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“We don’t care because we are not sick”: understanding youths perceptions of hypertension in urban South Africa

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Abstract

Background The growing burden of cardiovascular disease (CVD) in Sub-Saharan Africa (SSA) is largely driven by hypertension, with risk factors including poor diet, physical inactivity, tobacco use, psychological stress, and limited healthcare access. Early-life exposure to these risks contributes to adverse biological markers that increase hypertension susceptibility in adulthood. This study aimed to explore how young people in Soweto, Johannesburg, perceive hypertension risk, using the Health Belief Model (HBM) to understand their beliefs, attitudes, and barriers to prevention.

Methods This study explored youth perceptions of hypertension in Soweto, Johannesburg, using focus group discussions (FGDs) with 62 participants aged 18–25, guided by the HBM. Thematic analysis was conducted to identify key beliefs, attitudes, and barriers to prevention.

Results Participants largely underestimated their hypertension risk, perceiving youth as a protective factor and associating the condition primarily with older adults or those already diagnosed. While some acknowledged genetic predisposition, stress, and lifestyle factors as contributors, many saw hypertension as low severity and distant from their immediate concerns. Barriers to preventative action included social norms, stigma, financial constraints, and limited access to health-promoting resources. External cues, such as family influence and community awareness, were stronger motivators for behaviour change than personal risk assessment, while self-efficacy in adopting preventive behaviours was low.

Conclusion Findings highlight a gap in youth awareness and engagement in hypertension prevention, driven by misperceptions of risk and limited access to enabling resources. Targeted interventions must address these misconceptions, enhance perceived severity, and leverage community and familial influences to promote early prevention and sustained behaviour change.

Keywords Hypertension, Cardiovascular disease, Youth perceptions, Soweto, South Africa, Health Belief Model, Preventative health strategies, Precision prevention, Public health

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Background

The burden of non-communicable diseases (NCDs) has steadily increased in Sub-Saharan Africa (SSA), with hypertension emerging as a significant driving force with prevalence rising from 25% in 2000 to 40% in 2022 in South Africa [1–3]. The development of hypertension is influenced by environmental and lifestyle factors that often begin in early life [4, 5]. Evidence suggests that blood pressure (BP) patterns established in childhood strongly predict future hypertension risk. A longitudinal study in South Africa found that one in three children with elevated BP at age five remained in higher BP categories at age 18⁶. Specifically, boys with BP above the 95th percentile at age five were 3.85 times more likely to be in the upper BP trajectory group by adolescence and 21.8 times more likely to remain in the middle BP trajectory. Similarly, girls with elevated BP at age five had an almost six-fold increased likelihood of being in the middle BP trajectory and a nearly seven-fold increased likelihood of remaining in the upper BP trajectory [6]. These findings highlight the importance of early life exposures, including growth, nutrition, and other modifiable behavioural factors, that shape long-term BP patterns, reinforcing the need for early, behaviour-focused prevention efforts targeting children and adolescents.

As young adults transition into adulthood, the personal, social and environmental changes they experience significantly influence lifestyle choices, often contributing to poor diets and rapid weight gain [7]. Adolescence, defined as the developmental stage from 10 to 25 years of age [8] is particularly critical for establishing lifelong health as lifestyle behaviours become entrained during this stage [9]. This is also a critical period for NCD prevention, as rapid biological changes (including hormonal fluctuations and metabolic shifts), interact with behavioural and environmental factors, such as poor diet, physical inactivity and stress [10]. Adolescence is also marked by increased autonomy in dietary and lifestyle choices, often accompanied by experimentation with risk behaviours such as smoking and excessive alcohol consumption, further compounding long-term health risks [9].

There is an urgent need to support youth in adopting and sustaining behaviours that offset hypertensive risk, setting them on healthier life trajectories [11]. Prevention efforts that prioritise early prevention can significantly reduce the long-term burden of chronic diseases by equipping young people with the knowledge and tools necessary for sustained health [12]. Precision prevention (PP), a targeted approach within the broader framework of precision medicine, strengthens these efforts by customising interventions based on a combination of factors including biological, environmental and social determinants of health [13, 14]. Unlike conventional

public health strategies that apply uniform interventions across populations, PP harnesses multi-dimensional data, including genetic pre-dispositions, behavioural patterns, and socioeconomic influences to tailor preventative measures to specific individuals or groups. PP may provide a useful framework in the development of youth-based interventions to minimise elevated blood pressure.

A key step in the development of youth-based interventions is understanding the social, cultural and environmental factors that shape adolescent health behaviours related to elevated blood pressure [15]. Given the multifaceted influences on health behaviours (ranging from economic and interpersonal factors to structural barriers) formative research helps tailor interventions to specific risk profiles [15]. Most qualitative studies on hypertension in South Africa have focused on adults, such as Sekome et al. [16] who examined how social and cultural factors influence hypertension control in rural South Africa. Their findings highlight the significant role of community perceptions, affordability of healthy food, and gendered expectations in shaping physical and dietary habits. Qualitative data on youth perceptions of hypertension in South Africa remain limited, indicating a critical need to better understand how young people perceive their risk and engage with prevention efforts.

This paper explores how young people in peri-urban South Africa perceive hypertension, its risk factors, and prevention strategies. By engaging directly with youth living in Soweto, this study aims to uncover the social, cultural, and structural factors that shape their understanding of hypertension and their perceptions of prevention. The findings will contribute to the development of contextually relevant PP strategies that resonate with young people's lived experiences, ultimately strengthening hypertension precision prevention efforts in peri-urban South African settings.

Methods

Study setting and participant recruitment

This qualitative study was conducted in Soweto, which is South Africa's largest urban-poor township of approximately 1.8 million people with a burgeoning non-communicable disease burden [17]. To identify eligible participants (living in Soweto and 18–25 years of age), we utilised an existing database generated through a household survey of over 18,000 randomly selected households from 30 community clusters across Soweto. The household survey collected demographic information and contact details, allowing us to identify people for further engagement, and subsequently, we purposively randomly selected 85 young people. These individuals were then contacted telephonically and invited to participate in a series of focus group discussions. Of those approached, 62 consented and participated in the study.

Focus groups were held at our research centre (South African Medical Research Council Developmental Pathways for Health Research Unit), located within the Chris Hani Baragwanath Academic Hospital precinct. Sessions were conducted on Saturdays to accommodate young people's availability and reduce conflict with work or academic commitments. The research centre was selected due to its centrality, accessibility via public transport, and the hospital is familiar to local residents, and offered a neutral, youth-friendly environment conducive to open dialogue. The environment enabled a balance between institutional credibility and informal, peer-level interaction, making it well-suited for exploring young people's knowledge, attitudes, and perceptions of hypertension and related risk factors in their everyday lives.

Data collection

While the primary language used during discussions was English, researchers were multilingual, allowing participants the option to express themselves in their home vernacular as necessary, fostering a more inclusive and comfortable environment. The 62 youth were organised into six gender-specific groups (three male and three female), each comprising approximately eight participants. Each group participated in a single day of data collection, which consisted of three successive focus group discussion (FGD) sessions. Although the broader project spanned three consecutive Saturdays to accommodate all groups, each participant only attended one Saturday session. The three FGDs on the day were structured to align with the current study's objectives. Session 1 focused on participants' awareness, concern, understanding, and perceptions of responsibility regarding NCDs, with specific attention to hypertension. Session 2 explored participants' beliefs about factors influencing the development of NCDs across various systems, including the household, neighbourhood, media, and government. Session 3 was focused on co-designing elements of an intervention based on the insights discussed. To support comfort and engagement, breaks with refreshments and lunch were provided between sessions. This structure allowed for in-depth exploration of the study objectives within a single day per participant.

The FGD session lasted approximately two hours, with participants taking part in three sessions on a single day. This amounted to a total of six hours of discussion per participant. A semi-structured FGD guide was used to facilitate the sessions, allowing a structured yet flexible approach to maintain focus on research objectives while providing participants the freedom to guide the conversation. Discussions took place in a private room at DPHRU, where participants were seated in a circular arrangement to promote open interaction. Separating groups by gender aimed to create a setting where

participants could feel comfortable sharing their views without inhibition [18]. Data was collected through both note-taking by the facilitator and audio recordings, for which participants had granted permission beforehand. These recordings were securely stored on password-protected computers and transcribed later for analysis. Refreshments were provided to participants at the conclusion of each session.

The Health Belief Model (HBM) provided a guiding framework for structuring the FGDs. The model's six domains: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy were used to generate discussion across the three FGDs for each group. FGD 1 focused on perceived susceptibility and severity, exploring participants' understanding of hypertension and their beliefs about who is at risk and how the disease affects daily life. FGD 2 examined perceived barriers and benefits, as well as cues to action, by investigating the role of various environmental and social determinants in shaping health behaviours. FGD 3 emphasised self-efficacy and the development of intervention strategies, exploring how individuals, families, communities, and institutions can work together to promote healthy behaviours. Appendices D, E and F outline the FGD schedules.

The HBM provides a valuable framework for formative research, as it demonstrates the cognitive and social factors influencing health behaviours [19]. By examining how youth in peri-urban South Africa perceive their susceptibility to hypertension, the severity of its consequences, and the benefits or barriers to prevention, the HBM helps identify gaps in awareness and key drivers of behaviour change. Integrating HBM insights into PP strategies allows for interventions that not only address individual risk factors but also align with youth motivations, social contexts, and structural challenges. This approach strengthens the relevance and impact of prevention efforts, ensuring that they resonate with young people and promote long-term health engagement [19].

The likelihood of engaging in preventative health behaviours for hypertension is shaped by the interaction of key constructs within the HBM (illustrated in Fig. 1). Perceived threat, derived from perceived susceptibility (belief in one's risk), and perceived severity (belief in the condition's consequences), influences motivation to act [20]. However, behaviour change also depends on whether perceived benefits of prevention outweigh perceived barriers, such as cost or accessibility [20]. Self-efficacy, or confidence in one's ability to adopt healthy behaviours, determines follow-through, while cues to action (including health messages, social influences, or symptoms) can trigger engagement [20]. By structuring the FGDs around these domains, this study ensures that discussions not only capture youth perceptions on

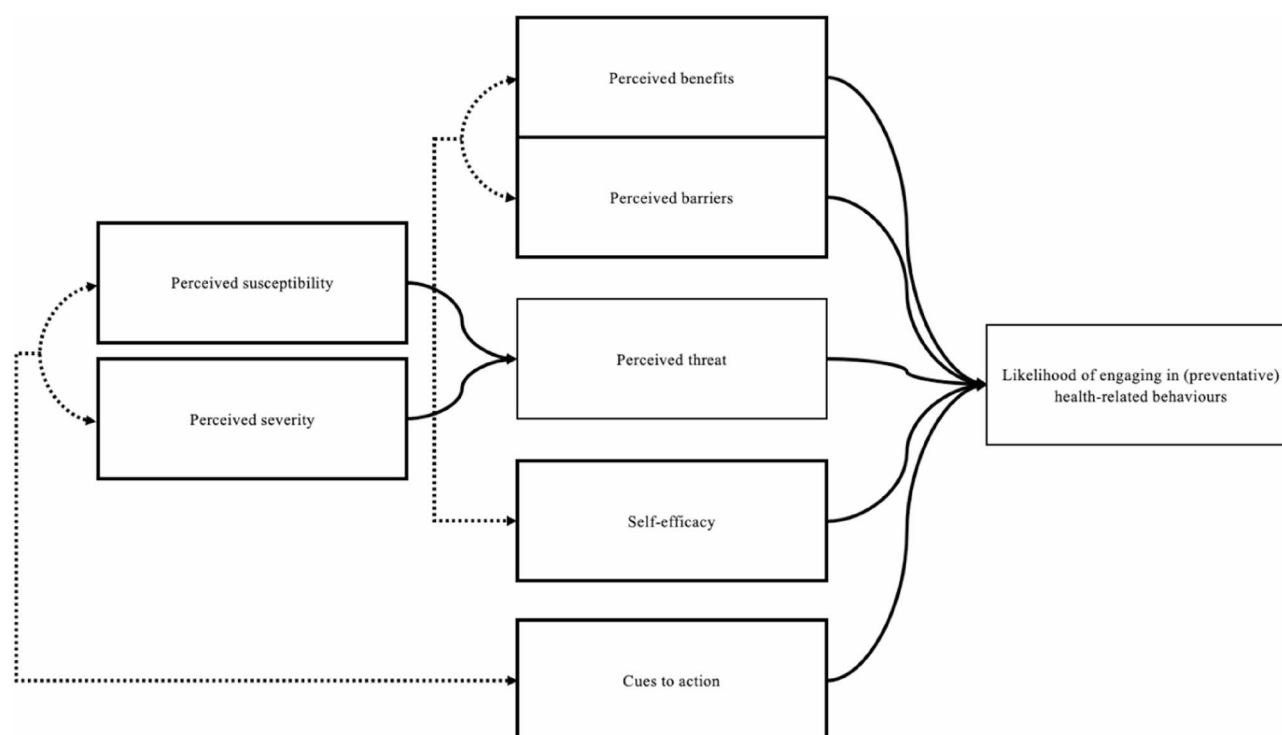


Fig. 1 Applying the HBM to formative PP research. *Dotted lines indicate interacting influences between domains, and solid lines indicate a direct relationship with likelihood of engaging in health-related behaviours

hypertension, but also inform targeted interventions that address both individual and contextual barriers to prevention.

Data analysis

All FGDs were audio-recorded, transcribed verbatim, and where necessary, translated. Data were analysed using a thematic approach guided by the constructs of the HBM: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. Findings were first analysed collectively across all focus groups to identify overarching patterns, before being organised into the thematic domains of the HBM. Data from male and female groups were examined both separately and together to identify gendered perspectives. Excel was used to manage and code the data systematically.

The analysis followed an iterative process, beginning with familiarisation, where all transcripts were reviewed in-depth to gain a comprehensive understanding of participants' perspectives. A deductive coding framework was initially developed based on the HBM constructs, while inductive coding allowed for the identification of emergent themes beyond the model. Codes were continuously refined through multiple rounds of review to ensure consistency and rigour. Thematic domains were constructed based on patterns that emerged across the full dataset, reflecting shared and divergent perspectives

among participants. Representative quotations were selected to illustrate key themes, providing depth and context to the findings.

Reflexivity was actively practiced throughout the study to identify and mitigate potential researcher bias. During data collection, each team member kept a reflexive journal to document personal assumptions, emotional responses, and moments of uncertainty. These notes supported critical reflection on how individual positionalities (such as training, gender, or cultural background) might shape facilitation and interpretation. Daily debriefing sessions allowed the team to reflect collectively on emerging themes, challenges, and potential biases, fostering mutual accountability. Where ambiguity arose, such as with local language or cultural references, team members drew on the expertise of local collaborators to ensure contextual accuracy. The team also remained aware of how the broader goal of informing youth-centered precision prevention strategies might influence engagement and analysis. To counter this, researchers interrogated whether interpretations stemmed from participants' narratives or from expectations of intervention relevance. These reflexive insights were captured in analytic memos and helped maintain a clear link between the data and findings.

Table 1 Perceived susceptibility

General perception of susceptibility	"Everyone is at risk of developing hypertension because it depends on diet" [Group 1, FGD 1]
Genetic and family risk	1. "It's not mostly older people, it's genetics" [Group 4, FGD 1] 2. "For me, like I said my mother has it and my grandmother also has it. I think that when I grow, I will also have it" [Group 3, FGD 1]
Stress as a contributing factor	"For instance if you are a breadwinner everything is on you. You must make sure that children go to school, there's food in the house. This might end up causing you stress and as a result hypertension" [Group 2, FGD 2]
Lifestyle and social modelling risks	"Society regard our family members as should be our role models. So you would think that the right thing to do is to consume alcohol which may lead you having hypertension" [Group 2, FGD 2]
Low perceived susceptibility due to youth	"When you are younger, you are still strong, meant to be a tool in a way" [Group 2, FGD 1]
Low perceived susceptibility due to intention to change behaviour	"It is not a threat per say because I am planning on stopping spicy and junk food" [Group 2, FGD 1]
Low perceived threat due to lack of symptoms or diagnosis	"We don't care because we are not sick and we don't get sick as much as the elderly, they care a lot" [Group 1, FGD 2]
Belief in personal resilience or immunity	"I am a soldier" [Group 6, FGD 2]

Table 2 Perceived severity

Perceived low severity due to lack of symptoms	"My grandmother was diagnosed but there are no symptoms, zero, nothing at all" [Group 3, FGD 1]
Perceived low severity due to limited exposure	"For me it is not a big deal because I have never experienced it around me" [Group 3, FGD 1]
Severity recognised only in extreme cases	"They don't take them seriously, someone has to be on the verge of dying then it will be taken seriously." [Group 5, FGD 2]
Perceived low severity due to belief in treatability or manageability	"If you do take treatment, it's not a threat to your, to your health" [Group 2, FGD 1]
Perceived low severity due to minimised impact on quality of life	"The only way I think it affects them is, sometimes she gets swelling feet, and she does not get cold very easily." [Group 2, FGD 1]
Perceived low severity due to youth as a protective factor	"We don't think that we as the youth can get it, we think it is only going to affect our grandmothers and grandfathers only" [Group 4, FGD 1]
Perceived low severity due to prioritising short-term gratification over risk	"We don't care what happens, as long as we get what we want, you understand" [Group 4, FGD 1]
Perceived high severity due to recognition of fatality or danger	"It is a silent killer" [Group 5, FGD 1]
Perceived high severity due to recognition of reduced quality of life	"I have seen people with high blood pressure and how affected they are" [Group 4, FGD 1]

Results

Sample characteristics

Sixty two youth participated in the FGDs. The mean age of participants was 20.8 years. Male participants ($n = 33$, 53%, $\bar{x} = 21$ years) and female participants ($n = 29$, 47%, $\bar{x} = 20.5$ years) were divided for the purposes of the FGDs. 57% ($n = 35$) of participants were enrolled in educational institutions at the time of participation. 34% ($n = 21$) of participants were enrolled in tertiary or higher education facilities, 18% ($n = 11$) of participants were either in Grade 12 or upgrading their Grade 12 results, and 5% ($n = 3$) of participants were still in high school. 34% ($n = 21$) of participants were unemployed, and 10% ($n = 6$) of participants were employed at the time of participation.

Perceived susceptibility

Participants demonstrated varying perceptions of their susceptibility to hypertension. Many recognised themselves as vulnerable due to factors such as family history, genetics, stress and lifestyle choices. Female participants particularly highlighted familial risk and personal vulnerability, while male participants focused more on the influence of unhealthy family behaviours. Conversely, a smaller group expressed low perceived susceptibility, often citing their youth, current healthy behaviours or

belief in personal resilience as protective factors (Table 1).

Perceived severity

Perceptions of the severity of hypertension varied among participants, with many downplaying its seriousness. Female participants often questioned its legitimacy due to a lack of visible symptoms or personal exposure, while male participants tended to perceive it as manageable or non-threatening if treated. Both genders highlighted youth as a protective factor and expressed attitudes of invincibility. However, a minority did perceive hypertension as severe, citing its potentially fatal consequences and observable impact on others' quality of life (Table 2).

Perceived benefits

Participants across focus groups generally acknowledged the value of adopting healthier behaviours to prevent or manage hypertension. Commonly recognised benefits included medication adherence, maintaining a healthy diet, and engaging in physical activity. Gendered differences emerged in how these benefits were interpreted or acted upon. Female participants highlighted not only practical health behaviours but also non-biomedical approaches such as prayer, traditional medicine, and psychological coping strategies (e.g., ignoring the disease to

avoid stress). Male participants emphasised the importance of health education, dietary changes (particularly in salt reduction), emotional regulation, and accessibility of healthcare services. However, some female participants expressed fatalistic attitudes, perceiving behaviour change as ultimately ineffective due to a belief in the inevitability of hypertension with age (Table 3).

Perceived barriers

Participants identified a wide range of perceived barriers to adopting and maintaining healthy behaviours, with many reflecting broader social, structural, and cultural constraints. Shared barriers across genders included limited access to healthy food, stigma surrounding illness, lack of family and peer support, healthcare access issues, limited health knowledge, and environmental factors that hinder safe physical activity. Advertising and prevailing social norms around food and lifestyle further reinforced unhealthy choices.

Female participants reported additional, gender-specific barriers, such as stress, side effects of medication, lack of time and motivation, financial constraints, and cultural narratives that framed healthy lifestyles. These views often led to social stigma and reduced self-efficacy in behaviour change efforts. Despite the prevalence of these obstacles, some participants (especially males) acknowledged enablers such as supportive churches, community resources for physical activity, and the availability of health information and food, even though uptake remained low among youth (Table 4).

Table 3 Perceived benefits

Recognition of preventative behaviours	Anyone can develop hypertension but not everyone will die from hypertension because they can manage it well" [Group 3, FGD 1]
Health education as a motivator	"I think educating them is very important because it will leave them to see the disadvantages of it" [Group 2, FGD 1]
Prayer and spiritual belief	"I am not going to take the medication, I am just going to pray and I am going to be fine" [Group 3, FGD 1]
Healthcare accessibility	"The government is making the hypertension numbers go lower because they provided clinics for people to go and get healthy" [Group 2, FGD 2]
Psychological coping strategies (e.g., ignoring illness)	"As much as it is ignorant but us ignoring it, does in a way decrease us dwelling in it so much that we end up dying from that disease." [Group 1; FGD 2]
Scepticism about effectiveness of behaviour change	"Even though I drink enough water and go to the gym and also avoiding salty and junk food, I think at some point when I grow up, I will have [hypertension]" [Group 3, FGD 1]

Cues to action

External cues to action were more prominently identified by participants than internal ones in shaping their readiness to prevent or manage hypertension. External cues to action included family influence, community structures, health promotion in familiar spaces (such as clinics, churches, and schools), and media-based messaging. Participants cited the impact of diagnoses, public awareness efforts, and real-life examples of illness as motivators for lifestyle change. Gender differences emerged, with females highlighting institutional efforts, personal reflection based on other's illness, nad access to health resources, while males emphasised media campaigns, peer support, and tailored messaging by demographic. Internal cues, such as personal motivation, self-observation, and desire to break negative family health patterns, were mentioned less frequently (Table 5).

Self-efficacy

Participants generally reported low self-efficacy in maintaining healthy behaviours, especially in relation to diet, habit change, and resisting social or physiological pressures. Both males and females admitted regularly making unhealthy choices, citing barriers such as peer pressure, temptation, lack of control over bodily urges, and difficulty sustaining change. Females in particular described a sense of helplessness or passivity in the face of automatic behaviours, while males often cited external social influences like friends and smoking culture. However, there were notable exceptions particularly among male participants, who shared examples of personal transformation, mental discipline, and confidence in their ability to maintain lifestyle changes (Table 6).

Perceived risk factors

The risk factors perceived by participants are demonstrated in Fig. 2.

Perceived protective factors

The protective factors perceived by participants are demonstrated in Fig. 3.

Discussion

The findings of this paper provide critical insights into the social, cultural, and structural factors that shape young South Africans' understanding of hypertension and their perceptions of prevention. The HBM concept of perceived threat (i.e., perceived susceptibility and perceived severity) suggests that individuals are more likely to take preventive action if they recognise a health threat as serious and as something they could develop [19, 20]. For many youth in this study, the low perceived severity of hypertension acted as a barrier to behaviour change despite youth perceiving high susceptibility. Although

Table 4 Perceived barriers

Limited access to healthy food	"We have more access to fast foods. You will not be able to eat proper cooked meals." [Group 3, FGD 1]
Stigma and secrecy around illness	"You tend to hear about it in your community or your next-door neighbour telling you about the high blood, it's always a secret, it's always a secret, but luckily for me, my granny told me the time she got it, so I know what it is" [Group 6, FGD 1]
Lack of family support	"Us the young people living with our parents, we eat whatever is provided for in the house. There aren't as many healthy choices as possible. If one wants to buy them, it would be hard since our parents are the providers" [Group 1; FGD 1]
Healthcare avoidance and fear	"But mostly what you see on TV especially the adverts, you hardly see broccoli being advertised. I've never seen asparagus being advertised. I've never seen cauliflower. I only see your McDonalds, get your Big Mac for R69. You never see asparagus" [Group 2, FGD 2]
Lack of knowledge and discussion	"We hardly communicate about non-communicable diseases as families and if we do it is only after when someone has already developed these diseases. As families we need to discuss about this issue so that we can be aware of it but in black families it is very rare." [Group 4, FGD 2]
Social norms promoting unhealthy behaviours	"The diet is basically the people around you. It doesn't even have to be your family. It can be your group of friends. Whenever you go out to eat, most of your friends like a bunny chow or a burger that's very salty and high in this and that" [Group 2, FGD 2]
Unsafe environments for exercise	"You know most of the parks when you go there you are going to get mugged. We no longer have a place where we can all go and sit down. The only places that we can go to now as Soweto youth are pubs." [Group 6, FGD 2]
Stress	"Getting stressed makes the disease worse" [Group 1; FGD 1]
Low motivation	"We are lazy" [Group 1; FGD 2]
Time constraints	"Young people only seem to make time for school" [Group 1; FGD 1]
Financial constraints	"I feel like food that is healthy and has quality are very expensive, so we buy food that we buy is cheap, but we don't have a choice because we want to sleep with a full belly and those ones make us sick" [Group 5; FGD 2]
Peer pressure	"My friend, let us go out to drink today! And if you say no, they will say you are boring. And another thing is that you will see that here I am losing friends." [Group 3; FGD 1]
Lack of accessible health information	"There is no one out there to point us to the right direction where information is concerned. Some of us had no idea about it until we came here" [Group 1, FGD 1]
Cultural identity and stigma (healthy = 'white')	"When people see you buying fruits and just making yourself better, making yourself white. Coz in this youth of ours, 'You, drinking water? Yoh. White person mentality.'" [Group 3; FGD 3]
Health system mistrust	"They are associated with death. You think that when you go to the clinic it means that you are dying." [Group 6, FGD 2]
Negative experiences with treatment and medication	"My grandmother becomes depressed whenever she has to drink her medication. She just gets angry and all she wants to do is to sleep, she does not want to talk to anyone. She says they pills makes her to go to the bathroom a lot" [Group 3; FGD 1]
Intergenerational differences in health priorities	"There are people who sell veggies but not all of us... it is the elders that see the need of buying and cooking vegetables not all of us, not the youth" [Group 1; FGD 2]
Enabler: Enabling physical environments	"I think they promote it in a good way, because most of the townships there have playing grounds where they take children there to exercise." [Group 4, FGD 2]
Enabler: Community-based health support	"In my church every year there is health promotion, and they make sure that we do not skip it. We discuss about mental health and chronic diseases. Nurses will come and different faculties." [Group 4, FGD 2]
Enabler: Personal responsibility and low health-seeking behaviour	"It is us who don't bother to make the necessary effort in educating ourselves" [Group 5, FGD 1]

participants recognised their likelihood of developing hypertension in the future, participants in this study largely viewed their youth, good health, and lack of diagnosis as protective factors against threat of hypertension. This perception aligns with Elkind's [21] concept of adolescent invincibility, which has been linked to a greater likelihood of engaging in risk behaviours [22]. This creates a paradox in how South African youth perceive hypertension, as while they view it as an inevitable part of their future, they do not see it as an immediate threat to their health, leading to a reluctance to engage in preventative or management behaviours.

Stress was also identified as a key psychological factor that further influenced participants' lack of engagement with hypertension prevention. While few participants described hypertension itself as a major current stressor (often viewing it as a condition that affected "older people"), many acknowledged that stress more generally was prevalent in their lives and believed it could contribute to future health problems, including hypertension. In this context, some participants described deliberately avoiding thoughts about hypertension, as they believed that focusing on it could increase anxiety or even exacerbate the condition. This tendency to mentally distance themselves from health risks can be understood

Table 5 Cues to action

Family influence	1. "She keeps on preaching it and I feel that if ever I come across such a problem or have it, a friend of mine has it then I will remember her words, that she did say– stop having too much of this or whatever the case may be. So I do think they do help in a way, personally I do feel that my granny does help in a way in preventing us getting hypertension or any diseases." [Group 1, FGD 2] 2. "At home they tell us that we should not smoke and if we do, something will go wrong with your life, you will end up being crazy, not knowing what the cause is. Nobody smokes at home" [Group 4, FGD 2]
Health education and increasing knowledge	1. "Show people what healthy meals are" [Group 5, FGD 1] 2. "What I think is helpful is if you have experts. If we make experts rather. So basically you have... Let's say they take this group right, whether it's the government, whoever, then they educate us on let's say a specific NCD" [Group 2, FGD 3]
Social and cultural engagement	"I say by tackling the things that the youth love the most, you create a demand, you know that youth love to party, create a social market, raising an awareness" [Group 6, FGD 3]
Impact of diagnosis	"I think that we deal with it when we know that we already have it. Prior to knowing I don't think that we pay much attention to it" [Group 5, FGD 1]
Media and advertising	"They should have commercials that show the positive side of what's this... of an active lifestyle. A physical active lifestyle. So that's one way they can do it" [Group 2, FGD 3]
Community support structures	"When you don't have a very strong support structure, you're more prone to getting into bad things and making them... basically doing them habitually." [Group 2, FGD 3]
Peer learning and storytelling	"The only way they can grab our attention, and like, through stories lines of generations and where ever the case might be, just make a scene, one scene, of that person having that disease or whatever the case might be, they, because that's the only way, not the only way, but the easiest way to grab our attention." [Group 1, FGD 3]
Influential figures and role models	"Let them get them like motivational speakers, which is their models. People that they look up to. At least if they hear it from their role models, it would probably make sense to them" [Group 3, FGD 3]
Tailored messaging for different groups	"I think it's not a one-size-fits-all sometimes. Different demographics tend to focus on different things, right? So for the younger people might be social media. For the kids might be cartoons. For the adults might be going to church and yeah, doing more productive stuff. So I think we should make the information more available and to gain more traction from it by putting them in spaces where those democracies are more focused on, right" [Group 2, FGD 3]
Conscious personal choice and agency	1. "No one promotes that behaviour for you, it is your choices. It starts with you to break the generational curse. So, no one is promoting drinking and smoking, it is your choice." [Group 4, FGD 2] 2. "Even if my granny doesn't say, don't eat this, eat that but based on her health condition I can tell that I don't want to be like this, so I will change my ways and my actions because I don't want to be...not sick like her but I don't want to have a health condition that is similar to hers." [Group 1, FGD 2]

Table 6 Self-efficacy

Low self-efficacy in diet	"I don't want to lie. We eat healthy, maybe once a week, otherwise we eat junk food or unhealthy food." [Group 1, FGD 2]
Lack of control/automatic behaviour	"Because you can't control your body. If ever it's something that has to do with that, your body, you can't tell your body what to do and what not to do, because it controls itself." [Group 3, FGD 3]
Difficulty changing behaviour	"What I tell myself in my mind is that I am still young so I told myself that as time goes by, I will reduce but then I try every day to reduce, but then I can't" [Group 1, FGD 2]
Peer pressure and temptation	"It was hard, because peer pressure, you see you friends smoking, the temptations of smoking are really high." [Group 4, FGD 3]
High self-efficacy: personal control and mindset	"I am firm in my believes so I don't think I can be defeated or my body can be defeated as long as I channel myself to the right direction" [Group 2, FGD 1]
High self-efficacy: past success with change	"I just changed my mindset, because I used to be wild, I used to be wicked, then I overgrew that, I used to smoke cigarette, I once smoked drugs, I stopped smoking, so yeah, I just changed how I think and how I perceive myself and how I perceive things." [Group 6, FGD 3]

as a coping strategy aimed at emotional self-regulation. Rather than reflecting fear or active distress about hypertension specifically, these responses appear to reflect a pattern of cognitive disengagement: an effort to reduce psychological discomfort associated with confronting long-term health risks while navigating already stressful life circumstances. This aligns with the concept of avoidance coping, a strategy in which individuals manage distress by denying or distracting themselves from a health threat rather than actively addressing it [23, 24]. Evidence from South Africa shows that avoidance coping strategies (such as denial, distraction, or minimising perceived risk) play a critical role in shaping maladaptive health-related behaviours, as seen in people living with HIV, where internalised stigma predicted higher avoidant coping, leading to delayed antiretroviral therapy initiation and poorer health outcomes [23]. Similarly, in the context of hypertension, avoidant coping may diminish proactive health-seeking behaviours, reinforcing disengagement from prevention and treatment. Participants described distancing themselves from the risk of hypertension by emphasising their young age and perceived good health, avoiding health information they found confronting, or deferring lifestyle changes to a distant future. Chasiotis et al. [24] further highlighted that avoidant motivation reduces engagement with health information-seeking and problem-focused coping, leading instead to emotion-focused coping strategies such as denial or distraction rather than direct disease management and prevention. In this study, participants demonstrated these avoidant coping patterns through a preference for stress

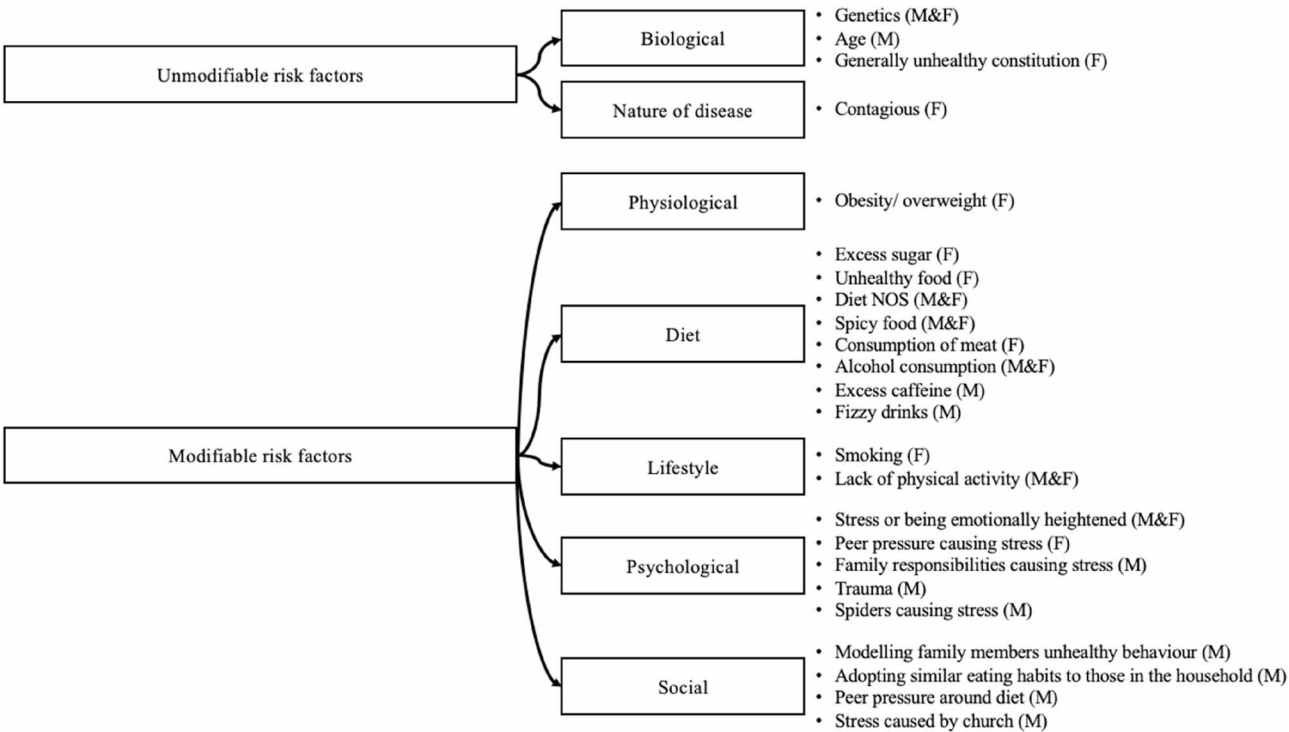


Fig. 2 Risk factors perceived by participants

Medical	Spiritual	Physiological
- Medication adherence (M&F) - Screening (F)	Prayer (F)	Youth (F)

Diet & exercise	Psychological/ mental	Social
- Healthy diet (M&F) - Exercise (M&F) - Drinking water (M&F) - Eating less salt (M&F) - Eating less sugar (F) - Not eating (F) - Lifestyle changes NOS (M) - Stop smoking (M) - Not taking drugs (M)	- Knowledge (M&F) - Meditation (F) - Rest (F) - Speaking about feelings (F) - Thinking positively (F) - Limiting stress (F) - Breathing exercises (M) - Emotional regulation (M) - Avoiding stress (M) - Mental activities (M) - Ignoring illness (F)	- Avoiding dating (F) - Communicating (M) - Forums for discussion (M) - Knowledge sharing (M)

Fig. 3 Protective factors perceived by participants. *In Figs. 2 and 3: (M&F) indicates the response was from both male and female participants, (F) indicates the response was from only female participants, and (M) indicates the response was from only male participants

management practices, such as meditation and breathing exercises, rather than direct engagement with hypertension prevention strategies. While these approaches contribute to overall well-being, they may also serve as a form of psychological distancing. By focusing on managing stress in general rather than addressing specific behavioural risk factors (such as diet, physical activity, or blood pressure monitoring), participants may unintentionally reinforce inaction toward meaningful risk reduction. This indirect approach reflects a broader coping style oriented toward emotional relief rather than problem-solving, thereby limiting the likelihood of sustained health-promoting behaviours.

In addition to stress, this study found that some youth (particularly female youth) viewed a healthy lifestyle in terms of drinking water and a healthy diet as something “only for white people”. This perspective reflects how racial and cultural identities influence health behaviours, particularly in South Africa where the legacy of apartheid continues to shape perceptions of health and wellness [25]. The transition from apartheid to a democratic society has resulted in a complex interplay between modern, Western health practices and longstanding traditional practices [25]. Within this context, some participants viewed health-promoting behaviours as culturally alien or associated with a racialised identity, contributing to resistance in adopting such practices. This perception is particularly significant given the documented links between poor dietary patterns and the prevalence of diseases like hypertension. These dynamics are not unique to South Africa; studies in England have similarly shown that cultural values and traditional food beliefs significantly shape health behaviours among minority groups [26]. Public health interventions often fail to resonate with these groups when they are not culturally adapted, ignoring the role of traditional foods, taste preferences, and social meaning of eating [26]. This underscores the need for culturally responsive health strategies that account for the socio-cultural context in which health behaviours are developed and sustained.

Further to the social and cultural influences, peer pressure also played a significant role in shaping participant’s health-related behaviours. Literature suggests that adolescent males, in particular, exhibit increased risk-taking due to a stronger peer group orientation [27]. In this study, however, both male and female participants described engaging in unhealthy behaviours (such as drinking alcohol, eating unhealthy foods or skipping exercise), not out of personal preference but as a way to maintain social inclusion. Several youth expressed fear of being judged, excluded, or labelled as “boring” or “different” if they made healthier choices. These accounts underscore how peer norms can create a powerful incentive to conform, often overriding individual efforts to

adopt healthier behaviours. In such contexts, social belonging was often prioritised over long-term wellbeing, highlighting the importance of addressing peer dynamics in youth-focused health interventions.

A culture of social gatherings centered around high-calorie, processed foods, and limited physical activity reinforced these patterns of unhealthy lifestyle behaviours, such as frequent consumption of unhealthy food, habitual sedentary leisure activities, and the prioritisation of social acceptance over personal health. Some traditional cultural practices, such as the expectation to consume large portions of energy-dense foods during family or community events, were perceived as contributing to health risks. In line with findings from Buksh et al. [28] participants in this study also shared that overconsumption of food during social gatherings was common and often encouraged. Social norms played a powerful role in shaping both dietary and physical activity behaviours, as supported by a recent systematic review which found that such norms consistently drive directional changes in youth behaviour [29]. This is particularly important given that opportunities for physical activity are not always within the control of young people. According to the Theory of Expanded, Extended, and Enhanced Opportunities (TE), youth often have limited autonomy over when, where, and how they are physically active due to the structured environments in which they live [30]. Without intentional efforts to expand, extend, or enhance these opportunities, and to ensure youth are supported and motivated within them, it becomes difficult for healthy movement behaviours to compete with prevailing sedentary norms. As Monterrosa et al. [31] note, food choices are deeply influenced by cultural, social, and psychological factors, making dietary patterns both a personal and social expression of identity. This complex web of influences highlights the difficulty of adopting healthier eating habits in environments where traditional and social expectations outweigh concerns about nutritional health.

Many participants learned about hypertension through observing family members or neighbours, with their views influenced by how those around them managed, or failed to manage, the condition. For some, hypertension was perceived as a minor, manageable issue, particularly when individuals neglected medication adherence yet appeared to function normally. This was especially true for those who remained asymptomatic, mirroring findings from Jimmy & Jose [32] which highlight that non-compliance with chronic disease medications is most common when patients do not experience unpleasant symptoms. In fact, medication adherence rates for chronic conditions like hypertension often drop significantly when symptoms are absent, as patients perceive the disease as less urgent or severe. As a result, some individuals became complacent and skeptical about

the true severity of the disease. This also aligns with Nouhravesh et al. [33] who observed that asymptomatic participants often did not perceive their condition as a real threat, showing little effort to understand or manage it until symptoms appeared, further contributing to a false sense of security regarding the potential risks of hypertension. However, others who had witnessed serious complications, such as strokes, kidney failure, or premature death, regarded hypertension as a significant and life-altering condition.

A major challenge identified by youth was the secrecy surrounding hypertension in their families and communities. Participants noted that older relatives often concealed their diagnosis, rarely spoke about the condition, or disclosed it only after severe health events such as strokes or death. This silence around the disease left youth without firsthand exposure to what living with hypertension entails, limiting their understanding of its long-term consequences. Many interpreted the secrecy as rooted in stigma; specifically, fear of judgement or perceptions of weakness, which created cultural taboos around discussing chronic illness. This dynamic mirrors findings in studies of dementia-related stigma in South Africa, where internalised shame and fear of social rejection led families to avoid disclosure and isolate affected individuals [34]. For youth in this study, such patterns of silence contributed to a low perceived threat of hypertension and weakened motivation to engage in preventive behaviours. Without visible role models openly managing the condition, hypertension remained abstract and distant; as something that happened to 'other people' or only became relevant in old age.

Participants frequently discussed how family members shaped their food choices and health habits, both positively and negatively. Some shared that when parents prepared meals or encouraged exercise, it was easier to adopt and maintain healthy behaviours. Family structures and systems are essential in shaping food choices, as they establish the foundation for lifelong eating habits [31]. These food practices are primarily learned through the transmission of behaviours and norms from parents to children, influencing not only what is eaten but also how and when meals are consumed [31]. When families model and encourage healthy behaviours (such as preparing nutritious meals, promoting balanced diets, and supporting physical activity) youth found it easier to adopt and sustain these habits [31]. However, other participants described family environments where unhealthy eating patterns (such as frequent fried foods or sugary drinks) were the norm, and attempts to eat differently were dismissed as strange or ungrateful. Youth highlighted the tension between wanting to change and the difficulty of doing so in households where health was not prioritised. When unhealthy patterns were normalised, or when

support for change was lacking, participants reported significant barriers to making healthier choices. This dynamic is especially relevant in the South African context, where many youth continue to live at home and are deeply influenced by their families' attitudes and behaviours. As noted by Bottorff et al. [35] the family unit plays a crucial role in shaping healthy behaviours, especially in childhood, by providing opportunities for physical activity and healthy eating. While their study focused on children, this dynamic remains relevant for youth, as family caregivers continue to shape lifestyle choices and help address modifiable risk factors, such as poor diet and physical inactivity, that contribute to long-term health issues like hypertension. This is applicable to the current study, which shows how family norms, modelling, and support systems can either enable or constrain youth's ability to adopt preventative behaviours, underscoring the importance of targeting family dynamics in youth-focused health interventions.

These results highlight the complex, multilevel factors that shape food and lifestyle related choices, where interactions between youth and their environment influence health-related behaviours [31]. While environmental factors, such as food marketing and availability, play a crucial role, biological factors like innate preferences for sweet, salty, and high-fat foods (which are deeply rooted in our biology) also drive individuals toward unhealthy options [36]. The food industry exacerbates this dynamic by marketing highly palatable, energy-dense foods that stimulate pleasure receptors in the brain, reinforcing unhealthy eating habits [37]. Youth in this study described pervasive advertising for fast food and sugary drinks as a persistent external cue, normalising unhealthy consumption and making it harder to prioritise healthier options. Broader structural factors, including limited access to affordable healthy food, lack of fitness resources, and societal norms favouring convenience over health, create systemic barriers to adopting healthier lifestyles. Additionally, barriers to healthcare access, such as long wait times and a focus on treatment (medication) rather than prevention, deter youth from engaging in proactive health management, with perceptions that clinics are only for severe illness further delaying the adoption of preventative care [38]. These combined factors contribute to unhealthy dietary behaviours and limited engagement with health-services, increasing the risk of hypertension in South African youth.

Lastly, the findings of this paper demonstrate that youth are looking to community structures such as schools, churches, clinics, and government institutions in supporting youth efforts to adopt healthier behaviours. Participants emphasised the need for greater dissemination of accurate health information and the creation of environments that actively facilitate positive change.

While churches are highlighted in this paragraph to illustrate the role of these institutions, the findings can also be applied to schools, clinics, and government organisations, as they share a similar potential to influence health outcomes. Evidence, such as the Impilo neZenkolo ('Health through Faith') programme [39] demonstrates the potential of church-based interventions to address health challenges in lower income communities. Further to this, churches have also played a key role in promoting health in South Africa, as seen in HIV prevention efforts [40] underscoring their potential as important partners in public health initiatives. However, while structures such as churches hold promise as powerful agents of health promotion, participants also acknowledge their capacity to spread misinformation when not used correctly. Churches, for example, were identified by participants as both a source of guidance and a barrier; while some invited health experts to educate congregants on disease prevention and healthy living, others promoted the idea of praying illness away. Expanding on the former point, in this study, youth advocated for the inclusion of diverse stakeholders, and emphasised the importance of moving beyond one-size-fits-all health campaigns. They call for collaborative efforts that engage influential community figures such as doctors, religious leaders, media personalities, and government officials to co-create sustainable and meaningful preventive health initiatives.

Limitations

This study has limitations that should be considered when interpreting. First, as a qualitative study conducted in a specific urban context (Soweto), the findings are not intended to be generalised to broader populations. Instead, their transferability depends on the relevance and resonance of the themes within similar sociocultural and economic settings. While the sample offers rich insights, participants were drawn from a single urban area, which may limit the applicability of the findings to rural areas or other South African communities with different contextual realities. Second, although social desirability bias is a known consideration in qualitative research, this study is further shaped by the dynamics between interviewer and participant. Interviews were conducted by trained researchers with local contextual understanding, but differences in age, gender, or perceived authority may have influenced participants' willingness to disclose sensitive or socially undesirable information. Reflexivity was practiced throughout data collection and analysis; however, the influence of researcher positionality and the interview setting on data richness and disclosure remains a limitation. Lastly, while the cross-sectional design aligns with the exploratory goals of qualitative inquiry, it limits the study's ability to capture changes in young people's perceptions over

time. Youth perspectives on hypertension and prevention behaviours may evolve due to shifting life circumstances, social influences, access to new information, or changes in health status. Further longitudinal qualitative research could explore how these perceptions are shaped and reshaped over time.

Conclusion

While youth recognised their susceptibility to hypertension, many perceived the condition as low in severity, often viewing their age and current good health as protective factors. This perception was particularly common among those who had no direct or visible connection to individuals with severe hypertension, often due to family secrecy or limited communication about the condition. In contrast, youth who had witnessed the serious consequences of hypertension, such as stroke or premature death in a relative, described the disease as more serious or expressed greater concern about its long-term impacts. Stress and avoidance coping further contribute to disengagement from prevention, alongside cultural perceptions that frame healthy lifestyles as foreign. Social influences, including peer pressure and traditional dietary practices, reinforce unhealthy behaviours, while family experiences shape perceptions of hypertension's seriousness. Stigma and secrecy surrounding the condition limit open discussions, reducing perceived threat and awareness. External influences, such as social networks and cultural norms, often outweigh individual health knowledge, emphasising the need for youth-centred, culturally responsive interventions. Addressing these barriers requires a continued shift toward more holistic strategies that integrate biomedical, social and psychological dimensions influencing youth engagement with hypertension prevention.

Ethics

Ethical approval was obtained prior to the research from the University of Witwatersrand Human Research Ethics Committee (Medical) (REF: R14/49 Protocol no: M220818). The research was performed in accordance with the 1964 Declaration of Helsinki and its later amendments. Clinical trial number: not applicable. Participants received an information sheet (Appendix A) detailing the study, and informed consent was collected prior to their participation (Appendix B), including specific consent for audio recording (Appendix C).

Abbreviations

NCDs	Non-communicable diseases
SSA	Sub-Saharan Africa
BP	Blood pressure
PP	Precision prevention
SAMRC	South African Medical Research Council
DPHRU	Developmental Pathways for Human Research Unit
FGD	Focus group discussion

HBM Health Belief Model

Supplementary Information

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Supplementary Material 1.

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Authors' contributions

MJS and SAN contributed to the study conception and design. MJS led data collection, conducted the data analysis, and wrote the initial manuscript draft. SAN and SHC reviewed and contributed to the final version. All authors provided edits and critiqued the manuscript for intellectual content.

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Data availability

Anonymised data is readily available from the corresponding author upon request.

Declarations

Ethics approval and consent to participate

Ethical approval for this study was obtained from the University of Witwatersrand Human Research Ethics Committee (Medical) (REF: R14/49, Protocol no: M220818). All participants received an information sheet (Appendix A) outlining the purpose and procedures of the study. Informed consent was obtained prior to participation (Appendix B), including explicit consent for audio recording where applicable (Appendix C).

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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