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Coping mechanisms during the COVID-19 pandemic and lockdown in metropolitan Johannesburg, South Africa: A qualitative study

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Abstract

Background: The COVID-19 pandemic has caused prolonged stress on numerous fronts. While the acute health impacts of psychosocial stress due to the pandemic are well-documented, less is known about the resources and mechanisms utilized to cope in response to stresses during the pandemic and lockdown.

Objective: The aim of this study was to identify and describe the coping mechanisms adults utilized in response to the stressors of the COVID-19 pandemic during the 2020 South African lockdown.

Methods: This study included adults ($n = 47$: 32 female; 14 male; 1 non-binary) from the greater Johannesburg region in South Africa. Interviews with both closed and open-ended questions were administered to query topics regarding the COVID-19 pandemic. Data were coded and thematically analyzed to identify coping mechanisms and experiences.

Results: Adults engaged in a variety of strategies to cope with the pandemic and the ensued lockdown. The ability to access or engage in multiple coping mechanisms were either enhanced or constrained by financial and familial situations. Participants engaged in seven major coping mechanisms: interactions with family and friends, prayer and religion, staying active, financial resources, mindset reframing, natural remedies, and following COVID-19 prevention protocols.

Conclusions: Despite the multiple stressors faced during the pandemic and lockdown, participants relied on multiple coping strategies which helped preserve their well-being and overcome pandemic-related adversity. The strategies participants engaged in were impacted by access to financial resources and family support. Further research is needed to examine the potential impacts these strategies may have on people's health.

1 | INTRODUCTION

The COVID-19 pandemic has caused prolonged stress in multiple ways, from unreliable social and physical environments to disrupted social connections due to isolation during lockdowns, and the enormous toll of lives lost worldwide (Nelson, 2021a; Taylor et al., 2020; Varma et al., 2021). These sustained stressors have disrupted everyday life, affecting the social and economic lives of individuals and well-being of communities (Gruber et al., 2021). Some of the reported stressors that people faced included financial loss, threat and risk of contagion for themselves and their families, and isolation (Garcini et al., 2022; Hamouche, 2020). Research in biological anthropology and other related fields has increasingly shown that these persistent stressors, compounded with other effects of the COVID-19 pandemic, and pre-existing forms of social inequality, gender-based violence, and structural violence, have biological and health consequences (Andrews et al., 2021; Gravlee, 2020; Kim et al., 2022; Liu et al., 2022) and widen health disparities in marginalized communities (Friedman et al., 2021; Nwosu & Oyenubi, 2021; Ruíz et al., 2020; Soares et al., 2021).

Lockdowns were put in place as key strategies to prevent the transmission of COVID-19, but such public health measures have also produced negative, unintended consequences, as seen in by elevations in mental distress and disruptions to socioeconomic activity (Kim et al., 2023; Kumar & Nayar, 2021). From the start of the pandemic, researchers anticipated an increase in psychological distress and symptoms of mental illness in the general population (Cullen et al., 2020; Kola et al., 2021). Now, a growing number of studies worldwide have reported the negative psychological impacts of the pandemic-related stress, including increases in risk for depression, anxiety, and post-traumatic stress disorder, among other psychiatric conditions (Al Maqbali et al., 2021; Oyenubi et al., 2022; Vindegaard & Benros, 2020). The negative impacts of lockdowns and social isolation on well-being have also been documented (Kim, 2020; van Niekerk & van Gent, 2021).

As anthropologists and human biologists, we are well aware of the impacts that psychosocial, environmental, and socioeconomic stressors have on human health and biology (Goodman, 2013; Leatherman & Goodman, 2020; Panter-Brick et al., 2008; Schell, 1997), but less attention has been given to understanding the coping mechanisms that people develop and utilize in response to stressful environments. Communities worldwide have exhibited a myriad of coping strategies to dampen the psychosocial and physical toll of lockdown policies (Fluharty et al., 2021), protect themselves from viral risk (Fukase et al., 2021), and build social support networks to assist those most in need (Carstensen et al., 2021). The available human biology literature on coping during conditions of stress and adversity, such as conditions of food insecurity (Hadley & Crooks, 2012; Smith & Richards, 2008), caregiving (Ice et al., 2011), and increased energy demands (Piperata & Dufour, 2007), highlights coping behaviors as natural and necessary responses to stress, both internal and external, as means for survival, protecting one's overall well-being and quality of life, and supporting one's broader social networks. Given the widespread and prolonged impacts of the COVID-19 pandemic and specifically, the potent psychological and societal concerns caused by both the pandemic and lockdown, identifying the coping mechanisms that individuals have developed in response to the stressors brought or heightened by the pandemic is essential for understanding human behavioral responses to novel stressors and providing effective support to vulnerable communities both during and after pandemic times.

Despite the widespread socioeconomic and public health consequences of COVID-19, there is a limited body of research that examines the coping strategies and resources people use to deal with the stressors related to pandemic (Baloran, 2020; Garcini et al., 2022; Nurunnabi et al., 2020; Savitsky et al., 2020). Coping is defined as the dynamic efforts aimed at managing or diminishing demands that exceed the current resources of a person (Lazarus & Folkman, 1984; Snyder & Dinoff, 1999). Identifying and describing the coping strategies that people use has the potential to inform future health interventions that are culturally and contextually informed (Garcini et al., 2022). Many studies have used quantitative data derived from surveys to examine coping strategies (Baloran, 2020; Nurunnabi et al., 2020; Savitsky et al., 2020) with a few using qualitative methods to provide more in-depth and contextual information in relation to the coping strategies that people have developed in response to the COVID-19 pandemic (Garcini et al., 2022). Some of the coping mechanisms that have been reported include engaging in enjoyable activities, using relaxation techniques, reframing thoughts to be more positive, practicing gratitude, religion, spirituality, building and maintaining social networks, use of humor, following strict protective measures, avoiding going out in public, avoid media news about COVID-19 (Baloran, 2020; Garcini et al., 2022; Nurunnabi et al., 2020; Savitsky et al., 2020). Other coping mechanisms reported, that may become negative if used long-term, include alcohol consumption, the use of sedative drugs, excessive eating and sleeping, and mental disengagement (Nurunnabi et al., 2020; Ogueji et al., 2021; Savitsky et al., 2020; Visser & Law-van Wyk, 2021).

Anthropologists and human biologists are equipped to examine the impacts of the COVID-19 pandemic on individuals and communities and describe the coping mechanisms that people developed in response to the pandemic. For the present study, data come from a diverse sample of adults living in metropolitan Johannesburg, South Africa. Therefore, to have a better understanding of the coping mechanisms that have been developed throughout the COVID-19 pandemic, it is vital to contextualize the development of the COVID-19 pandemic in the area and the government's response to it. The South African government enforced one of the strictest national lockdowns worldwide. During the most severe levels of the lockdown, people were forbidden from leaving quarantine except for food, medicine, and essential work, traveling across provincial lines, and purchasing alcohol and cigarettes. The South African National Defense Force was deployed in some of the most vulnerable communities to enforce strict adherence to lockdown regulations (Kim, Maaroganye, & Subramaney, 2021). As a result of these measures, a number of social and structural stressors such as gender-based violence, police brutality, militarization, demolition of informal settlements, food insecurity, lack of access to electricity and sanitation, and inadequate resources to adhere to quarantine laws were reported in South Africa (Eloff, 2021; Gittings et al., 2021; Kim et al., 2021; Visser & Law-van Wyk, 2021). Yet, few studies have investigated how people were able to navigate the strictest measures and cope during the pandemic. Some of the reported coping mechanisms include acceptance, seeking social support, practicing religion or spirituality, and taking protective measures against COVID-19 (Eloff, 2021; Engelbrecht et al., 2021; Scheunemann et al., under review; van der Merwe et al., 2021; Visser & Law-van Wyk, 2021).

This current study aimed to identify and describe the coping mechanisms people developed in response to the COVID-19 pandemic during the 2020 South African lockdown.

2 | METHODS

2.1 | Study design and context

This qualitative study was conducted in the greater Johannesburg area, the capital of Gauteng province and the country's most populous city. The study was administered during the first two waves of the COVID-19 pandemic, which took place between March 2020 and January 2021. Participants were recruited through convenience and snowball sampling techniques. Forty-seven ($n = 47$; 32 female; 14 male; 1 non-binary) adults aged 18 years and above and living in the greater Johannesburg region during the COVID-19 pandemic were eligible for this study. Adults that were unable to provide informed consent due to cognitive disabilities, active substance use, or other conditions that impaired the individual from comprehending the study components and/or providing informed consent were excluded. Data were collected telephonically to mitigate the risks of SARS-CoV-2 transmission. The Human Research Ethics Committee at the University of the Witwatersrand in Johannesburg, South Africa approved the study protocol (M190545) and all participants provided informed consent prior to data collection.

2.2 | Data collection

Qualitative data were collected by trained multi-lingual research assistants who collectively spoke English, isiXhosa, isiZulu, seSotho, Sepedi, and Tshivenda. English, isiZulu, and Tshivenda – the most common languages used in our study. Research assistants were trained in ethnographic interview methods for qualitative interviews (Heyl, 2001), which included a semi-structured nature to the administration of the interview, a constant awareness of how the relationship with the interviewee and broader social context shape the participant and their responses, and self-reflexivity of the research assistant in the administration and production of qualitative data. Interviews began with a brief assessment of participants' socio-demographic characteristics (e.g., age, marital status, employment, and level of education). An interview guide with both closed and open-ended questions was used, which asked specific questions about COVID-19 including: What has helped you get through the pandemic? Are you worried or optimistic for the future, and why or why not? What kind of support are you receiving during the pandemic? What did you do to decrease your risk of getting COVID-19? All interviews were recorded and ranged between 45 min and 2 h. Research assistants were instructed to take extensive jottings and reflections during the interview and compile them into a "field note" immediately after the interview. The field note served as a dense and thorough summary of the interview as well as the research assistant's own observations about the nature of the conversation and relationship, emotional and interpersonal dynamics of the participant, self-reflexivity, and other contextual factors that may have influenced the interviewee and their responses.

2.3 | Data analysis

Study authors, which include research assistants who conducted the interviews discussed these key patterns with the research assistants and developed key ideas and patterns from the field notes inductively. Any identified interpretive discrepancies were discussed and resolved at this level. Constantly evaluating and re-evaluating the already grouped data and reviewing the literature helped the research team to come up with new research questions and observations that informed the next course of data collection to a point where no new themes emerged (Braun & Clarke, 2021). A list of major themes was then generated to propose codes and definitions, which were then reviewed and revised through mutual agreement across three individuals. Key themes that emerged from the interviews and specific ideas and experiences about coping identified a priori through literature reviewers were combined to create a codebook.

Codes were then applied to the qualitative data using Dedoose (version 9.0.17), a qualitative analysis software, and discrepancies were regularly discussed and resolved within the study team. Initially, three senior research team members separately coded four (4) similar transcripts and after completion, discussed each coding pattern line by line. Discrepancies between the coding and code definitions were discussed until consensus was reached. For example, a code was marked with a value of 1 – to mean consensus and, 0 – to mean discrepancies. Collaboratively, the research team reviewed all the codes and came up with an inter-coder reliability of over 90%. The research team then coded the remaining transcripts. Coded data were then extracted from Dedoose and thematically analyzed to identify coping mechanisms and experiences during the COVID-19 pandemic.

3 | RESULTS

Participant characteristics are summarized in Table 1. A total of 47 adults living in the greater Johannesburg region participated in our study. The average age of participants was 36.6 years ($SD = 13$). Over half of participants identified as Black South African ($n = 31$), 12 identified as White South African, 3 identified as Indian South African, and one participant identified as a Black African person from central Africa. All but one participant earned at least a matric degree or higher, and 16 participants reported having a college degree or more (e.g., postgraduate degree, master's, doctorate). About 30% ($n = 14$) of individuals were unemployed during the time of the interview, two participants were pensioners, and the remaining 31 adults worked full-time (66%).

TABLE 1 Sample characteristics.

Variable	*n*/ mean(SD)	Range
Age (years)	36.6 (13.0)	19–65
Population group		
Black	31	
White	12	
Indian	3	
Other	1	
Language		
English	27	
isiZulu	18	
Sesotho	1	
isiXhosa	1	
Education		
Some grade school	1	
Matric	6	
Some college	15	
Graduated college	11	
Some postgraduate education or more	5	
Did not report	6	
Employment status		
Unemployed	14	
Pensioner	2	
Employed	31	

Findings from this study show that participants adopted various strategies to cope with the COVID-19 pandemic and the ensued lockdown. Some participants had the ability to access or engage in multiple coping mechanisms while others were more constrained to one coping mechanism due to financial or familial situations. The qualitative responses around coping during COVID-19 were grouped into the following seven themes: interactions with family and friends; prayer and religion; staying active; financial support systems; mindset reframing; natural remedies; and following COVID-19 prevention protocols.

3.1 | Interactions with family and friends

Virtual interactions with family and friends on a regular basis were one of the most salient coping mechanisms that helped participants endure the pandemic and lockdown. These interactions provided the opportunity for

participants to keep each other company, check-in with each other, and vent. One female participant expressed, *"We've got family chat groups with all my sisters so we're on it all the time. We even have different groups – we've got the recipe group for the four of us, we've got a news group, and then one just for family talks."* Another 28-year-old woman mentions a similar situation, *"I think also, what definitely helped was having, you know, consistent, or regular scheduled video chats with my family and my friends."*

For some participants, the lockdown provided an opportunity to improve their relationships with family and friends as they made more efforts to interact with each other. Some participants mentioned that this would not have been possible if the lockdown had not occurred. A 28-year-old White male mentioned, *"Doing things like Zoom quizzes with friends back home was really nice and something that we were only doing because everyone was on lockdown. So my actual contact with people back home probably increased as a result of the lockdown."* Participants who were regularly interacting with their family and friends mentioned that they made more conscious efforts to keep in constant communication with others at the beginning of the lockdown, but that these efforts became sparse as the lockdown continued. One participant mentioned, *"[check-ins] used to be every day, then it went to three times a week and now it's twice a week, and everyone just calls in just to see other people's faces and chat about anything."* Similarly, another participant mentioned that family overseas started contacting her more than usual at the start of the pandemic, but later on, they did not contact her as often. Participants did not provide any reasons as to why interactions became sparse.

Participants who did not live with family or who had to be in isolation, were sometimes able to stay in regular communication with others through phone calls, virtual meetings, group chats, or social media. This is exemplified with one participant, who during isolation was able to cope due to his strong social support structure; for example, he could communicate over video calls with his family, friends and work colleagues. This was helpful as he never felt completely alone when isolating in his bedroom. He mentioned, *"We've got a very close family so there was constant contact, video calls, zoom calls with family throughout the time, as well as conversations with friends, and my girlfriend, [who] was supportive through most of it considering we couldn't see each other through the lockdown."* Furthermore, for participants in isolation, having family support also provided them with material goods as shown by a 31-year-old woman and mother of three children, who mentioned that her brother brought her groceries during her two weeks of self-isolation.

3.2 | Financial support systems

Access to financial support systems was an important asset that participants mentioned made it manageable for them to persist throughout the pandemic and lockdown. While some participants mentioned that they were financially constraints as a result of the pandemic, other participants were able to remain financially stable by either keeping their jobs, relying on the income of family members, or receiving a stipend. This is exemplified by the following participant who had not been paid by their employer, but was able to rely on their partner's income, *"There's still no payment but because it's the two of us, and I only have one child in school, it hasn't been as terrible as if I was alone carrying the bills."* Another young Black South African woman shared that she was unable to find a job during the pandemic and had to rely on her mother's income, *"Yeah at home we have my mom who is the breadwinner, she buys food and makes sure it's there."*

Having access to financial resources and support allowed many participants to cover basic needs and for a number of participants it further facilitated the ability to engage in other coping strategies. A participant provided insight into how having access to enough financial resources allowed her, a married woman and mother of two children, to still have domestic help, *"My helper is locked down with me, so I don't have to clean my house. I mean can you imagine? I would not."* That same participant demonstrated how having access to financial resources additionally facilitated access to phone and internet services which were then used to engage with other coping mechanisms such as maintaining contact with family and friends through phone or online, *"We have internet, unlimited internet, we had a spare laptop my son could use for homeschool. You know, those little things you take for granted."*

For participants who expressed going through financial hardships, it was noticeable that many of them relied on multiple sources of income from themselves and other family members or friends in order to meet all their financial needs. For instance, a participant mentioned that the money they received from the government was not enough, *"The three hundred and fifty (Rand) is not enough. Think about it, even if you buy the generics, the basic inhouse brands. There is no way with three fifty, because you still need to buy food."* This participant was able to rely on friends, *"For me, the greatest thing was that I could ask my friends for whatever I needed."* Another example of combining financial resources is from a 35-year-old Black South African man who stated that he was able to make ends meet by combining a stipend he received, his wife's income, and financial help from his friends and family.

3.3 | Prayer and religion

Another major coping mechanism that participants mentioned, particularly women, was prayer and religious involvement with churches. For some participants it was comforting to have their religious beliefs (i.e., God is in control; life and death comes from God) amidst the uncertainty as a way to cope. This is exemplified in the interview of a 32-year-old Black South African woman who expressed she relied on her faith for comfort, through prayer and reading the Bible. Another 41-year-old participant expressed, *"I like listening to Pastors and reading the Bible. I tell myself one day it will be fine. My brain is strong. I remember that God is there. I hold onto this side."* In parallel, another interview of a 23-year-old Black South African woman also demonstrated the important role of faith as a coping mechanism, which reminded her that even though she was facing difficult situations, she could count on her faith. For other participants, faith provided solace in the midst of possible death. This is exemplified in the interview of a 60-year-old woman, who when asked about the future, expressed that, *"Life and death comes from God."*

Moreover, as participants had to make day-to-day decisions to deal with the demands and obstacles presented by the pandemic and lockdown, some expressed that their decisions were informed in part by their religious beliefs. This is shown in the following interview of a 46-year-old family physician who mentioned that God helps her to make the proper decision for any situation. Likewise, for some participants, faith gave them the ability to remain hopeful, as expressed by a female participant, *"I was under a lot of stress but then I always encouraged myself in the Lord and I gained strength in the fact that He lives and He will not leave me no matter what is happening around the world but I must stay positive and I must know that He still have plans with my life so I did not allow the situation to press me down or to think that there is no hope."* Faith was also helpful for participants who expressed that they were not completely confident in their faith or who did not engage deeply with organized religion, as shown in the interview of a 41-year-old Black South African woman, *"It's better when you have hope in something even though we are not sure. We don't know God. We have never seen him. I think it's self-counseling. Something like that but it helps."*

Despite not being able to engage in religious practices in-person at places of prayer or worship, religious involvement for some participants took place through group chats, online classes, and prayer videos. These forms of online religious participation facilitated the communication between practicing members and provided new insights and ways of being in community as people navigated the pandemic. This is shown in the interview of a woman who mentioned that faith has helped her through the pandemic, particularly through online classes in which they discussed different outlooks on the pandemic with a more spiritual outlook.

Another key component of religious involvement was that in some instances it also provided material resources for people. Some participants revealed that they were able to receive food, financial, and other types of resources through church groups. This is illustrated in the interview of a woman who received food parcels from a local church, *"The church supported us a lot with food during the lockdown, we applied and they gave us food every month so things were fine."* Similarly, another participant mentioned that Jewish organizations were able to provide financial aid for some people.

3.4 | Staying active

As the lives of many participants were disrupted by the pandemic and the lockdown, staying active and developing a consistent schedule was a useful coping strategy for some. This is expressed in the interview of a woman who mentioned that having a set schedule and exercising helped her. Participants also expressed that they engaged in a variety of activities (i.e., reading, exercising) that kept them occupied throughout the shutdown. Some of the activities that participants mentioned had been in place prior to the pandemic and needed to be done as a part of their daily routines. However, even some of the activities that predated the lockdown had to be adjusted as a result of the pandemic. This is expressed in the interview summary of a mother who had to adapt to online teaching, *"I'm doing online lectures, I actually started enjoying them because I started learning new ways of doing things, so the adaptation process to everything actually was a whole different way of looking at things."*

Numerous participants also mentioned that they started to engage with new activities to cope with the COVID lockdown. Examples of these activities included exercising, gardening, baking, and reading. This is shown in the following interview of a woman, *"I really embraced painting. I never really had time for the last couple of years because I was so busy studying and working. But I've embraced it again now and I really have just, that's a good thing that came out of the lockdown. I really enjoyed painting. It kept my mind off things, and it made me feel so much better... and also reading, I love reading so I read a lot of books."* Similarly, another woman mentioned, *"I baked a lot and got really into our baking as well. We also enjoy cooking. And, yeah, like we've done that quite a bit, and like, just like making food in general. Yeah, I think*

that has been the thing that kept me most sane." Another popular activity that was mentioned by many participants was exercise, as participants mentioned it helped them relax.

3.5 | Mindset reframing

Some participants mentioned that the ability to shift or reframe their thoughts was a helpful strategy to cope with the pandemic and lockdown. Several examples of the efforts that participants mentioned included striving to count their blessings, remaining optimistic, and communicating with others about their needs. An example of these efforts is illustrated in the following interview of a young man, *"I started meditating probably more towards the end of my quarantine."* Similarly, another 29-year-old woman mentioned, *"mindfulness became something that I needed to do for myself like a lot more and since that time it's definitely been a practice that I've needed to rely on for my own self-care a lot more."* Another interview indicates how important it was for participants to reframe their thoughts and to remain open to the new situations they were facing, *"I think it's been more like a coping, adapting mindset. Where I had to sit back and think, 'you know if I'm not gonna help myself and sort this out, then no one is going to come."*

For other participants it was also critical to reframe how they dealt with the pandemic, as indicated in the interview of a 65-year-old woman, *"Well, I have a very strong mind, so I reason things out and as soon as we found out about the pandemic I realized, there's not much you can do about that. I have accepted it and I take it day by day."* Some participants expressed that they had the opportunity to engage in mediation, attend therapy, and give themselves a break from work instead of pressuring themselves to remain constantly productive. A participant mentioned that she used mental health exercises to deal with her anxiety. It was also mentioned by some participants that it was helpful to not spend too much time ruminating about the pandemic or the future and to just learn to live with COVID. For example, an interview illustrates, *"I think Covid has definitely been a big test on like why it's not helpful to not focus a lot of attention on the future, um I think often very much stuck in like should and shouldn't and should've, those kinds of patterns of thinking, which at least now I can catch myself doing and try to do less of like being more in the present um but ya the apps have been incredible helpful in managing that."* Another 25-year-old woman mentioned that thinking too much was not always helpful and that instead of ruminating, she decided to talk about her problems.

3.6 | Natural remedies

Several participants mentioned that they had natural remedies or practices that they believed would help them and their families stay safe from contracting COVID. For some participants these practices included changing their diets to eat what they considered to be a healthier diet and taking vitamins. For others it was adding a daily drink to help strengthen their immune system that included some of the following ingredients: ginger, lemon, and cayenne pepper. An example of these remedies is illustrated in the interview of a 41-year-old Black South African woman who, when asked about how she copes with Covid, mentioned *"Prayer and all the things they tell us to drink like umhlonyane (African wormwood) which is now being sold but to express to obtain. Home remedies, lemon, garlic and ginger. We boil and drink, you see."* Similarly, a 39-year-old woman mentioned that she drank vitamin C, D and E with ginger, lemon, garlic and cayenne pepper to stay healthy and keep Covid away. Other participants expressed that they would use these practices specifically for elders within their families. A participant shared that she would keep her mother indoors, and give her warm water with garlic, cayenne pepper, honey, ginger and lemon and had recently started adding umhlonyane and boiled marijuana. Staying warm was an important component of natural remedies mentioned by various participants; this was with the purpose of killing the coronavirus.

3.7 | Following COVID-19 prevention protocols

As information on how to prevent exposure to COVID became available, many participants expressed that following such protocols was something that helped them feel like they were doing everything within their control to stay safe. For instance, the interview of a 30-year-old woman states, *"I am protecting myself in all ways possible so that I won't get infected. I wear a mask so that I won't get infected by this virus."* Similarly, another interview illustrated how a 28-year-old man and his girlfriend both followed prevention protocols as much as possible, *"I do everything right. I wash my hands all the time. I sanitize my hands. I'm taking all of the precautions to minimize the risk of getting [COVID-19]."*

As some participants were able to stay home and prevent exposure to COVID-19, there were participants who mentioned that they had to continue interacting with people outside of their immediate household regularly as a part of their job and thereby were constantly at risk of being exposed to the coronavirus. This was a particularly

precarious situation for participants vulnerable to COVID-19. For these participants, following preventative protocols seemed the only way to stay safe, as expressed in the interview of an older participant, who mentioned she had heart problems and worked at a hospital, *"I know anything can still happen, but we are extremely strict with our measures in order to make sure that everyone is as safe as possible. We all diligently spray our hands, wash our hands, these things we reinforce constantly."*

Several participants, who also had to work outside of their homes, mentioned that there were changes at their work sites in response to the pandemic. For example, a participant mentioned *"After the lockdown, we only treat someone who comes alone or two. But when they come we prepare water and soap so that they wash their hands, after washing their hands, we sanitize them, and take masks and wear them closing our nose and mouth."* For some participants these changes provided the opportunity to feel like they were doing everything possible to stay safe, as expressed in the following interview, *"We are wearing masks, we are following [protocols]. If we get infected, we will do so while following the regulations."*

4 | DISCUSSION

Findings from this study show that participants engaged in a variety of coping strategies to overcome the physical, economic, and psychosocial stressors of the pandemic and subsequent lockdown. These included interactions with family and friends, prayer and religion, staying active, financial resources, mindset reframing, remedies, and following COVID-19 prevention protocols. Some participants were able to use multiple coping mechanisms depending on their financial resources and familial support.

Our findings corroborate recent findings on experiences of coping among South African adults. For example, research among nurses, musicians, and undergraduate students has likewise reported that interacting with others, including family and friends, either in person or virtually is a key coping strategy (Eloff, 2021; Engelbrecht et al., 2021; van der Merwe et al., 2021; Visser & Law-van Wyk, 2021). Data from our study contribute to the literature by exploring how communication with family and friends changed throughout the pandemic. Particularly, it was noticeable that virtual forms of communication were more frequent at the start of the pandemic but that they tended to dwindle down as the pandemic went by. It is unclear why communication with family and friends decreased over time and what may be the implication of this decrease, but it may be that it this coping mechanism may lead to burn-out if prolonged or it may not be sustainable after a certain period of time.

Religion and spirituality are coping mechanisms that have been previously reported in the literature as strategies that allowed people to deal with feelings of desperation during lockdown (Eloff, 2021; Engelbrecht et al., 2021). Our findings concur with these earlier studies and demonstrate that even for people who may not be completely sure about their faith or fully involved in organized religion, faith and spirituality provide a sense of comfort during times of uncertainty. Additionally, it is also noteworthy that even though churches were closed for in-person gatherings, people found ways to participate, form community virtually, and provide or receive financial resources, similar to how participants mentioned that they stayed in contact with family and friends virtually and also received or provided financial resources. However, there was no information to examine if the virtual interactions through organized religion were also more frequent during the start of the lockdown and diminished as time progressed. Prior to the COVID-19 pandemic, research from South Africa had also reported religious support as an important factor that contributed to resilience among cancer patients (Kim et al., 2019). Yet this type of support, used to take place in physical meetings and fellowships. It is unclear if religious coping through online platforms differed or had the same impact as before the COVID-19 pandemic.

In terms of staying active, our data are similar to previous research that the lockdown provided an opportunity for some participants to engage in new activities (Eloff, 2021; Engelbrecht et al., 2021). The opportunity to engage in new activities was more noticeable among participants who were not affected financially by the pandemic. Therefore, access to financial resources was an important factor to be able to engage in other coping mechanisms. For example, numerous participants shared that financial resources were important to access the internet and be able to stay in communication with others. It was also noticeable that participants who reported that their employment or income had not been affected by the pandemic were not as worried about the future compared to participants who depended on the income and financial help of others.

Our findings add to the literature by identifying the use of local natural remedies as a coping mechanism within the context of South Africa. While there is not much literature reporting the use of local remedies explicitly as a coping mechanism, there is previous research addressing the use of self-medication using herbal remedies during the COVID-19 pandemic. Similar to our research, another study also documented the increased consumption of ginger, lemon, and other foods and drinks that are considered healthy and usually used to treat respiratory diseases, in response to the COVID-19

pandemic (Pieroni et al., 2020). The use of local natural remedies may be important beyond the COVID-19 pandemic, as previous research to COVID-19 from South Africa also reported that local natural or church remedies played an important role in relation to healing practices and other well-being behaviors (Bosire et al., 2022). For example, other research in South Africa has documented the use of natural remedies and traditional medicine to treat HIV/AIDS, particularly in circumstances when effective therapies are not available (Audet et al., 2017). Others have suggested that the use of local remedies needs to be investigated further as this may be related to the lack of access to healthcare services and might also inadvertently lead to adverse health effects (Anjorin et al., 2021; Malik et al., 2020).

The present study adds to the growing literature in human biology that uses ethnographic and qualitative approaches to obtain a more complete understanding of the factors that impact human health. Past biocultural researchers have called attention to the increasing reliance on quantifiable data within the field of human biology in an attempt to appear as a more objective science (Blakey, 1987; Nelson, 2019). Instead, researchers within the subfield, propose that we also give greater attention to examine experiential questions using qualitative, descriptive methods and to account for social and political economic contexts that shape health and well-being (Blakey, 2021; Hoke & Schell, 2020; Nelson, 2021b). For instance, Andrea Wiley (2004) has described the use of "ethnographic human biology" to understand the interaction between ecological challenges and cultural factors in her research on infant health in India. Nelson (2016) used ethnographic and quantitative data to examine the role of residential contexts in Jamaica and their association to child growth. Similarly, Hoke & McCabe (2021) have used the framework of syndemics and ethnographic data to investigate the associations between economic marginalization and infant growth and health in Peru. These studies highlight the importance of using ethnographic data to have a more nuanced understanding of the experiences of people and the factors that may impact their health and biology. Our study contributes to this literature by identifying and describing the coping mechanisms people have used throughout the COVID-19 pandemic as a start to further examine how these coping strategies may be related to health outcomes.

5 | LIMITATIONS

A limitation of the present study is that it used convenience and snowball sampling techniques. Therefore, these results may not be representative of the South African general population. This study was unable to include people with cognitive disabilities, active substance use, or other conditions that impaired the individual from comprehending the study components and/or providing informed consent. As such, people with these characteristics may have different coping mechanisms from the ones described in this study. Another limitation of this study is that it did not include information on participant's comorbidities which may impact the way people are impacted by COVID and how they cope with it, as previous research has indicated that people with comorbidities experience higher levels of stress (Elsayed et al., 2022). Lastly, data collection was done telephonically, which did not allow to capture non-verbal cues that may have been observed during a face-to-face interview. Despites these limitations, the present study provides descriptive information of the coping mechanisms that people in South Africa used during the COVID-19 pandemic.

6 | CONCLUSION

Despite the multiple stressors people in South Africa faced during the pandemic and lockdown, they were resourceful and able to develop multiple coping strategies. We identified seven major coping mechanisms that participants utilized to cope during the pandemic: interactions with family and friends, prayer and religion, staying active, financial resources, mindset reframing, natural remedies, and following COVID-19 prevention protocols. These strategies were mainly impacted by access to economic resources and family support. Further research is needed to examine the potential impacts of the identified coping strategies on individual mental and physical health outcomes and the adoption of such strategies to their daily lifestyles.

AUTHOR CONTRIBUTIONS

Andrew Wooyoung Kim conceived the study, acquired funding, and implemented the study. Andrew Wooyoung Kim, Nokubonga Ndaba, Lindile Cele, and Someleze Swana conducted data collection. Edna Bosire, Aneesa Moolla, and Andrew Wooyoung Kim conducted qualitative coding. NPR drafted the original manuscript. Andrew Wooyoung Kim, Nokubonga Ndaba, Lindile Cele, Someleze Swana, Edna Bosire, and Aneesa Moolla edited the manuscript for intellectual content.

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CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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