

Health maintenance and wellness of older adults with non-communicable diseases during COVID-19 restrictions: Goal 3

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Background. The COVID-19 pandemic preventive measures were implemented to curb coronavirus transmission but also impacted the risks and mortality associated with non-communicable diseases (NCDs). Older adults, who are particularly vulnerable, have been especially affected, yet there is limited research on how to maintain their health and wellness.

Objectives. To explore the impact of COVID-19 restrictions on the health maintenance and wellness of older adults with NCDs in the Western Cape Province, South Africa.

Methods: An exploratory-descriptive qualitative design was used, involving WhatsApp phone calls and nine semi-structured interviews that were audio-recorded, transcribed verbatim and thematically analysed.

Results. The data revealed two themes: COVID-19-induced health inequalities among older adults and their efforts toward a growth mindset. The findings indicate that the violation of human dignity among older adults with NCDs was exacerbated by limited access to healthcare facilities and fears of infection. However, their willingness to adapt enabled them to make necessary adjustments.

Conclusion. The disruption of healthcare services impacted the health maintenance and wellness of older adults with NCDs, prompting them to rely on both their internal and external capacities to strengthen their growth mindset and resilience. This highlights the need for disaster-resilient, people-centred primary health care and universal health coverage for older adults with NCDs.

Keywords. COVID-19, non-communicable diseases, older adults, health maintenance, wellness.

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Gene Dunn, Ashlin Hendricks, Shaiz Khan, Sylvia Kweza, Lebo Mailula, Ivive Meyi, Thabisile Mzelemu are occupational therapists working in the South African Public hospitals. They graduated with BSc Occupational Therapy from the University of the Western Cape in 2021. As part of the undergraduate research course, they showed interest in research focusing on the health maintenance and wellness of older adults living with non-communicable diseases.

The emergence of the COVID-19 pandemic has heightened the need to understand its unprecedented impact on the health maintenance and wellness of older adults with non-communicable diseases (NCDs), such as cardiovascular, cancer, chronic respiratory disease and diabetes.^[1] These NCDs cause 41 million deaths worldwide and account for over 86% of all premature deaths in low-and middle-income countries.^[1] In South Africa (SA), NCDs are perceived as significant threats, contributing to the burden of disease, with a 58.7% increase in mortality from 1997 to 2018.^[2,3] Several studies have reported that older individuals and those with pre-existing NCDs were at a higher risk of contracting the coronavirus, with poorer prognoses.^[3,4] In the Western Cape Province, the proportion of premature deaths among older adults with NCDs, including cardiovascular disease, cancers, type 2 diabetes and hypertension, increased by 14% owing to the COVID-19 pandemic.^[3]

The COVID-19 pandemic garnered significant attention within public health systems because it disrupts primary health care (PHC) service delivery and access to routine health and NCD services in SA.^[4,5] The pandemic's most debilitating impacts interrupted people-centred PHC, universal health coverage, rehabilitation, disability services and the hospitalisation of older adults with NCDs.^[6,7] Additionally, the effects of the coronavirus were further exacerbated by the implementation of COVID-19 restrictions, such as social distancing, lockdowns and confinements, which disrupted NCD services and care.^[6-8] These restrictions resulted in limited access to medications and mental health services and increased premature mortality, resulting in worsened clinical outcomes for people with NCDs.^[7,8] The COVID-19 restrictions were implemented to limit movement and reduce coronavirus transmission among individuals, families, communities, patients and healthcare workers.^[9-13] However, these restrictions also acted as barriers to accessing health services, triggering high levels of anxiety among older adults with NCDs and negatively affecting their health and wellness.^[14] Anxiety, as a mental health condition, can lead to increased morning systolic blood pressure, poor medication adherence and a heightened risk of cardiovascular events, further compromising the health of older adults with NCDs.^[11,12]

Older adults with NCDs faced adversities during the COVID-19 pandemic, partly because of their exclusion from the WHO STEPS surveys, which typically do not include individuals over the age of 64.^[6]

This exclusion resulted in a lack of data on NCD services for older adults, complicating efforts to address their health maintenance and wellness needs in African countries.^[6] The debate surrounding the health and wellness of older adults with NCDs has gained renewed attention, with many arguing that this population is susceptible to COVID-19. Despite this, the issue has received insufficient focus to date.^[6]

The wellness model serves as a theoretical framework for behavioural changes and personal harmony.^[14,15] Wellness is defined as an 'active process of becoming aware of and making a choice that influences quality-of-life outcomes as well as successful existence'.^[16:p66] It encompasses eight mutually interdependent dimensions: emotional, environmental, financial, intellectual, occupational, physical, social and spiritual.^[15] These dimensions are used to promote good health, well-being and holistic care, particularly for addressing the needs of older adults during the COVID-19 pandemic. Older adults with NCDs may be in a precarious situation owing to disruptions in wellness, pandemic-related mental health challenges, depression, stress, forced isolation, lack of financial support and food insecurity.^[14,17] Engaging in self-care activities for these individuals to cope with these challenges and support their health maintenance and wellness.^[14,18] However, research focusing on the importance of health maintenance and wellness for older adults with NCDs in the SA context remains limited.

Exposure to the COVID-19 pandemic adversely affected not only mental health but also physical health, functioning and management of uncontrolled type-2 diabetes.^[19] Individuals with uncontrolled diabetes faced a higher likelihood of COVID-19 infection and mortality in the Western Cape Province, SA.^[19] Consequently, older adults with NCDs became more vulnerable to COVID-19-related illnesses and deaths because of disruptions in NCD prevention and management services caused by the pandemic restrictions.^[15] The situation highlights the need for the Department of Health to prioritise Goal 3 (Good health and well-being) of the Agenda 2030 Sustainable Development (SDG) to reduce premature mortality among older adults during the pandemic. It is essential to monitor the health and wellness of older adults with NCDs to address the impacts of COVID-19 and minimise gaps in geriatric care.^[3,20] The research question was: What are the influences of the COVID-19 restrictions on the health maintenance and wellness of older adults with NCDs? This study aimed to explore the influences of COVID-19 restrictions on the health maintenance and wellness of older adults with NCDs. It is envisaged that insight gained from this study could contribute to innovative strategies that can strengthen NCD management policies and enhance older adults' health and wellness.

Methods

This exploratory-descriptive, qualitative, interpretative research was conducted to gain a deeper understanding of the impact of COVID-19 restrictions on the wellness of older adults with NCDs

For this study, we aimed to recruit 15 older adults with NCDs in 2021, while the COVID-19 restrictions were still in effect. Ultimately, a smaller sample of nine participants was recruited to foster meaningful and sustained relationships, in line with qualitative research practices for small samples (<20).^[21] This strategy enabled the researchers to comply with pandemic-related laws and prevent transmission. Participants were recruited through virtual platforms such as WhatsApp and Google Meets,

where the purpose of the study was explained via an information sheet, and consent was obtained. The participants, representing a vulnerable population with various NCDs, were selected owing to their heightened risk during the COVID-19 pandemic.

A purposive sampling method was used to select participants who met the inclusion criteria.^[22] The study included male and female participants aged 64 and older who were willing to participate and fluent in English, Afrikaans and isiXhosa. Semi-structured interviews ($n=9$) were conducted using an interview guide via phone calls on the social media platform WhatsApp, aligning with the COVID-19 restrictions and minimising physical contact. The interview guide covered demographic information and open-ended questions about participants' beliefs, faith, values, health and wellness activities, access to health emergencies, medication, South African Social Services Agency (SASSA) support, public health services and adjustments implemented during the COVID-19 pandemic. The interviews lasted for 20 - 60 minutes and were audio-recorded, transcribed verbatim and analysed through reflexive thematic analysis (i.e., familiarisation, coding, searching of themes, reviewing, defining and naming and report writing).^[23] Trustworthiness plays a critical role in maintaining the validity of qualitative research and is addressed through credibility, transferability, dependability and confirmability.^[24] An independent reviewer cross-checked the audio recordings and verbatim transcripts. Thick descriptions of the research settings and methodology of the study were provided to enhance transferability. Reflexivity was employed to allow authors to reflect on their motives, biases and other influences related to the research topic.

Ethical considerations

Ethical approval was granted by the Humanities and Social Sciences Research Ethics Committee (HSSREC) at the University of the Western Cape (Ethical clearance: HS21/5/25). Participants were informed that they could withdraw from the study at any time if they experienced discomfort, without facing any repercussions. The authors adhered to the POPI Act 2013 regulations to protect the study participants' identities.^[25] Anonymity was ensured by using alphanumeric codes for identification. Confidentiality was maintained throughout the study, and the collected information will be stored securely for 5 years with encrypted password protection.

Results and Discussion

Nine older adults living with NCDs participated in the study, with ages ranging from 65 - 92 years, and a mean age of 73.3 (standard deviation (SD) 8.6) years. The sample included six female and three male participants. Six of the participants reported using private healthcare and had various health conditions. All nine participants were from a middle-class socioeconomic background and lived with family (Table 1).

Presentation of themes and sub-themes

Two themes with sub-themes were identified during the thematic analysis and are presented and discussed with literature control (Table 2).

Theme 1: COVID-19-induced health inequalities among older adults with NCDs

The first theme addresses the health inequalities induced by the COVID-19 pandemic, which shifted PHC priorities between non-communicable and

Table 1. Participants’ demographic information

Participants (P)							
Number	Age, years 73.3 (8.6)*	sex	Health conditions	Health care	Education	Socioeconomic status	Living environment
1	80	Male	Vasculitis	Private	Grade 12 and bank training	Middle class	Lives with family
2	78	Female	Arrhythmia and rheumatoid arthritis	Private	Grade 12 and secretary course	Middle class	Lives with family
3	65	Female	Hypertension	Public	Grade 10	Middle class	Lives with family
4	74	Female	Hypertension, hypercholesterolemia, pacemaker	Private	Grade 12 and secretariat course post matric	Middle class	Lives with family
5	70	Male	Hypertension and diabetes	Private	Grade 12	Middle class	Lives with family
6	75	Female	Hypertension, diabetes and arthritis	Public	Grade 11	Middle class	Lives with family
7	92	Male	Hypertension and cholesterol	Private	Grade 8	Middle class	Lives with family
8	89	Female	Heart condition and bladder condition	Private	Grade 3	Middle class	Lives with family
9	73	Female	Arthritis	Public	Grade 12 and secretary course	Middle class	Lives with family

*Data is presented as mean (standard deviation).

Table 2. Themes and subthemes emerging from the interviews

Themes	Sub-themes
COVID-19-induced health inequalities among older adults with non-communicable diseases	<ol style="list-style-type: none"> Limited access to healthcare facilities Fear of infection
Older adults’ efforts towards a growth mindset	<ol style="list-style-type: none"> Acceptance of COVID-19 restrictions Technology as an adaptive strategy Spirituality fostered a growth mindset and hope Willingness to engage in healthy behaviours Risk reduction activities

communicable diseases. This theme comprised two sub-themes: limited access to healthcare facilities and fears of being infected by the coronavirus.

Sub-theme 1: Limited access to healthcare facilities

Participants who depended on the public healthcare system shared that service delivery and policies were geared toward the COVID-19 pandemic. They further noted that healthcare professionals prioritised the COVID-19 pandemic over NCDs and minor ailments. Consequently, those dependent on public healthcare facilities were hesitant to seek medical treatment, facing limited access owing to COVID-19 restrictions, in contrast to those using private healthcare:

‘Since lockdown started, they [health professionals] did not have the time to check us. Even now, if I go to the hospital coughing and they only want to test for COVID-19, they do not help us in any way rather than testing for COVID-19, as they only focus on it. Even if you have pain, they will say it’s COVID-19 symptoms. Meanwhile, you are in pain, and you can feel that you are not well. As I speak to you, my

blood glucose level is not right. They focus on it because they say it’s dangerous and they forget that when our diabetes or hypertension levels rise, we could die, do you see that?’ (P6, 75-year-old female)

‘I couldn’t go to the day hospital and I am just struggling to get my medication from the day hospitals, but I couldn’t go inside or speak to someone about it [medication]. So, that was a bit of a problem’. (P3, 65-year-old female)

The findings reveal that older adults with NCDs faced significant challenges in accessing healthcare through public health systems and grappled with access to medication because of the reduction of routine NCD management and outpatient visits. This observation corroborated previous work.^[3] When participants were asked about the possibilities of home delivery medication in their community, these were their responses:

‘They do try to deliver our medication, now they deliver our medication door to door according to our dates.’ (P6, 75-year-old female)

Despite the prioritisation of COVID-19 over NCDs during the pandemic, our findings, consistent with previous studies, reveal that older adults with NCDs benefited from using online pharmacy platforms to order medications. They were able to adhere to self-care routines with the support of both public and private health systems.^[26-28] Therefore, the findings suggest that prioritising appropriate systems, services and support for older adults with NCDs should be a key focus of people-centred PHC and universal health coverage policies, even while addressing communicable diseases. This strategy is important for strengthening pandemic-resilient public policy in PHC.

Sub-theme 2: Fear of infection

The COVID-19 restrictions exacerbated the participants' fear of infection, as evidenced by mental health challenges, social isolation and pandemic-related stressors. Additionally, participants with NCDs experienced ageism, which highlights prejudice and discrimination within health services.

'From my perspective, it changed my life. You know. You can't go where you want to, you know? In my mind, I will say, if I go there, what if I catch the germ? You become paranoid because of it. You're afraid to go places'. (P3, 65-year-old female)

'Upsetting for me not being able to visit them [*friends*] because they are weak, and I am scared now'. (P4, 74-year-old female)

The fear of infection among older adults with NCDs contributed to the restriction's impact by limiting their movements. This finding underscores the need for enhanced health literacy to mitigate the effect on their physical, emotional and mental health.^[28]

Theme 2: Older adults' efforts towards a growth mindset

This theme highlights the efforts that enabled older adults to experience a sense of personal growth through their growth mindset. Participants shared various efforts that fostered health behaviours and wellness, which are detailed in the following five sub-themes:

Sub-theme 1: Acceptance of the COVID-19 restrictions

It was evident from the participants' responses that their acceptance of the COVID-19 restrictions lessened the adverse effects of the preventive measures. This acceptance facilitated their intellectual wellness, enabling them to think critically, reason objectively and make responsible decisions. An intention to adapt was evident among participants, who found peace and acceptance in the restrictions. They also called for collaborative partnerships to address the pandemic crisis more effectively:

'I think that the people [*government and health professionals*] who implemented [*COVID-19 restriction*]. They know what they are doing... to keep people safe, so I feel that everyone must work together and do what they ask'. (P2, 78-year-old female)

'It [*COVID-19 restriction*] is that one should be accepting'. (P1, 80-year-old male)

The findings align with those of other studies that show older adults with NCDs eventually accepted restrictions on their freedom of movement and access to healthcare.^[3,13] This acceptance may be attributed to an understanding of the government's aim to reduce infection transmission, lessen the severity of the disease, minimise mortality and protect the health system and health personnel.^[28,29]

Sub-theme 2: Technology as an adaptive strategy

Appropriate technology is a key pillar of PHC that enhances participants' wellness and adaptive capacity. For example, participants used technology to place orders for their NCD medications via email, which helped them cope with COVID-19 restrictions.

'We are in a luckier position and the pharmacist could deliver our stuff. I sent an email, and they would deliver our things [*NCDs' medication*] at home'. (P1, 80-year-old male)

Several participants decided to buy glucose and blood pressure machines to monitor the vital signs of the NCDs. This is supported by a comment from one of the participants who mentioned the high cost of these machines.

'It was expensive, I bought myself the machine to check my diabetes and hypertension because we don't get the care that we need because of COVID-19'. (P6, 75-year-old female)

The findings highlight that a 'strength of the healthcare system's ability to provide supportive methods for chronic illnesses in various forms, including telemedicine and telepharmacy' should be buttressed.^[18p7] However, these findings should be interpreted with caution, as not everyone has access to technology and telemedicine. Hence, many older adults prefer in-person interactions.^[30]

Participants opted to use automated teller machines (ATMs) to withdraw their pension money, minimising the risk of coronavirus transmission. This promoted their financial wellness and resilience.

'Old age pension under normal circumstances needs to be collected either from one of the retailers but they have given us the option to withdraw the money from an ATM. Since COVID-19 we have stopped going to the supermarket to collect the pension'. (P9, 73-year-old female)

Sub-theme 3: Spirituality fostered a growth mindset and hope

Participants felt that spirituality provided them with meaning, purpose and strength, sustaining their lives. Concerning emotional and spiritual wellness, most participants expressed that they engaged in prayer to achieve a sense of peace and stability:

'It [*spirituality*] gave me strength. You know, especially when I feel so fearful. Knowing that I can speak to God and ask him to give me strength through the time. When we went into lockdown everything was closed which did affect me so being prayerful gave me the strength to go on. Otherwise, I probably would have not made it through this COVID-19 without prayer'. (P3, 65-year-old female)

'It made me stronger. I needed that faith during COVID-19. To keep me strong ... yes, I would say mentally strong'. (P9, 73-year-old female)

Participants' intellectual and spiritual wellness was rejuvenated because they expanded their knowledge about God through engaging in spiritual activities with their family and fellow members on the Zoom platform:

'Yes, it is important to me and my family. We do regular worship where we attend meetings with fellow members twice a week on Zoom in a week and there we get spiritually fed by the Organisation which brings us closer to Jehovah. And we do the ministry, following the service arrangement'. (P7, 92-year-old male)

Sub-theme 4: Willingness to engage in healthy behaviours

Despite the indisputable negative impacts of COVID-19 restrictions, participants demonstrated a positive mindset and willingness to persevere.

They established a sense of normalcy by developing routines that involved healthy habits such as regular exercises, which reinforced their emotional and physical wellness through adaptive practices.

'I did not have a problem with adapting to the situation. It [COVID-19] is a new norm, and you must understand'. (P1, 80-year-old male)

'It [COVID-19 restriction] helped me. You feel it if you do this early in the morning and sometimes in the late afternoon. I felt that instead of just sitting helpless and your work for the day was done, we did exercises at home'. (P4, 74-year-old female)

Fabio *et al.*^[30] reported similar findings to the present study, noting that healthy older adults demonstrated a positive relationship between their beliefs about intelligence and their willingness to adhere to healthy behaviours, allowing them to manage their daily tasks with ease.

Sub-theme 5: Risk-reduction activities

Based on the participants' responses, it is recommended that older adults receive additional support in the form of education and resources to prevent further isolation due to fear of infection. Participants demonstrated autonomy and agency to improve their quality of life by adopting safety precautions and engaging in self-care risk-reduction activities, such as maintaining cleanliness, consistently wearing masks and cash management. These actions fostered a growth mindset, enabling participants to navigate their lives amid the challenges of COVID-19.

'The adjustments that I had to make involved staying healthy at home. I had to see that everything was clean. I try not to interact with people other than just the household people. For me to stay healthy, that is the adjustment I had to do, just to be at home you know'. (P3, 65-year-old female)

'I always put my mask on and then wash my hands regularly as we are told that we must'. (P8, 89-year-old female)

The results showed that a growth mindset encouraged older adults to adopt healthy behaviours and risk-reduction activities, enhancing their health maintenance.^[30]

The COVID-19 pandemic also highlighted the financial instability among older adults. However, participants made efforts to use their pensions wisely, fostering financial resilience through multiple strategies, such as reducing trips, saving on petrol and skipping meals to mitigate financial challenges.

'We get a pension, so I can bridge the gap with the pension money. As a pensioner, there is a difference but not that much because the government cares about us as older people... I collect it [pension money] myself as I have said I do everything by myself'. (P6, 75-year-old female)

'I could not drive around as much and therefore you saved petrol... You don't have so many guests that come to help you eat so much anymore'. (P1, 80-year-old male)

'I don't need to buy a new jersey or something. I was more sparingly. I saved a bit more because I didn't go to the shops'. (P4, 74-year-old female)

These findings have implications for occupational therapy practice, research and policy. They can guide efforts to assist older adults with NCDs in addressing public health challenges related to mental health and wellbeing, particularly through collaboration with social protection services.^[31]

Conclusion

Returning to the initial question posed in this study, it is now evident that COVID-19 restrictions influenced the health maintenance and wellness of older adults with NCDs. The findings revealed that older adults' dignity was compromised by health inequalities stemming from limited access to care and fears of infection. However, the study also showed that their health maintenance and wellness were enhanced by their acceptance of restrictions, use of technology and strength gained from spiritual activities. These efforts empowered their growth mindset and adaptive capacities across emotional, environmental, financial, intellectual, occupational, physical, social and spiritual dimensions. The findings provide valuable insights for interprofessional teams looking to collaborate with community stakeholders to build disaster-resilient, people-centred PHC and universal health coverage for older adults with NCDs.

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Data availability statement. The datasets generated and analysed during the current study are available from the corresponding author upon reasonable request.

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