

A Qualitative Study of COVID-19 Prevention Measures: Insights from Staff and Students at a University in Eastern Cape Province, South Africa

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Abstract:

Introduction

COVID-19, akin to other respiratory ailments, posed severe challenges that called for non-pharmaceutical interventions to curtail transmission and infection rates. This study delved into the understanding and adherence to preventive measures against COVID-19 among students and staff at a higher education institution in Mthatha, Eastern Cape, South Africa.

Methods

For this qualitative study, snowball sampling was employed to purposefully select willing and eligible participants from the student and staff population. Data were gathered during the third wave of COVID-19 in 2021 through telephonic key informant interviews (tKII) involving eighteen participants. Each interview was facilitated using a guide, and the proceedings were audio recorded and subsequently transcribed.

Results

The most recurrent theme was identified via a word cloud before conducting a thorough thematic analysis. Several themes emerged, including perceptions of preventive practices, steps a suspected case should undertake, and self-reported responses to a confirmed or suspected COVID-19 case. Participants expressed a prevalent non-compliance issue, attributing it to ignorance, misconceptions, and controversial beliefs that COVID-19 is a man-made and therefore, an unavoidable disease.

Conclusion

These findings underscore the importance of reinforcing technical implementation and rigorous monitoring across all sectors - education, healthcare, and community at large - to ensure strict adherence to preventive measures during a pandemic.

Keywords: Prevention Measures Uptake, Respiratory Infectious Diseases, COVID-19, University Staff and Students, South Africa

Introduction

The COVID-19 pandemic is the fifth pandemic in a century since the 1918 pandemic[1, 2]. It first manifested as unusual cases of pneumonia in Wuhan, Hubei Province, China, in December 2019[1]. The virus responsible for this illness, Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), leads to the disease now globally recognized as Coronavirus Disease (COVID-19)[3, 4]. By March 2020, the World Health Organization officially declared it a worldwide pandemic[5]. As of April 20, 2020, over 120 million cases and approximately 2.6 million fatalities had been reported globally[6]. In Africa, roughly 20,313 cases were reported, accounting for 0.84% of global cases. South Africa had the highest number of confirmed cases on the African continent, with 3,158 (15.56%), followed closely by Egypt with 3,144 (15.48%)[7, 8].

On March 5, 2020, South Africa confirmed its first case of COVID-19[9, 10]. By April 1, 2023, the nation had recorded over 4.1 million cases and 102,595 fatalities. However, South Africa also reported a commendable recovery rate of 97%[11, 12]. The virus primarily spreads through droplets released when an infected person coughs or sneezes, as well as by contact with contaminated surfaces. Common symptoms, including cough, fever, and sore throat, typically manifest within a week of exposure[11].

In response to the COVID-19 pandemic, nations worldwide adopted various measures to curtail transmission and mitigate adverse impacts[13]. Among these strategies were non-pharmaceutical interventions (NPIs) such as promoting rigorous hygiene practices, temporarily shutting down educational institutions, museums, theatres, select shopping malls, and restaurants, and suspending religious events and public gatherings[14][15]. Even with the introduction of vaccines, simple precautions like regular handwashing, refraining from touching the face, maintaining social distance, and wearing face masks remain the most effective defensive tactics[16]. As the global combat against COVID-19 persists, consistent adherence to these preventive actions, especially by students and university faculties, becomes paramount[17]. Their knowledge, attitudes, and preventive behaviors (KAP) toward COVID-19 are pivotal in this battle[18]. In light of this, a study was carried out to assess the COVID-19 preventive behaviors of both staff and students at a rural-based university in the Eastern Cape Province of South Africa. The insights gathered aim to reveal compliance levels with COVID-19 preventive practices in tertiary institutions, guiding evidence-based policies and future strategies for health and educational stakeholders[18].

Methods

Study Design

A qualitative research involving key informant interviews using phenomenological approach was conducted to explore knowledge, attitudes and preventive practices towards COVID-19 among purposively selected staff and students.

Study Setting

The study took place at an academic institution in Mthatha, a town situated in the predominantly rural and underprivileged Eastern Cape Province of South Africa. Despite substantial investment, the province grapples with widespread illiteracy, unemployment, and limited access to essential and social services [19]. The Eastern Cape Province, spanning 170,600 square kilometers (km²), is the country's second-largest in terms of surface area, covering 14.0% of South Africa's total landmass[19]. With a population of approximately 6.6 million, it ranks as the third most populous among the provinces. Notably, the province encompasses district towns such as Alfred Nzo, Amathole, Cacadu, Chris Hani, Joe Gqabi, and OR Tambo. Residents from these districts attend Walter Sisulu University, with some enrolling as students and others serving as staff members of the institution [19].

Study Population and Sampling

We purposely recruited staff and students in WSU that were eligible and consented to participate in the study. The study participants were aged 18 years and above.

Ethical Consideration

Ethical approval was obtained from the Walter Sisulu Faculty of Health Sciences Research and the Institution Ethics Committee before collection of data. Data collection process was in accordance with the ethical principles for protecting the information of study participants.

Data Collection Management and Analysis

Data was gathered via telephone informant interviews. An interview guide for the Key Informant Interviews (KIIs) was crafted following a review of relevant literature. Each interview was tape-recorded and documented with notes. These recordings were later transcribed verbatim. The transcriptions underwent both content and thematic analysis to identify and code themes. Word

clouds illustrated the most frequently used terms, while tree diagrams captured relationships within the transcripts.

Results

Description of Study Participants

Of the 18 participants, the majority (62.5%) were women, and most were students (Fig 1 & 2). The participants, who were both staff members and students, comprised about 13% (Fig 1). In Fig. 3, the majority of the female participants were 20 years old (30%), while the males were 24 years old (34%).

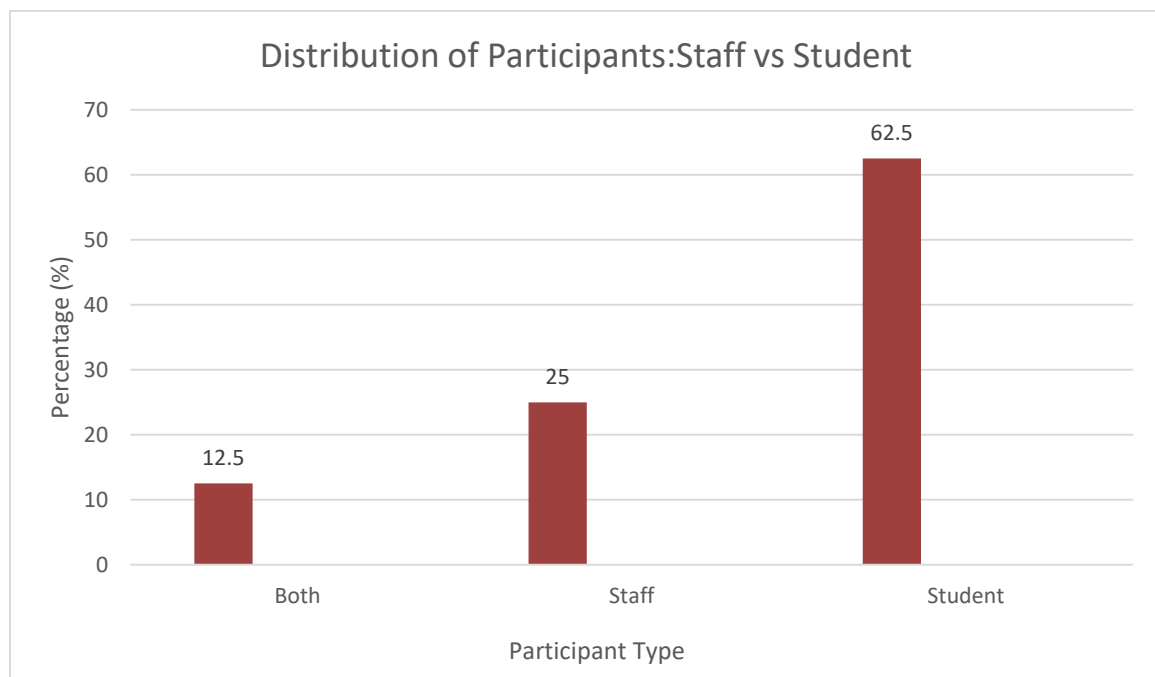


Figure 1. That shows the staff or student percentages.

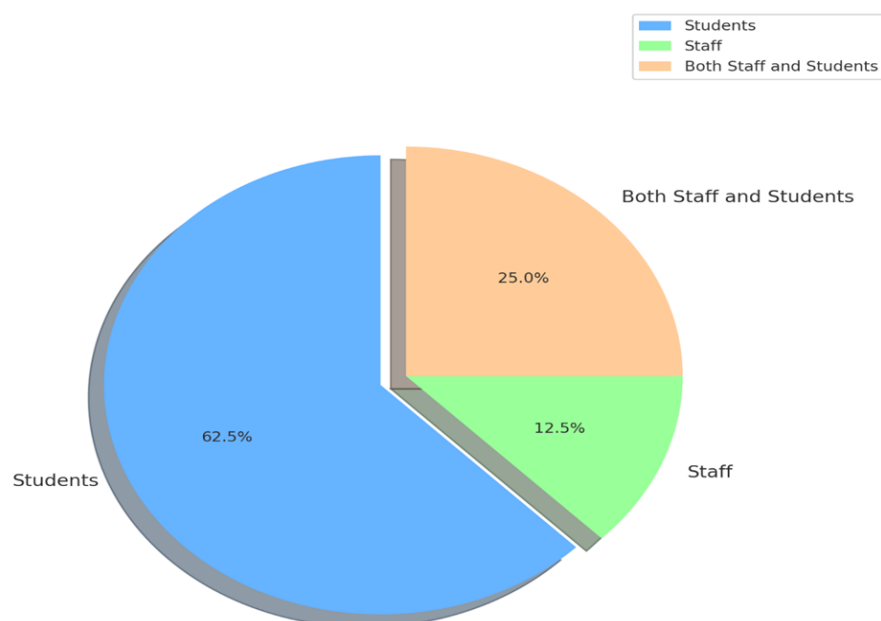


Figure 2. Distribution of participants by role in a qualitative study on COVID-19 preventive measures at a university in Eastern Cape, South Africa, from June to September 2021 (N=18).

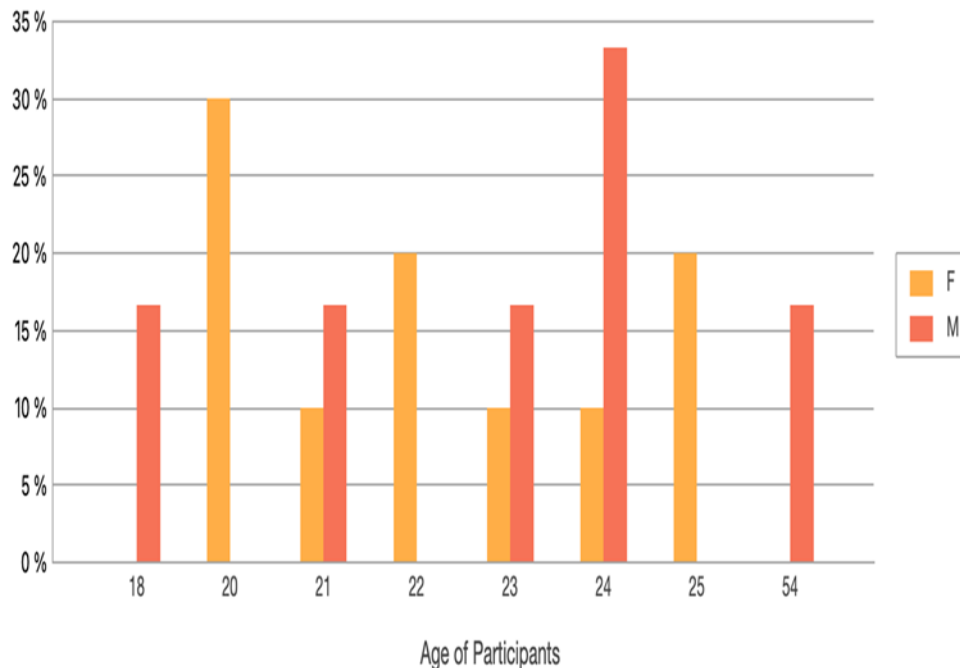


Figure 3. That shows age of participants.

Emerged Themes from The Data Analysis

The analysis of the data yielded the themes presented in Table 1 and discussed in sub-sections 3.3 below.

Narratives for Emerged Themes Presented in Table 1

I. Understanding of COVID

Participants discussed their understanding about COVID-19, they further acknowledged that people with risk illnesses are more exposed to contracting the virus than individuals without comorbidities. Participants were also well-informed about how the virus spreads, what precautions should be applied, and how fatal COVID-19 is (Table 1).

II. Awareness of COVID Means of Transmission/Infection

Participants explained the transmission ways, infection symptoms and the implications, perceived threat, and high-risk populations related to COVID-19. Furthermore, one of the participants states that “touching something infected has chances of transmission being high.” In a nutshell, it concludes that COVID-19 is a highly transmittable virus that is fatal (Table 1).

III. Recognised Preventative Measures

Many participants highlighted the preventive measures that were current strategies to limit the spread of cases such as hand hygiene, social distancing and quarantine are the main effective preventive measures (Table 1).

Table 1. Emerged themes and illustrative extracted quotes.

Themes and Corresponding Illustrative Data Extracts

I. Understanding of COVID

“COVID-19 is the pandemic that is faced by South Africa and mostly affecting people with comorbidities”.

(Staff.no.1)

“Covid-19 is a dangerous virus that can move from one person to another very easy, we should be very extra careful because it is deadly sometimes.”

(Student.no.15)

“Covid-19 is a disease that kills people”.

(Student.no.16)

II. Awareness of COVID Means Of Transmission/Infection

“You can get Covid-19 through physical contact with an infected person when attending social gatherings without protection.”

(Student.no.12)

“You get Covid-19 when you become in contact with people who are infected, you can also get Corona in an overcrowded place with someone positive.”

(Student.no.10)

through a droplet of the person who is having Covid-19 and being close to a person that Covid-19 positive

(Both staff and student.no.3)

III. Recognised Preventative Measures

“Wearing of a mask, washing hands regularly and Vaccination”

(Student.no.7)

“Wearing of mask especially in public spaces, social distancing, washing of hands with soap and have your own hands sanitiser every time”

(Staff.no.11)

”By washing hands frequently, follow social distancing, cover the mouth when coughing avoiding social gathering and wear a mask”

(Student.no.10)

IV. Knowledge/Understanding of COVID Infection Presumed Symptoms

“By observing the following signs: fatigue, headache, and shortness of breath”

(Staff.no.11)

“Chronic cough, high body temperature running nose and difficulty in breathing”

(Staff.no.13)

“I cannot see or know but there are symptoms like coughing”

(Both staff and student no.3)

V. Notions on What To Do If Having Symptoms

“The person is supposed to isolate until the person is cured to avoid transmission and if the situation is very bad, they should seek medical attention..... since there is no cure yet they can opt for traditional medicine”

(Student. no.4)

“I would distance myself from them.”

(Both staff and student.no.3)

“That person should visit the nearest clinic for testing to check if they are positive or not”

(Student.no.10)

VI. Reported Reactions Towards A COVID Suspect or Case

“Yes [she would invite such to her party even if it is six-months away], because he/she has § been treated which means he/she is no longer a threat “

(Both staff and student.no.8)

“Yes [she would invite such to her party even if it is six-months away], if they fully recovered.”

(Both staff and student no.3)

“Yes [he would invite such to her party even if it is six-months away], but I will make sure I have the testing kit to confirm if they are treated”

(Student.no.9)

VII. Social decisions relating to a suspect or case

“I do not trust if they are truly fine [so she would not invite such to her party]”

(Student.no.2)

“Yes [he would invite such to her party even if it is six-months away], only if they are going to wear protective clothing”

(Student.no.16)

“It will help in reducing the spread when all people were to follow the guidelines though”

(student.no.10)

VIII. Perceptions on Current Preventive Measures

“Covid-19 can be preventable through the wearing of a face mask, washing hands now and then, avoiding handshakes”

(Student.no.9)

“People do not obey all the regulations, if we could work together, we can fight against Covid-19”

(Staff.no.13)

“It’s important to follow Covid-19 protective guidelines for flattening the curve”

(Student.no.14)

Narratives for Emerged Themes Presented in Table 1 Continued

IV. Knowledge/Understanding of COVID Infection Presumed Symptoms

Several participants had clear understanding of the symptoms related to COVID-19 these symptoms were stated as “flu-like symptoms, sore throat and heavy breathing” (Table 1).

V. Notions on What to Do If Having Symptoms

Participants acknowledged having COVID-19 symptoms in order to inform their relatives that they had tested positive and isolate those who are infected (Table 1). Participants voiced out the COVID-19 preventive, that they should always apply precautionary measures to avoid contracting the COVID. Figure 4. illustrates the statements that the participants expressed.



Figure 4. Interactive tree on the ‘word support’ in the transcribed data.

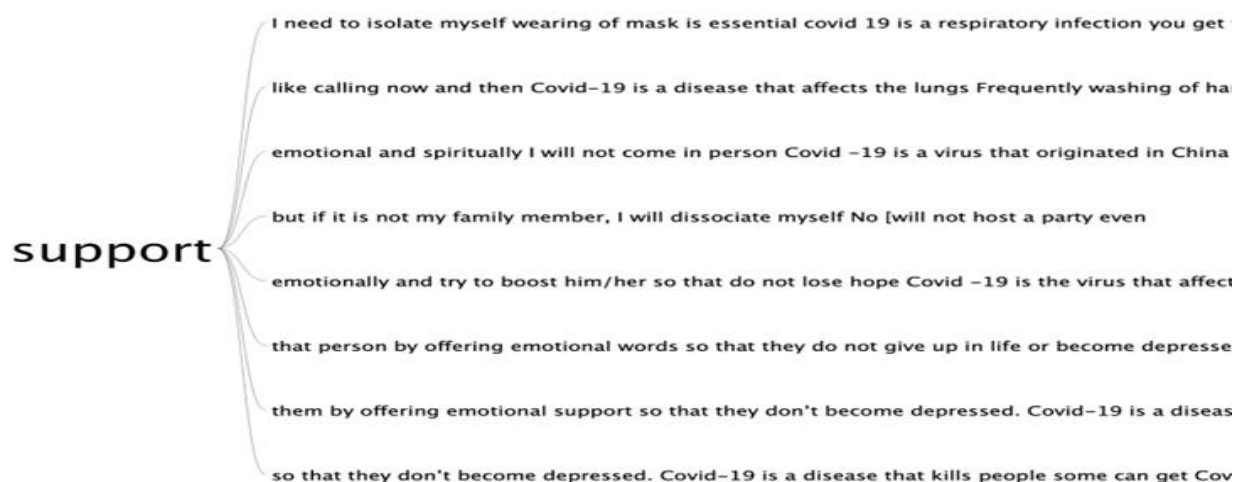


Figure 5. Interactive tree on the ‘word support’ in the transcribed data.

VI. Reported Reactions Towards A COVID Suspect or Case

Most participants reported that when having COVID case, unsurprisingly, respondents frequently described their emotional reactions to the pandemic, and these reactions were typically unfavourable (Table 1).

VII. Social Decisions Relating to A Suspect or Case

Participants reported that to take preventative measures daily. When you must be near them, wear a high-quality mask. Some argues that people must learn what to do if you have been exposed to COVID-19 (Table 1, Fig. 4).

Figure 5 depicts the word "support" in a scenario of contracting Covid-19, illustrating that people are not alone.

VIII. Perceptions on Current Preventive Measures

The COVID-19 information sources sought, adoption of preventive measures, and ability and willingness to self-isolate. Some reports that there is a high reliance on the general public to adopt and implement preventative measures in order to halt the spread of the virus, especially as pharmaceutical interventions are not yet widely available. Understanding the elements that influence the public's response can aid in the development of tailored interventions to encourage the implementation of preventive measures. By focusing on certain groups and providing suitable resources or conducting specialized interventions to influence people's behavior, it is possible to increase the adoption of preventive measures and reduce COVID-19 morbidity and death.

Discussion

Include your discussion here Given the current state of the COVID-19 epidemic, it is imperative to assess students' understanding of and compliance with preventive measures in particular settings, such as universities. This study looks into how well students and staff at a higher education institution in Mthatha, in the Eastern Cape Province of South Africa, comprehend and abide by COVID-19 preventive measures. The research holds importance as it adds to the wider comprehension of the difficulties encountered when executing preventive measures in an academic environment, especially in an area with distinct sociocultural dynamics and resource accessibility. Through investigating attitudes and practices related to COVID-19 prevention in this particular setting, the goal of this research is to offer insightful information that can guide focused interventions.

The study's major findings provide important insights into the understanding, attitudes, and behaviors of both staff and students regarding COVID-19 preventative efforts. The participants exhibited a complicated network of beliefs about preventive measures. While others accepted the significance of precautions such as mask use and hand hygiene, there were widespread misconceptions and skepticism regarding the virus itself. One troubling element that surfaced was some participants' conviction that COVID-19 is a man-made disease, leading to fatalistic attitudes that it cannot be stopped [20]. This misunderstanding contributed to a sense of impending doom, reducing motivation to follow preventive measures. These findings highlight the crucial significance of accurate and accessible information transmission in combating disinformation and fostering a more educated and proactive approach to security.

Furthermore, the study shed light on the steps that individuals believed a suspected COVID-19 case should undertake. The responses varied, revealing gaps in understanding about appropriate actions. This confusion might hinder effective contact tracing and prompt isolation, which are crucial aspects of controlling the virus's spread [21]. Additionally, the study highlighted participants' self-reported responses to confirmed or suspected cases within their social circles. While some expressed willingness to encourage testing and self-isolation, others admitted avoiding individuals who were suspected of having the virus, reflecting stigmatization and the need for comprehensive awareness campaigns that address both medical and social dimensions of the pandemic.

Lastly, this study sheds light on the limitations of adopting effective COVID-19 prevention measures in a university setting in South Africa's Eastern Cape Province. The findings highlight the critical

importance of focused educational initiatives to dispel misconceptions, improve comprehension, and encourage responsible conduct. Addressing these findings can help bridge the knowledge-action divide, leading to more effective pandemic control tactics not only inside the university community but also in the greater social environment.

When the outcomes of this study are compared to current literature on COVID-19 preventive methods, especially in similar situations or demographic groups, they show both alignment and divergence. Participants in this study, like those in other countries, recognized the crucial importance of preventive activities such as mask use and hand hygiene. However, the widespread notion that COVID-19 is a man-made disease that cannot be avoided is a unique and startling discovery that has not been thoroughly described in the existing literature [20]. This viewpoint could be attributed to a combination of mistrust in official information sources, conspiracy theories, and a lack of understanding of the virus's origins. This underscores the importance of targeted communication tactics that address the underlying causes of such misconceptions and seek to increase trust in scientific knowledge.

In comparison to other university studies, the non-compliance issue reported by participants is consistent with research indicating that young adults and students may be less adherent to preventive measures due to feelings of invincibility and the perception that COVID-19 poses less risk to their age group [21]. The precise causes for noncompliance in this study, such as ignorance and contentious ideas, provide insights into the cultural and contextual elements that may shape actions differently in this region. Understanding these nuances is critical for designing treatments that are appealing to the local people.

The theme of responses to suspected or confirmed COVID-19 cases is consistent with broader findings emphasizing the importance of decreasing stigma and fostering supportive behaviors within communities. This constancy shows that, despite the situation, the emotional and social aspects of responding to the pandemic are consistent across contexts. It's worth noting that some participants avoided suspected cases, demonstrating the existence of stigma and the necessity for complete training efforts that address both medical and public perspectives [20].

In conclusion, the study's findings provide a nuanced understanding of COVID-19 prevention measures within a university setting in the Eastern Cape Province. While some findings align with existing literature, such as the challenges of compliance among young adults, the prevalence of beliefs regarding the virus's origin as a man-made disease is a distinct observation that warrants further investigation. These unique findings emphasize the necessity of context-specific interventions that address local beliefs, misconceptions, and attitudes, ultimately contributing to more effective preventive strategies in this region.

The study's emphasis on the importance of technical implementation and rigorous monitoring across various sectors further underscores the need for a holistic approach to pandemic control. Collaborative efforts between educational institutions, healthcare providers, and the broader community are crucial for promoting adherence to preventive measures. This includes transparent communication about suspected or confirmed cases, streamlined testing and contact tracing procedures, and creating a supportive environment that encourages responsible behavior without stigmatization [21]. The findings also underscore the value of utilizing local influencers and community leaders to disseminate accurate information and debunk misconceptions, as community engagement can play a pivotal role in enhancing the effectiveness of preventive strategies.

Ultimately, this study's implications extend beyond the university context. The insights gained have the potential to inform strategies not only within educational institutions but also across the wider population of the Eastern Cape Province and similar regions. By addressing the identified gaps in knowledge, attitudes, and behaviors, public health policies can be refined to create a more resilient and informed community capable of collectively contributing to the prevention of COVID-19 transmission. In doing so, the well-being of staff, students, and the broader population can be better protected, contributing to the overarching goal of mitigating the impact of the pandemic.

Study Limitations

This was a qualitative study and as such, the results are not generalizable to all university students and staff members in the country. Besides, the sample was small as only few university staff members participated. The study's strength, however, comes from the fact that it included participants from a crucial industry—that of education, which disseminates knowledge to public health stakeholders. In order to improve knowledge and the future of the nation, more research is required across South African universities to try and understand more about COVID-19.

Conclusions

The findings have provided insights on the level of understanding of public health implications of non-compliance with available preventive measures against respiratory infectious diseases especially by individuals from academic institution within the education sector who should have been well informed. Even with the extent of awareness campaigns about COVID-19 preventive measures, the participants concurred that there is a problem of low compliance. With this study findings as lessons learned, we propose that public health stakeholders collaborate with institution of higher learning management, staff, policy actors, health with other stakeholders to develop tailored approach to improve health awareness on preventive measures and uptake when it comes to combating spread and burden of respiratory infectious diseases.

What Is Known About This Topic

- COVID-19 is a respiratory illness caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) virus, primarily spread through respiratory droplets from infected individuals, and common symptoms include fever, cough, and difficulty breathing.

What This Study Adds

- Study uncovers a widespread belief among participants that COVID-19 is man-made, leading to fatalistic attitudes, emphasizing the need for targeted communication to dispel misconceptions and build trust in scientific knowledge.
- Non-compliance issues and varied responses to suspected cases highlight cultural and contextual factors shaping actions in the region, underscoring the importance of context-specific interventions and community engagement in effective pandemic control.

Author Contributions: Conceptualization, O.O. and K.E.O.; methodology, O.O.; validation, K.E.O. and F.L.M.H.; formal analysis, K.E.O. and A.B.; resources, K.E.O. and O.O.; writing—original draft preparation, K.E.O. and A.B.; writing—review and editing, K.E.O. and O.O.; project administration, O.O. and K.E.O.; funding acquisition, O.O. and K.E.O. All authors have read and agreed to the published version of the manuscript.

Funding: This study was funded by the Royal Society for Tropical Medicine and Hygiene. O.O.'s research protected time was partially supported by the Incentive Funding for Rated Researchers' Grant from National Research Foundation (No:132385), Walter Sisulu Seed Funding and South African Medical Research Council (SAMRC) through its Division of Research Capacity Development under the Research Capacity Development Initiative from funding received from the South African National Treasury. The content and findings reported / illustrated are the sole deduction, view and responsibility of the researcher and do not reflect the official position and sentiments of the funders

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Faculty of Health Sciences Research, Biosafety and Human Research Ethics Committee (approval number: IREC 025/2020) before collection of data. The data collection procedure followed ethical principles for protecting study participants' personal information.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Acknowledgments: We thank the study participants and personal who assisted with collecting the data. We also wish to thank the Faculty of Health Sciences, Walter Sisulu University for the conducive platform and resources to conduct this research and disseminate its findings.

Conflicts of Interest: The authors declare no conflict of interest.

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