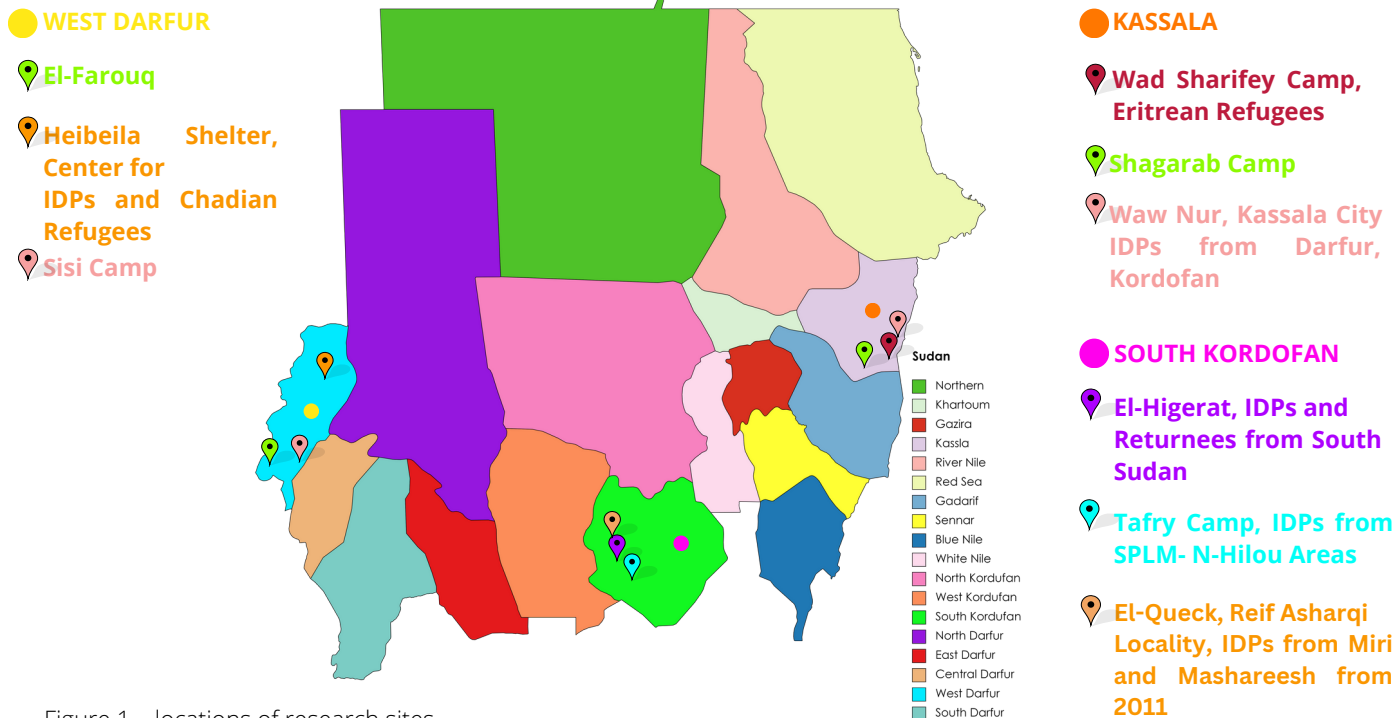


Figure 1 – locations of research sites.

Data was collected from West Darfur, South Kordofan, and Kassala states. In each state, three sites were selected (Table 1). Figure 1 illustrates the locations of the study sites on the Sudan map. Focus was on communities impacted by conflict and displacement, and with low vaccination rates.

## 2. METHODOLOGY AND APPROACH

Table 1: Number of study participants recruited from each study site:

State	Location	No of participants
West Darfur	El-Farouq	30
	El Genina, Heibeila Shelter center for IDPs and Chadian refugees	29
	Sisi camp, Kereinek	29
		<b>88</b>
South Kordofan	El-Higerat, Reif Algharbi, IDPs and returnees from South Sudan	30
	Kadugli, Tillo, Tafry camp, IDPs from SPLM-N-Hilou areas	30
	El-Queck, Reif Asharqi Locality, IDPs from Miri and Mashareesh from 2011	30
		<b>90</b>

## 2. METHODOLOGY AND APPROACH

Table 2: Number of study participants recruited from each study site:

Kassala	Wad Sharifey Camp Eritrean refugees	20
	Shagarab Camp	20
	Waw Nur, Kassala city IDPs from Darfur, Kordofan (Bani Amer and Waw Nur). Are suffered intercommunal clashes recently.	20
		<b>60</b>
<b>Total</b>		<b>238</b>

## 2. METHODOLOGY AND APPROACH

### 2.3 Sample profile

KIIs: Twenty-three respondents were interviewed by a Y-PEER Sudan member. From each state a government official, media-official, humanitarian worker, community leader and member of a community-based organization was invited to partake in interviews. Eight KIIs were conducted with media experts to augment findings from the desk review.

FGDs: 27 FGDs were conducted with 238 participants living in camps for refugees and internally displaced people (IDPs) and in host communities. Table 1 and 2 describe the profile of the FGD participants.

Table 1: Profile of FGD participants

Indicator	Percentage
Gender	50% male, 50% female
Age	18-24 – 13% 25-39 – 38% 40-59 – 33% 60+ - 16%

Indicator	Percentage
Profession	Farmer - 23% Soldier - 1% Merchant - 6% Housewife - 16% Unemployed - 17% Self-employed - 30% Technician/mechanics - 2% Teacher - 1% Driver - 2% Translator - 1% Volunteer - 1%
Education level	Informal education - 29% education - 29% Primary - 24% Secondary - 30% University - 11% N/A - 6%

## 2. METHODOLOGY AND APPROACH

### 2.4 Study limitations

Qualitative research relies on subjective interpretation rather than numerical data. This approach has certain strengths, such as providing rich and detailed insights into complex phenomena, but it also has some limitations. The findings of this study are context-specific and may not be generalizable to other populations or settings. In the SRH section, to support the qualitative methodology, rumor tracking data (Internews, 2023) was used to triangulate the findings.

Y-PEER SUDAN volunteers were members of the studied community. They conducted the interviews and facilitated the FGDs. However, co-production with end-users of knowledge at all

other levels of the research would have resulted in better understanding of the tools and better interpretation of findings. Data was not recorded verbatim for most interviews. This was because most study participants did not give consent. Furthermore, the transcripts were summarised by field assistants despite emphasis during training sessions on the scientific methods of note taking. As a result, important details and nuances in the data may have been lost, which could have led to a less accurate understanding of the study topic. It is also important to note that there could have been an element of interviewer bias, where the interviewer may have subconsciously influenced the responses of the interviewee.



# 3. FINDINGS

This part of the report presents the findings. The key themes and data patterns are presented in four sections. The findings detail how and in what ways the military takeover of 2021 transformed the information landscape through examining developments within different media platforms. Thereafter the report looks at gender, language, and other communication dynamics.

## post-military takeover content of the SNBC was “hijacked and instrumentalized” to serve the new agenda.

In the immediate aftermath of the military takeover, there

### 3.1 Information landscape in Sudan from March 2021 to December 2022

were changes to the management of both the state television and radio stations as the military leaders sought to establish firm control and propagate a narrative that justified the takeover.

#### 3.1.1 Television and Radio

The military leaders made changes to the management of the Sudan National Broadcasting Corporation (SNBC) by dismissing the director of the broadcaster as well as the Minister and the First Secretary of Information. The former director of SNBC was

reappointed as were most of the first-rank Islamists from the toppled regime (Altahgyeer newspaper, 2022) These changes had an immediate effect as the messaging of the SNBC shifted and the broadcaster supported the new regime (Altahgyeer newspaper, 2022). A media professional commenting on the developments at the public broadcaster stated that: “Everything rolled back, Islamists were everywhere”. They also described the new post-military takeover content of the SNBC as “hijacked and instrumentalized” to serve the new agenda. A glaring change after the coup was that all broadcasting institutions supported the repressive regulations and actions undertaken by the coup leaders that were used

to deny media freedoms and stifle free expression such as internet interruptions, news website blockages and censorship (Jadallah et al., 2021). Media organisations broadcasting from abroad were the only entities able to share content without restrictions or the risk of consequences. Local correspondents, on the other hand, were confronted by repressive state apparatus and this informed and constrained their information sharing practices (Reporters without borders, 2020; Sudanese Journalists Network, 2022a; Sudanese Journalists Network, 2022b). The political changes in Sudan had an immediate impact on the availability of (trustworthy) news for citizens.



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### 3.1.2 Print and digital media

Print and digital media platforms were affected by the political developments. On October 26, 2021, all print newspapers were suspended for a fortnight (Euro-Med Human Rights Monitor, 2022). Several arrests were made, and these included the arrest of the Director of the Democrat newspaper, eleven journalists and employees from Ramatan Agency in Khartoum, and a former media advisor to the Prime Minister (Euro-Med Human Rights Monitor, 2022).

Journalists who were either covering news on the streets or spoke to international media about the situation were targeted for arrest and harassment (Euro-Med Human Rights Monitor,

2022). The violations further included physical and verbal attacks, particularly when covering the protests or trying to access governmental institutions (Euro-Med Human Rights Monitor, 2022). Some journalists reported that they often had to hide their identities to protect themselves and to be able to practice. A local journalist stated that, “We had to lie so that we do not expose ourselves while covering the news, it was dusky!”.

Journalists working with International Media houses were not spared either. According to a media professional, working soon after the military takeover was almost impossible. They said, “The concerned forces

did not know how to treat journalists, and did not understand that journalists are like doctors, and should be able to cross the bridge to conduct their work. As most journalists work in Khartoum, they had to cross a bridge to get to work. On behalf of international journalists, the Office of External Affairs at the Presidential Office and International Media Outlets intervened to facilitate our movement”.

At least fifty-five (55) violations against journalists took place in the period between October 25th, 2021, and March 8th, 2022 (Euro-Med Human Rights Monitor, 2022). Some of these violations included

physical attacks and confiscation of assets, most notably, the shutdown of Al Jazeera offices in Khartoum, and the attack on Al-Hadath correspondent and head of their office, Lina Yagoub, while covering a protest in Khartoum. Ahmed Jadain, a researcher, and expert on Freedom of Expression posited that: “Ever since the coup, the military stopped speaking with journalists, they wait for news to be leaked”.

However, while channels for accountability remained non-existent, this crackdown made media professionals and journalists more organized and determined regarding their unity demands (Espanol, 2022).



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As a result, the Sudanese Journalists Union (SJU) resumed its activities and elected their first Secretary General since 1989 on August 29th, 2022 (Reuters, 2022b).

The repressive actions of the military regime towards both media houses and journalists negatively impacted the finances of the print media and most entities struggled to stay afloat as citizens could barely afford the rising prices of newspapers (Reuters, 2023). Reflecting on the rising prices of newspapers, a media professional at Al-Youm Al-Tali newspaper asserted that: “Three years ago (2019), the average price of a newspaper was 100 SDG,

now, it is 3,000 in Khartoum and might reach up to 7,000 in the states/peripheries. Who has such money?!”

In the months after the coup many newspapers adopted different measures to adapt to the situation and revive their operations. For instance, some of the media organizations massively reduced their daily print run (Reuters, 2023). Some, such as the Al-Youm Al-Tali newspaper, skipped publishing issues on Fridays. Other newspapers changed the frequency of their publishing from daily to once or twice a week, while others shifted to digital platforms, sending their employees to work from home, thereby cutting operational costs (Reuters, 2023).

The shift to digital media however came at a cost, mostly borne by the public. In a country where internet penetration is 30.9% and mobile phone penetration is 77% (Kemp, 2022), with only 55% of the population with access to electricity supply this might have affected the consumption of news as people, affected by the economic downturn limited their access to news (Reuters, 2022c; World Bank Group, 2020).

#### 3.1.3 Social Media

While there was a decline in print media production and consumption there was an increase in internet usage. A Kepios analysis indicates that internet users in Sudan increased by 331.000 between 2021

and 2022 representing a 2-percentage increase (Kemp, 2022). These user figures reveal that 31 million people in Sudan did not use the internet at the start of 2022, meaning that 69 percent of the population remained offline at the beginning of the year (Kemp, 2022). According to Statcounter, Facebook is the most popular platform in Sudan, with 71% of social media users in Sudan accessing the platform from Feb 2022 to Feb 2023 (Statcounter, 2023). While Twitter with 16% of social media users was the second most used platform, followed by YouTube (12%) (Statcounter, 2023). The Zero Facebook policy implemented by leading telecommunication companies in Sudan, like

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## Internet users in Sudan increased by 331,000 between 2021 and 2022 representing a 2-percentage increase.

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MTN and ZAIN, may have increased Facebook usage (MTN, n.d.). This policy has allowed vulnerable groups free access to social media platforms and as a result, they were able to stay up to date with current events. A closer look at the trend of social media usage showed that there was drop in Facebook users combined with a rise in Twitter users, in the period between August 2022 to December 2022 (Statcounter, 2023). Study participants stated that many Sudanese lost trust in governmental institutions. News shared by

a trusted person was regarded as more credible than news from a newspaper. This trust dynamic coupled with the dire economic crisis could have led many print and digital newspapers to start using social media as an attempt to retain and grow their audience (Reuters, 2023).

Following the Military takeover, the country was subjected to 25 days of total internet blackout in an attempt by the new regime to control the amount of information shared by the

people (CIPESA, 2022). Telecommunication companies were ordered to shut down the internet, and internal calls were also disrupted (Aljazeera, 2021). Notwithstanding, journalists, media professionals, and activists managed to use alternative offline channels to convey information, as limited as it was, to each other. Printed brochures, and text messages, in addition to verbal communication during social and religious gatherings, were some of the ways and the platforms Sudanese used to access information (Financial Times, 2019).

During the blackout, thirty-six (36) radio stations broadcasting from Sudan were ordered to close for five days (Euro-Med Human

Rights Monitor, 2021). The radio stations resumed their operations with a censored discourse, except for Hala 96 FM radio station, which was able to broadcast again on December 6, 2021 (Africanews, 2021). The orders were enforced to stem the alleged defamation of the Sudanese Army (Osman, 2020). Despite the restrictions, having made it more difficult for activists and protesters to organize and communicate, and have raised concerns about the erosion of civil liberties in Sudan, many Sudanese citizens continued to use social media platforms to voice their opposition to the military government and to share information about the ongoing situation in the country.

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### 3.2 Language and literacy dynamics

Language and literacy dynamics played a crucial role in effective risk communication. This section describes the participants' accounts of their experience with COVID-19 related information.

#### 3.2.1 Women sometimes get information about COVID-19 and COVID-19 vaccines through different channels than men

Men in South Kordofan, for example, access information mainly in public spaces like “watching clubs” (where a television owner sells tickets for popular football games, movies, and the news to

customers), around and at the mosque on a Friday and at sunset prayers, through resistance committees, Jabana ceremonies Domino clubs, at football matches and games, and at government offices. They also use mass media like radio and television, and mobile phones, more frequently than women.[1], [2]

Women more frequently get information from friends and family in the neighborhood,

#### Women in West Darfur get information about COVID-19 vaccines mainly “in their neighborhood”, or from the health centers they visit with their children.

and rarely use technology, they report. Women in West Darfur, for example, get information about COVID-19 vaccines mainly “in their neighborhood”, or from the health centers they visit with their children. In El-Queck, South Kordofan women mentioned hearing information about COVID-19 vaccines through the mobile health teams of the state-level Ministry of Health (MoH), who walk through different neighborhoods using microphones to

spread health information. Sudanese women of higher socio-economic classes living in urban areas in Kassala, who often also had a higher level of education than women living in rural areas, were an exception to the rule. Women in Gedaref, for example, mentioned that they also get information about COVID-19 vaccines from specific Facebook groups including two called “Kassala Mangos” and “Wasif Lei - describe to me”. These women also listen to the news on the radio. They also mentioned getting information about COVID-19 vaccines through neighborhood gossip (locally described as “El-Kobli”) or during coffee gatherings with other women.

[1] Sudanese resistance committees (Arabic: **لجان المقاومة**) are informal, grassroots neighborhood networks of Sudanese residents started during the Sudanese revolution.

[2] Traditional coffee making and drinking ceremony

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### 3.2.2 Women and men trust public health officials for information provision about COVID-19 and COVID-19 vaccines

According to Sudanese women in urban areas in Kassala, it is easy for people to lose trust in information when news channels spread misinformation or politically motivated content (which they said happened frequently). “Television is no longer a reliable source for us. Like Alhadath channel: they said once the American vaccine is good and after a while, they said the Russian one is better. It was all about marketing. And I'm trying to

know which is right”, explained a 29-year-old university student from Gedaref.

In South Kordofan and West Darfur, the MoH was named as a trusted source of information about COVID-19 and COVID-19 vaccines. In Kassala this theme was not discussed.

Even if the information was passed by a government agency, and general trust in government is low, public health officials are seen as a credible source for health information in both South Kordofan and West Darfur. “Because they are specialists, they are the concerned authority”, said a 29-year-old farmer from Gobi, West

Darfur. “I ask the people who are working at the health centers because they know the right information”, says a 45-year-old woman from Lamnig, South Kordofan, for example. Other women in South Kordofan agreed with this, when asked which information they trust about COVID-19 vaccines: “The Ministry of Health [...] they know a lot about the health field”, said a 56-year-old woman from Kadugli, South Kordofan. “They are doctors who work in hospitals: they know the disease”, agreed research participants in Sisi camp, West Darfur.

### 3.2.3 People living in temporary settlements access information about COVID-19 vaccines differently

People living in camps for refugees and IDPs are largely dependent on humanitarian aid organizations, service providers, and public officials like the MoH for information about COVID-19 vaccines. In Sisi camp, West Darfur, for example, people say they mainly get health information about COVID-19 and COVID-19 vaccines from hospital staff. . In Tarfi camp, South Kordofan, women get most information about COVID-19 and COVID-19 vaccines from the Governor



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and Sheikhs (religious leaders), who come and tell them about vaccines after being briefed by public health officials. Some men also sometimes listen to the radio (FM 100) through their phones, if they have money for credit.

In Kassala, Tigrayan refugees say that there is an information gap on COVID-19 vaccines. In Shagarab camp, for example, men said they prefer to access this information through the television, radio, and mobile phones, but frequently cannot. This is “because the resources we were talking about are not available all the time, moreover the internet is very bad and these resources are not

available except in the camp market”, one refugee said. People want camp management “to provide information resources inside the camp where they will be available and accessible to everyone at all times”. This is important, because currently, people say, this type of information is not available in the refugee camp: “there is no body or partner in the field that shares any kind of information with us”. Eritrean and Somali women sometimes get information from the receptionists at the camp.

#### **3.2.4 People want information in their own languages; very few understand Modern Standard Arabic well**

People want information about COVID-19 vaccines and COVID-19 to be made available to them in the languages and dialects they understand (see Figure 1). Many women and men from West Darfur, for example, said they understand Masalit the best. In Tarfi camp, South Kordofan, some participants said those who speak Angolo and not Arabic don't understand the information and “need translators to translate and interpret”.

In some areas, particularly when people from different communities, ethnic groups and language groups live together, “Arabic” still is the preferred “common” language. In El-Geneina and El-Queck, South Kordofan, for example, women and men report that Arabic is the right language to communicate in (“it is the right language because all people speak and understand it”). In El-Queck, South Kordofan, the need for a common language was related to the high number of South Sudanese refugees who are hosted in this part of Sudan, but don't speak local languages. “Aid workers use Arabic, Nuer, Dinka, and English because most of the refugee community does not



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know Arabic. It is spread by word of mouth, and this method is correct”, confirmed a local leader. Participants, however, explain that they want health information not in Modern Standard Arabic, but rather in Dariji Arabic, the colloquial language spoken in their area.

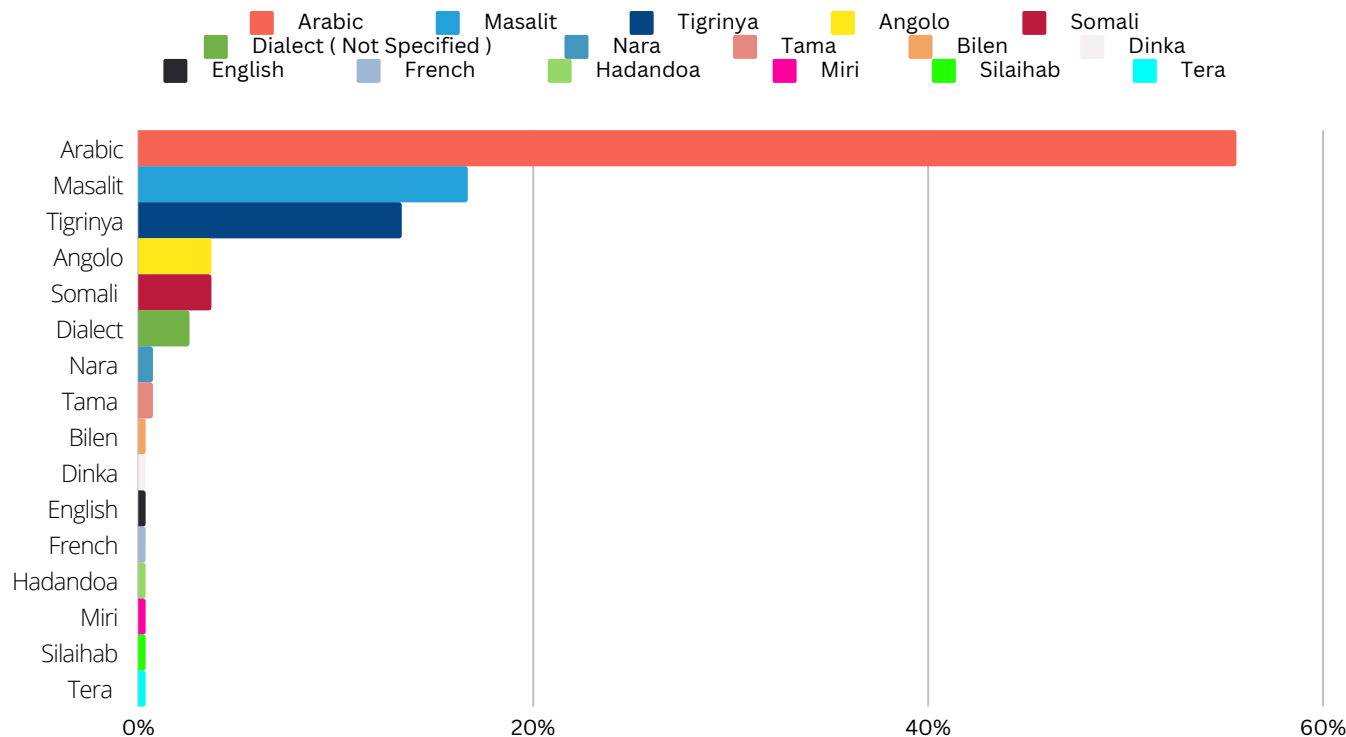
“When it is in classical Arabic some people don’t understand it because we use more of our dialects than Arabic”, explained participants in Sisi camp, West Darfur; “it is better in the everyday language”. “The information is available in Arabic, but we translate it into a dialect because some people don’t know [Modern Standard] Arabic”, says a 41-year-old man from Angolo, South Kordofan.

Aid workers should make sure that the languages people speak and prefer are mapped at a local level, as there is great diversity even within the research sites. In Kassala, it can’t be assumed that refugees from Ethiopia, Eritrea, Djibouti, and Somalia speak the same Arabic dialect as people in host communities; or that they necessarily want to get information in the majority language in their home country. “In some communities they need another language than Arabic”, says an aid worker, who recognized the need for translation and interpretation. When information is not clear, misinformation and rumors may fill the void: “rumors are the biggest challenge we have”, said a government official working on COVID-19 prevention in South Kordofan.



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Figure 1: Main languages spoken at home<sup>3</sup>

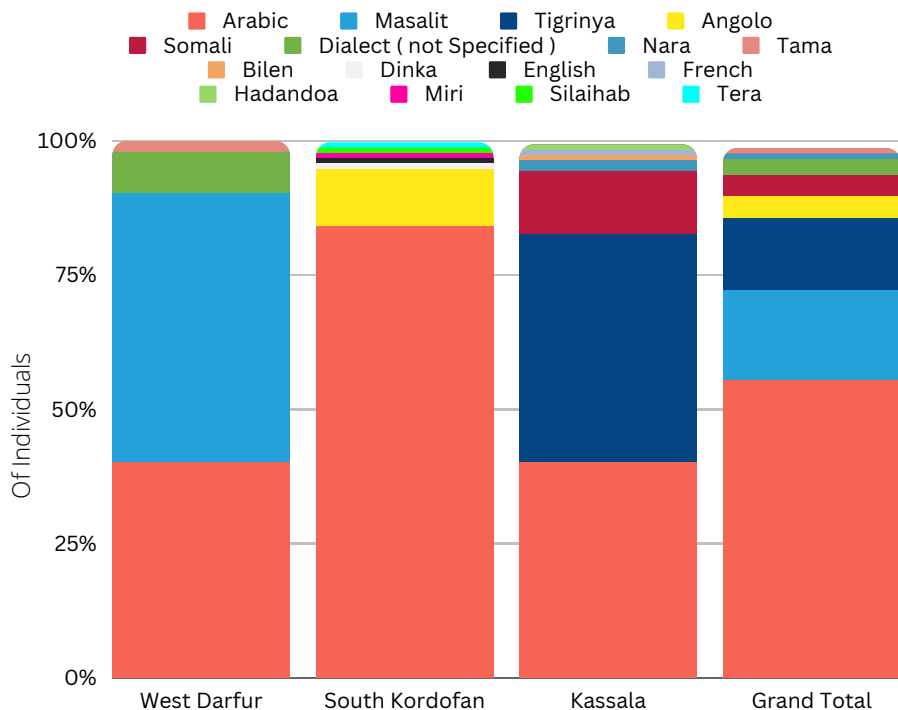


[3] Many variants (dialects and vernaculars) of Arabic and other languages were recorded. For the purposes of analysis presented, except when specified, these have been considered as one language. See more analysis here: <https://tinyurl.com/3afn7fz3>



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Figure 2: Regional distribution of main languages used at home <sup>4</sup>



#### 3.2.5 People prefer information in spoken form.

People in West Darfur, Kassala, and South Kordofan, prefer information about COVID-19 and COVID-19 vaccines in spoken form, ideally complemented with images. This is because they prefer the use of Arabic everyday language (locally called dialects) and because of high illiteracy rates (more on this below). “It is colloquial Arabic, and the speech should not be written”, explained a 68-year-old housewife from Gogar, in West Darfur. In Tarfi camp, South Kordofan, women mentioned that they prefer spoken information and images, “because they don’t

[4] Ibid. Geographically, Arabic speakers (as a main language) are more frequent in the South Kordofan data, at 84%, with Masalit speakers present mostly in West Darfur. Additional analysis and visualizations can be found here: <https://tinyurl.com/3afn7fz3>

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know how to read and write". "We don't understand if it's written, unless our educated children tell us", said a woman in El-Higerat, South Kordofan. In El-Queck, South Kordofan, men said their children help them understand written material.

Due to low literacy rates and language dynamics, participants said they prefer pictorial communication, video, and theater over written text. "They showed us images of people who got infected. We all like that [form of communication]", people in West Darfur mentioned. "Not everyone is able to read or to understand well, that's why the images and the play were good, and everyone saw them", added a 32-year-old woman from Mistri,

South Kordofan. "We prefer the images and spoken information because reading is hard for us", confirmed women in El Genina, West Darfur. In Kassala, men mentioned that visual information should be disseminated through neighborhood committees, youth initiatives, or through theater, as: "all residents like it that way". "Theater is better in delivering the information because people pay attention to you", according to women in urban areas in Kassala. When information was shared in this way, people were grateful: "They talked to us in our language [...], they used images and videos, and we liked the videos", say people in Sisi camp, West Darfur. Media actors mentioned already using

drama, magazines and talk shows for passing COVID-19 information.

#### 3.2.6 Illiterate people are at risk when information about COVID-19 vaccines is shared in writing.

A lot of the COVID-19 related information was shared in written and Modern Standard Arabic, which many people did not understand. Consequently, particularly in Tafri camp, South Kordofan and amongst older participants, knowledge about COVID-19 vaccines was still low. women said they were unaware of COVID-19: "she doesn't know about this disease because she recently came from her hometown",

says a 40-year-old woman about another woman in the focus group discussion (FGD). In several FGDs in South Kordofan, people thought that COVID-19 was man-made and spread through vaccination ("they infect them with COVID-19 through the vaccines").



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Image 1: “Vaccines save lives”

### 3.2.7 Women and men across Sudan often misunderstand images shared to promote uptake of COVID-19 vaccination.

The following four images were shared with participants, and questions were asked about the images, first without the text, then with the text, to test comprehension.

The image on the left was used by UNICEF in Sudan. It was developed at the early stages of the COVID-19 vaccination campaign (March, 2021). The images were printed on posters and disseminated to health and vaccination centers across Sudan for the campaign’s launch. A few more educated people understood this message even without text, whilst many others understood the image to depict some idea of protection against infection with COVID-19. ...

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Most people, however, did not understand the link to COVID-19 vaccination. This is logical as the image does not show a vaccine: non-literate people would not (reliably) understand the text, so in effect most people would not understand the picture. Elderly women with limited formal education often totally misunderstood the meaning of this image, in some cases with potentially very risky interpretations.

Some of the participants, particularly those with higher education levels and access to information in urban host communities in Sudan (Kassala), understood what the image wanted to convey. “Vaccination is an umbrella that protects against diseases”, said a well-

educated woman from Kassala, for example. Many people across the other research sites in West Darfur and South Kordofan, however, did not understand this image well, particularly not without the text.

Only a few participants in West Darfur and in Wad Sharifey, Kassala, understood this image to be specifically about COVID-19 vaccines. “These people went to the doctor and got vaccinated. They are not going to get infected with Corona”, said a 57-year-old farmer from Mistri after being shown the image. “They went to the doctors, that is why they are not scared of the disease”, said a 32-year-old woman from Mistri.

In Hebeila, West Darfur, participants understood the image as: “the vaccine looks like an umbrella protecting you, they all got vaccinated”, said a 58-year-old man. In Wad Sharifey, a woman said the image was wrong, as it showed: “the umbrella protects from the sun, but it doesn't protect from the virus”.

The umbrella in the image was frequently understood as a new form of protection against COVID-19 infection (much like other infection prevention control measures like wearing facemasks and keeping physical distance). In South Kordofan, men said they believe that the umbrella “is protecting them from the disease”. “They are

protecting themselves from the virus by using the umbrella”, said a 56-year-old woman from Kadugli, South Kordofan. “For every human on earth, the umbrella protects against the disease”, added people in Tafri camp, South Kordofan. “The umbrella protects against the virus”, mentioned participants in Kassala too. This may be a dangerous message for people to take away, as some may take using an umbrella to be a new infection prevention control method and engage in more risky behavior.

Other interpretations of the umbrella were also present and reinforced common misperceptions about COVID-19 transmission.



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. Men and women in Sisi camp, West Darfur, believed that: “they are all carrying umbrellas because they can get infected if they are in a hot place or under the sun”. Men in South Kordofan thought the image showed that “Corona comes with cold weather”. “Something is coming from above?”, asked a 57-year-old farmer from Mistri, West Darfur, perhaps referring to a rumor that COVID-19 is sent by God. Others understood the image (when it was presented without the accompanying text) to be about the importance of social distancing and COVID-19 prevention strategies (like wearing masks) more generally. In El-Queck, South Kordofan, men said this image was about social

distancing and mask wearing for protection against getting infected with COVID-19.

Women in South Kordofan and West Darfur believe that the image is about “prevention against the COVID-19 virus”.

“It is apparent that there is a mask which is a protection”, also concluded a 47-year-old man from Angolo, South Kordofan. Women in Kassala saw the image representing: “All of us despite our differences under the same umbrella and healthy”.

Comments showed a general uptake of COVID-19 information messaging.

“These people followed the instructions of the Ministry of Health, they wear masks and wash their hands, they are not going to be infected by Corona”, said a 35-year-

old merchant from Mistri, West Darfur, and: “When you come to a crowded place you should sit away from them”. Whilst many could not read the Modern Standard Arabic text written on the image, when Y-PEER read out the text, participants said that the language was clear and well understood. Those who could read the text immediately, did understand what the image was supposed to show. In El-Queck, South Kordofan, a well-educated man reported that the image meant that: “the vaccine is protecting people from the virus, that the umbrella represents the vaccine”. The text printed under the image said: “vaccines save lives”.

The way people are dressed

and acting in pictorial materials, including in this one, can affect how positively or negatively the intended audience reacts. With this image, for example, people said that the characters shown were not observing the Ministry of Health’s social distancing guidelines. This was viewed as negative by participants.

Some people like the facial expressions of the people in the image. They said: “there is no apparent fear” and believe that “their arrangement (read: on the picture) is appropriate”. One woman likes that the image has people of all walks of life represented in it: “I see younger and older people go to the doctor, even people living with disabilities”.

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In El-Geneina, West Darfur, women praised the fact that people in the image were observing social distancing rules: “people are sitting away from each other”. Others, however, felt that the participants were placed “too close to each other; they are not observing social distancing”.

Several points were made about the clothes that the women and men in the image wore. Women in West Darfur noted: “their clothes are beautiful and long”. In Tafri camp, South Kordofan, women mentioned that “they are wearing watches”, and that the clothes have “beautiful colors”. Men in El-Genina, West Darfur, also noted that the clothes are “very beautiful and decent”, and that people look confident because “they got the vaccine”.



**Image 2: “Vaccination protects the whole community including those who aren’t eligible to be vaccinated”**

**The second image was also used by MoH and UNICEF for the first nationwide COVID-19 vaccination campaign. The images were printed on large posters and disseminated to health centers.**

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Many people did not understand this picture to be about vaccination. This was mainly because the image did not show a vaccine, and many people could not read the text describing this image (due to low literacy). In effect, people believed that the image was about inclusion or disability rights or COVID-19 protection (which they guessed, because this FGD was announced as being about COVID-19). Although people noted that UNICEF tried to show a representation of the whole society in its choice of characters and clothes, people called for non-Muslims to be represented. This is important so that people can recognize their community in the information, education, and

communication material on COVID-19 vaccines. Without the text, many people were confused about what this image was supposed to show. “I don’t understand it”, said a 60-year-old man from Miri, South Kordofan. “What is the circle that is around the child?”, asks a man in the El-Arab neighborhood in Kassala. In Shagarab refugee camp, Kassala, another man added: “the aura surrounding the person in the wheelchair, around the child that is carried, and the small girl is incomprehensible”. “The community will not understand this except the educated people or people who saw the virus on TV”, concludes a 29-year-old university student in

Gedaref. Men in Wad Sharifey refugee camp, Kassala, however, did understand that the image depicted: “a group of individuals under vaccine protection”. Since participants found the meaning of the picture unclear, some people have come up with their own interpretations of the message it conveys. “This is a family picture”, or: “This picture shows a family with a disabled child”, said other participants in El-Queck, South Kordofan. “This is about people living with disabilities”, said a participant from Al-Arab, Kassala. Another man from Shagarab refugee camp, Kassala added: “there are no services for disabled people”. Yet others believed that the

picture was about “raising awareness about child marriage”. Other people, for example in Tarfi camp, South Kordofan, and El-Geneina, West Darfur, understood this image to be advocating for infection prevention measures like social distancing and facemask wearing. “It is about social distancing”, said a man in Kassala. In El-Queck, South Kordofan, women were unable to read the description written on the poster but believed that this image called for everyone to observe health protocols and to get vaccinated: “the doctor, the student, people with disabilities, have the right to be vaccinated”. In Kassala, participants noted: “I see a group of individuals from



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different age groups and different jobs” and: “everyone can get infected with corona: Eritrean, Muslim”.

Men and women say the people in this image have sad facial expressions because: “they are all afraid of the disease”; “they show fear of the virus”. Women in FGDs in West Darfur added: “people didn’t get vaccinated and that is why they are sitting away from each other. They are afraid”. It is good that people wear masks to protect themselves from getting ill, they said. Others mentioned that the image was “not good” because “there is no distance amongst the people”. In Shagarab, Kassala, women

said: “it’s a bad picture because they are close to each other, they will also get infected by cough and tuberculosis” and “They will get infected with Corona”. “As long as we are not vaccinated, we should not come closer, and that is why the picture is inappropriate”, added a woman trader living in the refugee camp.

In Kassala, some people recognized that the picture was intended to be representative of the community. “The picture shows different groups of society and different ethnicities”, said a man in Kassala. Women in West Darfur liked the clothes: “they represent the diversity of the community”.

Others believe that the image does not represent everyone: “it represents individuals in the Sudanese community only [not refugees]” and: “the picture should include all Sudanese ethnicities, so others don’t

get sensitive about it”.

Women in urban areas in Kassala said: “There is a variety in clothing, but the picture is incomplete; the costumes do not reflect the diversity of all people; not all people are Muslims”.





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Translation of text: “Viruses constantly change over time, and this is a normal/ natural process in the life span/cycle of a virus. Viruses need to find something alive to nest in (such as animals or humans), as if they were entering a new house. When they find this new house, they start reproducing themselves to further multiply. In this multiplication process, not all copies that the virus made are identical. And this is what is known as mutation – as long as the virus keeps on spreading, there is a likelihood of mutations appearing to stay alive”.

Image 3: Viruses change over time

The third image was used for the monthly COVID-19 social media vaccination campaigns of the MoH. Some of these materials were also printed for use in the Khartoum Fair, a large event that was used to raise awareness for COVID-19 vaccines.

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Whilst many people understood this image to be about COVID-19 vaccines, people reported that the image was scary because of the use of the big needle. Many people also said that the doctor should look more like COVID-19 vaccine teams and should position the needle of the syringe in the right angle. More accurate representation will help people in viewing the image as trustworthy and accurate. Non-accurate representations may feed mis- and dis-information and can ultimately harm a vaccine's campaign/uptake.

Even without text, many people understood this image to be about COVID-19 vaccines. Women in South Kordofan explained it as

follows: "he is protecting himself from the virus"; "this is the coronavirus, and this person vaccinates against the virus". In Tarfi, South Kordofan, men described the image as: "here is a doctor saving someone's life". Others simply misunderstood the image: "the person is taking nettle herb for protection". This is presumably linked to the fact that the FGD was announced as being about COVID-19.

For many, this image was a source of fear. "The syringe is big and terrifying", said one man from West Darfur. In Shagarab, Ethiopian and Somali women mentioned: "we got horribly scared because we saw a big syringe". Another added: "the person is being injected with

the disease" and "if someone gets this disease, he/she will not survive at all". In Shagarab refugee camp, Kassala, men mentioned: "the big syringe should be replaced with a small one". Others simply said: "the syringe is big and inappropriate". The image also elicited mis- and disinformation. Some, for example, misunderstood that taking vaccines could help people heal from COVID: "the syringe saves infected people". The image also reinforced pre-existing beliefs. A 48-year-old man in West Darfur mentioned that this image made him believe more in misinformation related to the origin of the COVID-19 virus: "based on this image, the virus is made by men".

Some people noted factual errors in the image. "It is supposed to be at an angle of 45 degrees, so it is an injection error", said a 48-year-old farmer, originally from South Sudan. In El-Queck, South Kordofan, men reported that "the person is injected from a distance" and added: "it is supposed to be at a 45-degree angle". In Shagarab, Kassala, people said: "the position of the doctor and the vaccine recipient should be adjusted so it would look normal". A 50-year-old woman from Eritrea said: "The person who gets vaccinated should not sit like that, it's not by force [that they are vaccinated]". Women in host communities in Kassala said that the doctor is not dressed like a vaccination worker, and that



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this should be changed to better fit reality. "It's better that the doctor wears the right clothing; it doesn't make sense that someone who looks normal, injects me with the vaccine", said a 29-year-old woman. In Wad Sharifey, another woman said: "the one who injects should wear [clothes] like doctors and cover all his body".



Image 4: #CoronalsNotOver – vaccines save lives

The fourth image was used for the monthly COVID-19 social media vaccination campaigns of the Ministry of Health. Some of these materials were also printed for use in the Khartoum Fair, a large event that was used to raise awareness for COVID-19 vaccines.

Translation of text: "#CoronalsNotOver – In order to protect ourselves, our beloved ones and those around us and to preserve the stability of the health/ sanitary system from the repercussions of having Corona, it is important to inoculate the biggest number of people targeted through vaccination – As such contributing to achieving collective immunity like other countries who were able to overcome the consequences of COVID by vaccinating the biggest number of its citizens, this is reached through continuous vaccination campaigns to reach the biggest number of people targeted through vaccination – As such, please make sure to take the vaccination shots and to encourage everyone around you and your acquaintances to get the shots in the nearest health centers which provide a COVID vaccination service".

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All research participants recognized this image to be about the COVID vaccines due to the depiction of the COVID-19 vaccination card. However, many people (wanted to) believe that this image was about “the right to vaccination” and not, as was written in the text, immunity, and uptake. People also misunderstood the image because they often are not able to read (Modern Standard) Arabic. Those who could read mentioned that the text was too long and boring.

Because literacy rates are low, participants often did not read the text part of this image: they only looked at the image itself. To participants across all research sites, it was clear

that this image depicted COVID-19 vaccination cards. Men in South Kordofan understood the image as “vaccination for protecting ourselves from the virus”. In Kassala, participants mentioned that this image is about “vaccination and the vaccination card”. People in Sharifey refugee camp, Kassala, noted that the image showed that “the vaccination gives the body immunity against the virus”. In El-Geneina, West Darfur, women saw this image to be about vaccination cards, which they found “very important”. They could not read the text on the side but instead talked about how “people who get vaccinated should have the card, because that is very important”. According to

both men and women, this image was about “the right to get vaccinated”, and they used it to talk about the (un)availability of vaccines for them and their families. Women in South Kordofan, for example, reiterated that “anyone who got vaccinated has the right to have the card”. “This is my first time seeing the card, and I got injected without the card”, says a 41-year-old man from Angolo, South Kordofan. Women in West Darfur also talked about “the right to be vaccinated and take a vaccination card”. They swore: “if the vaccination team comes, we will go and be vaccinated with our families”. In El-Queck, women also talked about fairness and the right to healthcare and vaccination cards :

“anyone who got vaccinated should have the vaccination card”.

In Kassala, women mentioned that the text on the picture was not in accordance with what was written down. “There is a contradiction between the picture and the text. The card means you have got vaccinated, and the continuation of vaccines needs another picture”, says a 29-year-old student in Kassala. The text also prompted more questions. Women said: “the text is incomplete; they didn’t mention vaccination against what exactly. It could be vaccination for pregnant women or routine child vaccination”.

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### 3.2.8 People think that the words do not always convey the same meaning as the images.

People in Kassala felt that in the materials discussed, images and text do not always convey the same message. “There are no words that are incomprehensible but the relationship between the pictures and the texts is quite weak. The pictures are clear but don’t fit with the text”, said a man in Sharifey refugee camp. Women in urban areas of Kassala felt the same: “the text is clear, but it does not explain the picture”. “All agreed that the speech does not explain the

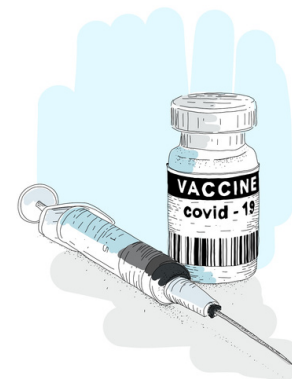
picture”, said a woman in Wad Sharifey camp.

For all images, participants said that the words on the image are clear when they are read out loud in the right Arabic dialect/language. The sentence structures are clear, and no difficult words are used, they say. However, participants in Sisi camp noted that “the speech should not be that much, and the text can [seem] long. It should be small, precise, and useful”. In Wad Sharifey refugee camp, people said: “the text is long and boring”. Others were concerned with the choice of words: “sometimes they use English words that we don’t understand”; “some complicate the message they

### 3.2.9 When it comes to fertility and taboo topics, health workers should communicate in a culturally sensitive manner.

are trying to convey”. People want health workers to answer their questions about the side effects of vaccination on fertility and reproductive health. “The people of the ministry are supposed to explain to me, a man, about the vaccine”, says a man in West Darfur. This communication should be done in a culturally sensitive way, say men in West Darfur. “When talking about fertility, they should bring the religious side along and take

customs and traditions into account”, say men from Kassala. Being culturally sensitive is also about adhering to local communication practices. “It is preferred to separate [...] men and women, as well as children and adults”, when talking about such topics, say men in Kassala.<sup>5</sup>



## 3. FINDINGS

### 3.3 Gender roles in COVID-19 risk communication

Gender-sensitive risk communication recognizes that women and men have different needs, preferences, and vulnerabilities when it comes to understanding and responding to risks. In this section, contrasting perceptions and practices between men and women are reported.

#### 3.3.1 Men and women trust different sources of information to varying degrees

Men were found to be more likely to report that they trusted information from experts and authorities such as the Ministry of Health, TV,

and Radio in all three states. Women were more likely to trust the information from their friends and family members. This may be due in part to differences in socialization, as men are often socialized to value and trust their own expertise and the expertise of others, whereas women are often socialized to prioritize relationships and the opinions of those they know and trust. However, it is important to recognize that these generalizations do not apply to all men and women and that individuals in this study may have their own unique preferences and sources of information that they trust.

#### 3.3.2 Perceptions of access to information varied between men and women in Waw Nur, Kassala city

Among the study participants from Waw Nur, Kassala, men reported that they found COVID-19 information accessible, timely, accurate, and trustworthy. They said, “Access to information is fast and accurate at the same time. It is communicated through telephone under the directive of the Ministry of Health. Telecommunication companies send text

messages and audio recordings before each phone call or while waiting during a call”. On the contrary, women found the information they received “repulsive” and not trustworthy. A woman said: “people are saying that there is even no COVID-19 (infection),” suggesting that the sources of information that are discussing COVID-19 are not reliable because the people who they trust think there is no disease. The same group of women relied on social media for news updates, as discussed above (Section 2). When asked about the COVID-19 vaccine, one of the women said, “I need to be educated to take



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the vaccine. I didn't take it because I didn't have enough information." From this experience from Waw Nur, it is understood that when men and women had potentially similar access to the same information, they perceived the information they received differently. Gender could therefore be a factor that can influence how people access and perceive COVID-19 information. However, other factors, such as age, race, and socioeconomic status, may also play a role. In addition, the ways in which people access information may be influenced by cultural and societal norms.

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#### 3.3.3 Different information needs: More men wanted to learn about COVID-19

All participants were able to identify gaps in their knowledge and articulate the

issues they wanted to learn. In the Shagarab and Wad Sharifey camps in Kassala and the Hejayrat area in South Kordofan, men expressed their need for learning more about COVID-19. Women in Hejayrat did not think that they needed to learn more about COVID-19, although they thought that their access to information was limited and delayed. There could be several reasons for that. Women may have experienced an information overload, lack of trust, language and literacy barriers or competing priorities. In all other sites, everyone thought they needed to stay up to date on the COVID-19 pandemic. Table 3 illustrates specific unmet information needs by study sites and gender.



### 3. FINDINGS

State	Location	Men	Women
West Darfur	El-Farouq	Learn about the COVID-19 vaccine, because we are hearing a lot of rumors Why is COVID-19 infecting people with chronic diseases? Is COVID-19 real because I haven't met anyone who has been infected?	Why is there no treatment for COVID-19? How is that some people die from COVID-19 and others survive? Why are we getting two doses of the vaccine? They say COVID-19 virus does not survive in hot places, then how come we are getting infected?
	El Genina, Heibeila	Is COVID-19 manmade? What is the difference between a COVID-19 infection and a common-cold?	Prevention, control and treatment of COVID-19. Will the vaccine protect me from future infections?
	Sisi camp, Kereinek	Covid pandemic Vaccine	COVID – outcomes after infection? Side effects of vaccine
South Kordofan	El-Higerat, Reif Algharbi	Side effects of COVID-19 vaccine General health promotion	(Nothing on COVID-19) Endemic diseases Acute infections
	Kadugli, Tillo, Tafry camp	Learn more about the COVID-19 vaccine Why does COVID-19 infect people with chronic diseases? Does COVID-19 really exist?	Why is there no treatment for COVID-19 infection? What are there two doses of the vaccine? How is the virus surviving in the hot weather?

Table 3 illustrates the unmet information needs by study site and gender:



### 3. FINDINGS

Table 3 illustrates the unmet information needs by study site and gender:

State	Location	Men	Women
South Kordofan	El-Queck, Reif Asharqi Locality	-	-
Kassala	Waw Nur, Kassala city	(Nothing on COVID-19) Home waste management First aid education FGM Schooling and education Social responsibility and human rights Public Safety Employment opportunities	(Nothing on COVID-19) Home waste management Reproductive Health Child Immunisation ID and personal documentation procedures Domestic Violence Rape education Drug use
	Shagarab Camp	Any information about COVID-19 Migration and Sudan laws Viral Infections Immuno deficiency diseases	(Nothing on COVID-19) New diseases Monkey pox
	Wad Sharifey Camp	Any information about COVID-19	(Nothing on COVID-19) Employment How to learn Arabic How to continue with university studies

## 3. FINDINGS

### 3.3.4 Men and women described different approaches to rumor verification

We found a distinct difference in verification skills between groups of men and women. In Shagarab camp, men verified news by checking for similar information on TV/Radio. By contrast, some women in the same area checked their information with relatives and camp officers. They said, “We can see (in their appearance) if they are telling the truth or lying.” People may tend to look for information that confirms their existing beliefs or biases and may reject or ignore information that contradicts them.

This can lead to subjective verification of the information. The subjective verification of information can be influenced by a range of factors, including biases, critical reasoning, trust in unreliable sources, and personal motivations. Rumor tracking data from Internews showed that 53% of the recorded rumors nationally were expressed by women. In the three study states, women expressed less rumors (45%) when compared to national figures.

### 3.4 Sexual and reproductive health rumors and COVID-19 vaccine

Reported sexual and reproductive health (SRH) rumors were found to have serious implications on vaccine hesitancy. Societal pressure influenced men’s acceptance. Nevertheless, on several occasions, participants were able to refute the rumors through logical analytical thinking.

Study participants demonstrated a reasonable understanding of the importance and purpose of the COVID-19 vaccine. Many participants were vaccinated, and some of the others expressed their willingness to take the vaccine. A community leader from South Kordofan said: “The vaccine is good and there is a great desire to take the

vaccine. Community members are able to think in this way (positive attitude towards the vaccine) because they have access to vaccine information from various media sources”. It is also important to note that this positive attitude could have been due to an interviewer bias, where people tended to tell the researchers what they thought was the correct expected opinion. In addition, direct questions often examine perceptions which may not necessarily translate into action.

Women from Waw Nur, Kassala, who relied on social media for their COVID-19 information source, and who were distrustful of the of the



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information they received, were among the study participants who were skeptical of the vaccine. They believed the vaccine was not safe because, “they were not sure who brought the vaccine”, they said. The association between unreliable sources of information and vaccine hesitancy was evident in this group of women. While there seemed to be general positive comments on the vaccine, a closer examination of some concerns around reproductive health rumors highlighted a reason that could explain low vaccine uptake in the study sites.

#### 3.4.1 Both men and women had concerns related to rumors around sexual and reproductive health

SRH rumors emerged as a major concern, and a source of fear on some occasions, across most communities. A member from a CBO in Kassala said: “the fear was because of infertility. We as a community took a stance against the vaccine because we have no trust in it”. A member from a CBO in West Darfur said: “they (the community) think that there is a very dangerous risk from the vaccine, and that danger is in infertility”. Interviews with key informants working in media also confirmed

that this is a major concern. Men from South Kordofan and women from Hay Waw Nour in Kassala expressed notably no regard for rumors of SRH.

Reported rumors related to SRH had the following thematic focus:

- COVID-19 vaccines cause infertility in both men and women.
- COVID-19 vaccines decrease libido in men.
- COVID-19 vaccines cause a loss of pregnancy (miscarriage and still birth).

Internews data from online and offline rumor tracking across Sudan was able to collate many rumors related to reproductive health,

infertility, and pregnancy. The rumor tracking team also conducted a thematic sentiment analysis on the data. Here they applied certain criteria to the concerns associated with the expressed rumor. It was found that fear was the most common sentiment (96%) associated with SRH and pregnancy rumors. Anger and/or frustration (2%) came next after fear (Internews, 2023). This analysis by the RiT project team provides a meaningful insight and validates findings from the present IEA.



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### 3.4.2 COVID-19 was deliberately created to control the population

Some participants said that they had heard about the COVID-19 virus and believed that this virus was made to restrict population growth. This seemed plausible to a male participant from Waw Nur because of “the mysterious circumstances in which the virus appeared, the way it quickly disappeared, and the availability of the vaccine free of charge”. A senior employee at a CBO explained that community members in South Kordofan share similar opinions. They said: “Some people have in their minds that foreigners brought this COVID-19 vaccine to eliminate society”.

### 3.4.3 Men were more fearful than women of societal pressure

Societal pressure was found to be a powerful force shaping men’s beliefs and attitudes towards the COVID-19 vaccine in West Darfur. Participants from the men’s FGD in West Darfur felt that they would be judged by others if they took the vaccine. They conformed to social norms and expectations as a result. They said: “It (rumor on infertility) has a negative impact on our mental health. The community has no mercy. If they get to know that you have taken the vaccine, they will say: that’s it! You will not have children again! And this (judgment) is harmful”.

Men from Sisi camp in West Darfur said: “people think that if you take the vaccine, then you must be a coward and that you are not a man.” They also said, “Being an infertile man is a stigma in itself”.

Other participants from South Kordofan also expressed concerns but these were not directly associated with societal pressure. A vaccinated man from Tarfi camp in South Kordofan said, “The rumors got me thinking that I should get married so I can have kids before the 6 years are over”. He was referring to a rumor that infertility happens six years after taking the COVID-19 vaccine.

Women had concerns

related to their value in society. They did not make any direct references to societal pressure influencing their decisions. A woman from El-Farouq in West Darfur said: “One is healthy now. But if we become infertile, where do we go? We will have to leave the center.”

This IEA reports on experiences that may have not been captured in the past, as most studies on infertility often focused on women. Very little is known about men’s experiences of childlessness in Africa (van Zandvoort et al., 2021). In the African culture, childbearing is considered essential to the true meaning of marriage, which is only fulfilled if the couple



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conceives and bears children (Dyer et al., 2004). A child is considered to be a source of power and pride, and children act as insurance for their parents in old age (Dyer et al., 2004). Thus, it is not surprising that both men and women had serious concerns that could have strongly influence their vaccine uptake decision.

### 3.4.4 Participants described logical arguments to refute RHS rumors

A woman from El-Farouq area in West Darfur said: “at first, I refused to take the vaccine. I was afraid that I may not be able to bear children. But then I saw that my neighbour gave birth after she took her second

dose. I was then convinced to take the vaccine”. Another woman from El-Queck in South Kordofan said: “no, I don’t think this is true because I haven’t seen anybody who was affected in this way”. Another man from the same site said: “I did not take the vaccine at first. I wanted to test it out. I saw my friend who got vaccinated and got children. Then I took the vaccine”.

Logical thinking can be a powerful tool in the process of rumor verification. It involves evaluating information based on evidence and reason, rather than emotion or intuition. This demonstrated skill can be further strengthened among community members.

## 3.5 User recommendations

Participants were able to reflect constructively on Sudan’s COVID-19 response. Men and women in FGDs had their own practical suggestions for improved communication and information services about COVID-19 and COVID-19 vaccines. These recommendations, which could be useful to all responders, government officers, humanitarian workers, media personnel and community members are listed below:

### 3.5.1 Language and Literacy

- Graphic designers should make sure that people stand further apart in images about COVID-19, to avoid confusion about distancing guidelines: “there is no distance between them, so they will get infected”. Another recommendation was that: “older people should be included in the picture, because they are the most vulnerable people, who get infected more than others”.
- Women and men would like humanitarians, service providers and the Ministry of Health to use images or spoken communication to share information: “we prefer the spoken [word], for the people who do not write to hear the information”.

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- Ideally information should be provided face-to-face through channels and locally preferred and available influencers that are already sharing information: “bring it here in the health center in spoken Arabic through the Governor and the Sheikhs”; “we prefer it to be verbal, in posters and images through our local channels and by mobile microphones”.
- When images are used, humanitarian agencies and other health information providers should “explain the images to [people] verbally so they can understand it”.
- Women mentioned that those who are not literate have challenges understanding COVID-19 information. As such, humanitarians: “should speak with people who do not know Arabic as their dialect”; “in the simple language our society understands”.
- In general, humanitarians were encouraged, particularly by women, to “use simple colloquial Arabic”, because “people don’t understand classical Arabic”. Participants mentioned: “they use the written information, but we like colloquial language”; “if it is possible for people to explain the information in a simple way and in their own language [then that would be much better]”.
- Make sure to avoid images that look scary, for example, those with big needles: “We want images which are not scary for children (the virus and the injections look scary).”
- People want information about the (un)availability of vaccines made available to them.
- People mentioned wanting short and concise text on and below images.
- One participant reported preferring the word “protects” to “saves”.
- Participants want aid workers to “inquire about the participants’ preferences”, particularly when it comes to the languages and formats used.
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### 3.5.2 Partnerships and collaborations

- A humanitarian actor from West Darfur study site suggested that: “partnerships should be made with all organized bodies so that awareness can be raised across a wider region, thereby improving response.”
- A community leader from Kassala voiced similar needs for responders to partner with key community members in future responses. They added that responders will need to identify the community needs and implement their projects by working with and through community groups.

- A humanitarian actor, who seemed to struggle with working effectively with government entities in South Kordofan said, “during health emergencies, developing a mechanism for collaboration with the Ministry of Health will be helpful. These mechanisms could cover training of responders and rehabilitation needs of recovering patients.”

### 3.5.3 Preparedness and continuous response

- A CBO member from Kassala mentioned that government and partners need to develop a response plan that focuses on the role of health centers in the neighbourhood level. “Plans should include sustained health promotion campaigns in between COVID-19 waves”, said a CBO member from South Kordofan.
- A humanitarian actor from West Darfur highlighted the importance of inclusivity and collaboration by recommending, “We need to include refugees and humanitarian migrants in all COVID-19 services delivered to host communities”.

### 3.5.4 Political stability and continuous support

- A government official from Kassala explained that there has been a decreased support from non-governmental organizations to the government in recent years. He said, “All support was halted after the current political escalations (2021 military takeover).” Participant did not present a solution or recommendation, but they predicted great losses because of work and aid suspension.

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### 3.5.5 Information management

- A humanitarian actor from South Kordofan, and a CBO member from Kassala described the need for data management during crises. One said, “state authorities should document the COVID-19 response by creating a database on the disease and its attributes.” Another said, “We need to establish an emergency room and a database for disaster management.”
- Build a network of organizations to enable information sharing across the country., said a CBO in Kordofan, a community leader in South Kordofan and a government official in Kassala.

### 3.5.6 Strengthen role of media outlets

- The goal of media personnel is to become a reliable source of information. Technical and logistic support is required for the state stations to run efficiently. A hotline would help media personnel understand people’s worries and concerns.
- It would be good to train local media and alternative media personnel on how to educate people and spread awareness, said a member of a CBO in Kassala.





# 4. IEA RECOMMENDATIONS

The following considerations, based on our findings, may provide women and men with greater access to information:

## 4.1 Effective risk communication requires a thoughtful approach that considers the language and literacy levels of the audience

Men and women in South Kordofan, West Darfur, and Kassala, need information about COVID-19 and COVID-19 vaccines in a language, images, and format they understand.

It is critical to test comprehension of COVID-19 messages and images before dissemination.

## 4.2 Develop gender-sensitive pathways in future risk communication

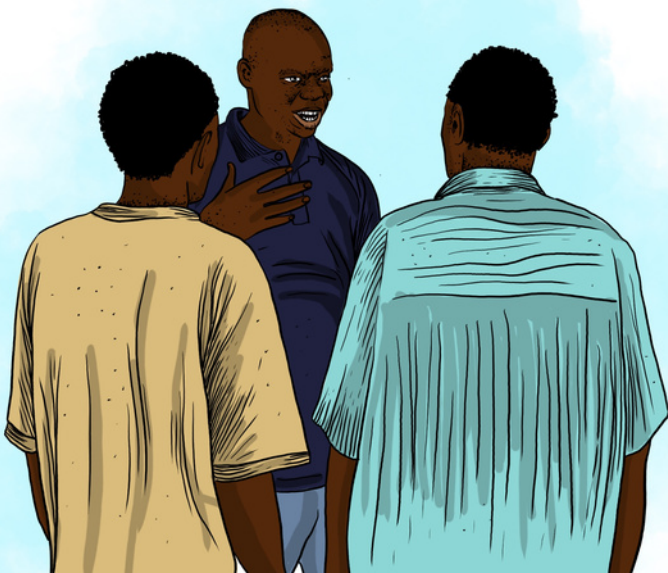
By adopting the following pathways, risk communicators can create more gender-sensitive risk communication strategies that better serve the needs of both women and men and help to build more resilient communities.

- Use a variety of communication channels, such as social media, radio, or community meetings, to
  - reach both women and men recognize that women may be less likely to have access to digital technology or may face more restrictions on their mobility.
  - Involve both women and men in the planning process to ensure that their needs and perspectives are considered. This includes involving women in decision-making processes and ensuring that their voices are heard.
  - Recognize that gender inequalities can increase vulnerabilities to risks. Address these inequalities by providing women and men with equal access to resources and opportunities to build their resilience to risks.
- Help community members develop the skills they need to verify COVID-19 news and make informed decisions about themselves and what to share with others. Training could include explaining the importance of COVID-19 news verification,
- identifying reliable sources for COVID-19 news, looking for corroborating evidence for COVID-19 news and critically evaluating it and providing community members with COVID-19-specific misinformation.

## 4. IEA RECOMMENDATIONS

### 4.3 Combat sexual and reproductive health rumors

Rumors about sexual and reproductive health (SHR) had serious implications for vaccine uptake.



In addition to the guidelines on the Sudan Internews rumour response report (Internews, 2021), the following should be considered:

- Provide accurate information about COVID-19 vaccines and their impact on reproductive health. Encourage participants to seek information from reliable sources and use social media responsibly. Healthcare providers can address these fears and concerns by explaining the vaccine's safety and efficacy and providing information about the vaccine's impact on reproductive health.
- Encourage men and women to discuss their concerns and questions with their healthcare providers, family members, and friends. Open dialogue can help dispel rumors and misconceptions related to vaccines and reproductive health.
- Sharing personal experiences of men who have received the vaccine and their reproductive health after receiving it can help others understand the importance and safety of vaccines.

# 5. ACKNOWLEDGEMENTS AND CREDITS

Internews in Sudan would like to thank the study participants, researchers and organizations who generously shared their time, experience, and materials for the purposes of this project.

This study has been conducted in partnership with Sudan's Youth Peer Education Network (Y-PEER Sudan), a nationwide network of youth volunteers active in promoting health and youth participation.

This project was done in collaboration with CLEAR-Global/Translators Without Borders, a non-profit helping people get vital information and be heard, whatever language they speak. CLEAR helped Internews in Sudan do a background review on language, literacy, and analysed language specific findings. A consultant for the organization also helped with the analysis and write-up of qualitative findings focussed on language, gender, and literacy, and reviewed the final report.



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# QUOTES



**“We prefer the images and spoken information because reading is hard for us”.**  
Women – West Darfur

**“I need to be educated to take the vaccine. I didn’t take it because I didn’t have enough information.”**  
Woman – Kassala

**“I did not take the vaccine at first. I wanted to test it out. I saw my friend who got vaccinated and got children. Then I took the vaccine.”**  
Man – South Kordofan

