

## Review



# A rapid review of research conducted on diseases and conditions impacting older persons in South Africa

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## A rapid review of research conducted on diseases and conditions impacting older persons in South Africa

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## Abstract

*The population of older persons in South Africa is increasing. With the accompanying health conditions that come with ageing, it is critical to understand the burden, risk factors, and useful interventions that will promote healthy ageing and overall well-being of older persons in the country. The goal of this study was to map the research conducted on diseases and conditions affecting older persons in South Africa in order to guide future research and planning efforts. A comprehensive search of the literature was conducted on PubMed, Scopus, and Web of Science databases using a defined search strategy for studies conducted between 2010 and 2022. Study selection, data extraction and narrative syntheses were rapidly performed following a systematic methodology. A total of 1488 articles were found, of which 244 were found to be eligible for inclusion in this study. The majority of the studies on health conditions affecting older persons focused on infectious diseases (n=46), followed by non-communicable diseases (n=39), mental health (n=28), musculoskeletal conditions (n=28), cognitive health (n=24). Few studies among older populations, which were mostly less than five studies and these studies focused on alcohol and drug use, ageing and frailty, falls, blood disorders, cancer, violence against older persons, reproductive health and eye health. A high number of studies (n=73) focused on determinants of health among older persons such as lifestyle (nutrition and physical activity), mortality, quality of life, care and support, elder abuse, health policy and expenditure, and access to health care. Our study shows that the majority of studies identified were centred on both infectious and non-communicable diseases. Nevertheless, there remains a need for further research to deepen our understanding of the epidemiology of these conditions in older persons in South Africa with particular emphasis on topics that have received less attention such as alcohol and drug use, ageing and frailty, falls, blood*

*disorders, cancer, reproductive health, and eye health.*

## Introduction

Many countries are seeing an increase in the number and proportion of older persons. It is expected that by 2030, one in every six persons globally will be 60 or older, and by 2050, the world's population of persons aged 60 and up will have more than doubled (2.1 billion) [1]. According to projections, about 80% of the world's ageing population will reside in developing countries. The percentage of elderly Africans is projected to rise from 5.1% in 2000 to 10.4% in 2050 [2]. Sub-Saharan Africa, in particular, is experiencing an increase in the number of older persons due to a growing population, the rollout of antiretrovirals, and the effects of globalization [2].

The Older Persons Act 13 of 2006 defines an Older Person (OP) as a person who is 60 years old or older [3]. Population estimates in South Africa indicate that the proportion of OPs has grown from 7.6% in 2002 to 9.1% in 2020. This puts the current estimated population of OPs in the country at 5.43 million [4]. Over the last 20 years, South Africa has moved from a country where most deaths occurred as a result of communicable diseases such as tuberculosis and HIV/AIDS which were often concentrated at younger ages to a country where most causes of death are attributable to non-communicable diseases, manifesting at older ages, such as from strokes or heart disease [4,5]. COVID-19 has also impacted on deaths in this age group. Vulnerabilities evident in this age group range from the need for social assistance programs and easy access to cash transfers to food programs and access to health care [4].

The years 2021-2030 have been designated as the decade of healthy ageing by the UN General Assembly, with the World Health Organization tasked with overseeing its implementation. It is planned that governments, civic society,

international organizations, experts, academics, the media, and the commercial sector will work together for ten years to reduce health inequities and promote longer, healthier lives of older persons, their families and communities [1]. Mapping the available evidence on research conducted in OPs in South Africa will serve as a first step towards shaping interventions and research priorities that would lead to improved health outcomes among this population in this country. This study aims to review the nature and extent of research on diseases and conditions affecting older persons in South Africa.

## Methods

A rapid review of published research was undertaken using systematic methods to identify South African research in this area. The Joanna Brigg's Institute (JBI) methodology for scoping reviews was adapted for this review [6,7].

### Search strategy

We used PubMed, Scopus, Web of Science, Google Scholar, and the HAALS database to identify relevant studies. We scanned reference lists of included articles to ensure all relevant systematic reviews were identified. Grey literature was also considered including conference proceedings from the Public Health Association of South Africa and the Psychological Society of South Africa. The following keywords were used in the searches: "Elderly OR older persons OR older people OR... AND "Health OR Disease OR Burden of Disease", AND "NCDs OR hypertension OR diabetes OR obesity OR COVID OR TB OR HIV OR Cancers OR Mental Health OR alcohol, tobacco or drug use OR substance use OR abuse of medications Or Hearing OR Vision OR oral health" and South Africa. Supplementary information contains the search strategies for PubMed, Scopus, and Web of Science databases and the corresponding search results.

### Inclusion criteria

We considered all published articles and unpublished reports, research studies (including student theses and dissertations at postgraduate level) and scientific letters that have a specific focus on the health of OPs, eligible for inclusion. Older persons in this study referred to persons 60 years and older. The focus was on studies conducted in South Africa, including multi-site studies. This review focused on research published between 2010 and 2022. Systematic reviews and meta-analyses were also included.

### Exclusion criteria

Studies that did not specifically acknowledge the unique health conditions and burden of disease in OPs were excluded as well as studies published before 2010 or studies not conducted in LMICs or which were not written in English.

### Study selection and data extraction

One Investigator (CI) independently selected potentially eligible publications from the records yielded in the search, to confirm eligibility by looking at the titles and abstracts of articles, removing duplicates, and extracting data from the included publications. The Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review (PRISMA-ScR) [8] flow diagram in Figure 1 shows the search results and the study inclusion procedure: identifying the number of articles retrieved from the individual searches, the number excluded for various reasons, the number of duplicates removed, and the final number of articles identified. A data extraction sheet was prepared by the investigators capturing authors' names, year of publication, study objectives, and locus of research topic, on the areas listed under data synthesis below. Other authors reviewed the data for completeness and confirmed the eligibility of papers for inclusion in this study (Figure 1).

## Data synthesis

Data synthesis was carried out, with the primary focus on study objectives and information extracted from each study. The included studies were grouped into themes according to specific diseases and health conditions such as infectious diseases, non-communicable diseases, mental health, musculoskeletal conditions, cognitive health, cancer, falls, ageing and frailty, eye health, blood disorders, alcohol, tobacco, and other drug use. The findings were then narratively described in the results section.

## Results

A total of 244 studies were included in this review. There was a successive increase in the number of publications between 2010 and 2022. The lowest number was in 2010 (n=2), while the highest number of publications was in 2019 (n=47) (Figure 2). Almost all studies (n=243) were peer-reviewed articles with only one being a conference abstract.

### Countries where studies were published

Of the 244 studies included in this review, 185 were conducted in South Africa alone. The remaining (n=59) were multi-country studies either consisting of South Africa and other sub-Saharan African countries, with other low and middle-income countries (LMICs) (e.g., China, Brazil, India) or with high-income countries (the USA and European countries).

### Study designs and type of publications

Most of the studies were quantitative (n=197), including cross-sectional, cohort, longitudinal, and randomized controlled trials. Twenty-eight studies (n=28) were qualitative, while 19 were categorized as reviews, including systematic reviews, scoping reviews, literature reviews, and guidelines; eight studies were mixed or multi-method studies, including combinations of quantitative or

qualitative or systematic reviews and qualitative or quantitative studies.

### Locus of research

Our findings were divided into two primary categories: "health conditions in older people"; (Table 1) and "the determinants of health" (Table 2), with each category having subcategories as detailed below.

### *Research on health conditions among older persons*

#### Infectious diseases (n=46)

Forty-six studies were focused on infectious diseases. Of these, 31 studies dealt with infectious diseases only, while the remaining were a combination of infectious diseases with health focus such as infectious diseases and non-communicable diseases (n=10), including nutrition, well-being of persons living with HIV, cognitive health HIV and sleep parameters.

The majority of the studies in this category (n=28) focused on HIV. The studies that focused on HIV alone were further divided into various themes. Firstly, five studies focused on the prevalence and risk factors of HIV acquisition and sexual behaviors among older persons [9-13]. In addition, four qualitative studies explored the knowledge of older persons about HIV transmission and the vulnerability of older persons to HIV [13-16]. Further, four studies focused on food insecurity, economic factors that affect access to quality food, comorbidities requiring multiple medications, side effects of drugs, difficulties related to social factors and lifestyle, support and adherence to Antiretroviral Therapy (ART), experience with the health system and stigma, and how disclosure could affect adherence and retention in care [17-20]. Also, two studies focused on the wellbeing of HIV infected persons [21,22]: while three studies consisting of two cross-sectional studies and one multi-method study focused on the caregiving role of elderly

taking care of sick relatives infected with HIV [23-25] with older women playing these roles mainly [26]. One cross-sectional study conducted in a rural setting which focused on assessing the wellbeing of older persons living with HIV [27].

Two studies focused on the disclosure of HIV status [28,29]. Two studies focused on access to HIV testing [22,30]. One study followed persons living with HIV to assess mortality risk [31]. One study reported on the first HIV treatment cascade among older persons infected with HIV [32]. Two studies focused on the experiences of persons living with HIV and the impact of stigma on their lives [33,34]. Only one study focused on TB: a cohort study focused on the burden of TB among older persons [35]. Also, only one study focused on COVID-19 [36] a protocol that focused on the management plan for COVID-19 in an urban older person's home, including prevention, treatments, and referrals [36].

On the other hand, 10 studies focused on a combination of infectious diseases and other health conditions. These topics included HIV and nutritional wellness [37]; HIV and wellbeing of persons living with HIV [29,38]; HIV and cognitive health such as dementia [39,40]; HIV and multimorbidity such as hypertension, diabetes mellitus [41-44] and HIV and sleep parameters [45].

### **Cardiometabolic diseases, kidney diseases and cancers (n=39)**

The majority of studies in this category were cross-sectional studies (n=35), while the remaining were cohort studies (n=4). Studies focused on the burden of all non-communicable diseases and risk factors [46-52], with some focusing specifically on the burden of heart diseases and risk factors, including hypertension and stroke [53-63]. In addition, some of the studies focused on diabetes and hypertension [64,65] or diabetes alone [66] or its impact on quality of life [67] or care and support systems for persons living with diabetes [68,69]. Five cross-sectional studies

focused on the burden of obesity and associated factors [70-73]; the burden of chronic respiratory diseases [74]; impact of well-being on general health, the association between social capital and non-communicable diseases including the occurrence of hypertension [75,76]. One study each focused on the occurrence of kidney disease [77] and dyslipidemia [78] as well as the occurrence of Noncommunicable Diseases (NCDs) alongside communicable diseases like HIV [79]. Four cross-sectional studies focused on cancers, including breast, cervical, vulvar, and prostate cancers [80-83]. These studies focused on the incidence of cancer and the factors associated with cancer.

### **Mental health (n=28)**

Twenty-eight studies (n=28) in this category either focused on mental health alone or in combination with other conditions. The majority were cross-sectional studies (n=27), with only one being a randomized controlled trial. Fifteen studies focused on the prevalence and predictors of mental illnesses and depression, including symptoms [84-98]. Seven studies focused on mental health and social capital, support, and well-being [99-106]. One study focused on the impact of mental health illness on caregivers [107], mental health and multimorbidities [108] and life decision-making for persons with mental illness [109]. Also, a Randomized Controlled Trial (RCT) was found to assess a drug, bupropion, for treating depression in older persons [110].

### **Cognitive Health (n=24)**

Twenty-four studies were found in this category; 21 were quantitative studies including cross-sectional (n=13), cohort (n=9) and a Randomized Controlled Trial (RCT) (n=1) and only one study (n=1) was a qualitative study. The majority of the studies (n=17) looking at cognitive health focused on the prevalence of cognitive impairment and correlates of cognitive health [111-123] including studies with a specific focus on

dementia [124-126]. One study was an RCT that sought to evaluate the effectiveness of a therapy known as low-intensity Cognitive Behavior Therapy (LI-CBT) mHealth-supported intervention which "targeted maladaptive cognitions in older people experiencing loneliness" [127]. Four other studies focused on sleep disorders and their predictors among older persons [113,128-130]. Two studies focused on the screening tools for cognitive impairment (n=2) [131-133].

### **Musculoskeletal conditions (n=8)**

Eight cross-sectional studies focused on musculoskeletal conditions, such as the impact of musculoskeletal disorders on the quality of life [134]; the prevalence of osteoporosis and arthritis, sarcopenia, hip fractures, and back pain [135-141].

### **Ageing and frailty (n=6)**

Two studies focused on ageing [142], including ageing with HIV [143], experience with ageing [144]. Three cross-sectional studies focused on developing frailty index [145]; prevalence and risk factors of frailty and disability [146,147].

### **Medicine use (n=5)**

Five cross-sectional studies were included in this category. The first assessed the prevalence of potentially serious Drug-Drug Interactions (DDIs) and their predictor [148]. The second study evaluated the ability of a checklist, known as the American Geriatrics-Beers (AGS-Beers) criteria, to predict adverse drug reactions [149]. The third study assessed the knowledge and perceptions of Nigerian and South African health care professionals on appropriate prescribing among the elderly [150]. The fourth described the prevalence and pattern of potentially inappropriate prescriptions [151], while the last assessed adherence to chronic medications in the elderly [152].

**Falls (n=4):** studies in this category (n=4) focused on the prevalence of falls in older persons [153]; risk factors associated with falls [154]; preventive measures [155]; and methodological challenges of a study on falls [156]. Three studies were cross-sectional, while one was a mixed-methods study.

**Dental/oral health (n=4):** four studies which were all cross-sectional studies, focused on dental health. The prevalence of dental diseases, including periodontal disease and edentulism, were described in these studies [157-160].

**Eye health (n=3):** three cross-sectional studies in this category focused on the prevalence of cataracts [161] and causes of visual impairments [162], and factors associated with visual impairment [162].

**Hearing impairment (n=2):** these two cross-sectional studies focused on hearing impairment and its impact on quality of life [163,164].

**Reproductive health (n=1):** only one study focused on the relationship between sexual activity and self-rated health status [165].

**Blood disorders (n=1):** only one study focused on anaemia [166].

**Alcohol use (n=1) (only one study was focused on this area):** a study which assessed the relationship between alcohol consumption and high-risk sexual behaviour among elderly [167].

### ***Research on the determinants of health among older persons (n=72)***

**Lifestyle factors nutrition and physical activity (n=22):** studies focusing on nutrition comprised seven cross-sectional studies, six reviews, and one RCT. These studies focused on vitamins deficiency and supplementation [168,169]; consumption habits of sugars and beverages [170]; malnutrition [171,172]; body mass index [173,174]; dietary guidelines [175-179]; nutritional pattern [180] and malnutrition [172]. An RCT assessed the effects of a fish diet on

cognitive health [181]. Seven cross-sectional studies focused on physical activity and its correlates among older persons [96,182-187].

**Quality of life (and wellbeing) n=19:** nineteen cross-sectional studies in this category focused on quality of life, including issues around socio-economic factors that affect the health and wellbeing of older persons, such as living arrangements and others [188-202]. Other studies focused on diseases that impact the quality of life [48] and how inequality affects the quality of life [203,204].

**Disability status-quality of life, handgrip strength (n=9):** seven cross-sectional studies focused on quality of life as it relates to disability among older persons, including factors associated with disability [205-211]. While two cross-sectional studies focused on handgrip strength and associated factors [212,213].

**Care and support offered to older persons (n=8):** eight studies focused on the care and support mechanisms for older persons. There were three cross-sectional studies, one qualitative, two reviews, and two mixed-methods studies. These studies focused on various kinds of support offered to older persons suffering from various health conditions, such as social support [214-219], self-care [220] and access to such support systems [218].

### **Access to health care (n=6)**

Six studies focused on access to health care by older persons. These were qualitative studies (n=3) and quantitative/cross-sectional studies (n=2). Most studies (n=4) focused on the experiences of older persons regarding healthcare delivery [221-224], while the remaining focused on predictors of health care use [225] and health insurance [226].

**Violence and 'eldercides' (homicides) among the elderly (n=3):** three cross-sectional studies assessed the proportion of homicides [227] and

the violence faced by older persons, particularly intimate partner violence [228], and their predictors [229].

**Mortality (n=3):** three cross-sectional studies focused on mortality and causes [41,230,231].

**Health policy affecting older persons (n=1):** only one study described how health policies could impact the health of older persons [232].

**Health expenditure on older persons (n=1):** two studies in this category described the health expenditure for persons living with HIV [187,233].

## Discussion

Our scoping review of research on diseases affecting older persons in South Africa showed that most studies focused on infectious diseases, particularly HIV. Many studies were also conducted on non-communicable diseases, such as hypertension, diabetes, and obesity. Additionally, our study found that a large number of studies each focused on mental health and musculoskeletal disorders. The least studies were conducted on ageing and frailty, alcohol and tobacco use, cancer and eye health. These findings are consistent with previous research on the disease burden among older people in South Africa and other Low- and Middle-Income Countries (LMICs), as communicable and non-communicable diseases are major contributors to morbidity and mortality among the elderly [1,4,234].

The finding that many studies focused on HIV may be because the population of older persons living with HIV is growing due to access to Antiretrovirals (ARTs) and high survival rates. Secondly, the incidence of the infection appears to be growing among older persons [235,236]. More studies are required to understand the factors associated with this rising incidence and factors affecting access to HIV services among older persons. Only one study was found looking at COVID-19 and older persons. We may attribute this to the fact that we

conducted our literature search in 2022. It's possible that some relevant papers, crucial for our synthesis, may not have been published. As a result, more research into other infectious diseases like COVID-19, particularly long-term effects of COVID-19 ('long COVID'), and how it impacts older people may be necessary.

Among the non-communicable diseases, more studies on cardiometabolic diseases were reported than cancers, reflecting a greater research focus on these conditions in South Africa. Considering that cancers could contribute to morbidity and mortality among older persons [237], more research may also be needed to understand the burden of cancer, risk factors, and effective interventions to address these conditions among older persons. Also, the few cancer studies identified in this review were focused on the prevalence and risk factors of cervical and prostate cancer. It is important to note that older persons in South Africa are also at risk of other types of cancers and likewise further research is needed to understand the burden of other kinds of cancers among older men and women in the country.

We found a significant number of studies focused on determinants of health, such as lifestyle, mortality, quality of life, care and support, violence against older persons, health policy and expenditure, and access to healthcare in South Africa. Physical and social environments can affect health directly or indirectly. Maintaining healthy behaviors throughout life, such as eating a balanced diet, engaging in regular physical activity and refraining from tobacco use, all contribute to reducing the risk of non-communicable diseases, improving physical and mental capacity, and delaying care dependency [1]. The fact that several studies are looking at nutrition among older persons in South Africa is encouraging as understanding nutrition knowledge gaps can guide educational interventions to reduce nutritional deficiencies and promote healthy ageing, as nutrition knowledge affects eating behaviour and nutritional status [238].

Sexual and reproductive health issues in older people have received little attention from health professionals, researchers, and policymakers [239]. We found only one study that focused on the reproductive health of older people which supports the statement. Male and female hormone declines in men and women are linked to physical and psychological symptoms such as decreased libido, pre- and menopausal symptoms in women, and erectile dysfunction, among others [239]. Furthermore, studies show that more than 80% of men and 65% of women continue to be sexually active in old age, which may affect their sexual behaviors and potentially increase their risk of contracting HIV and other Sexually Transmitted Infections (STIs) [239]. The prevalence of STIs among the elderly appears to be increasing [240]. As a result, more research is needed to better understand the reproductive health issues of this age group in South Africa.

Population ageing has been recognized as one of the world's most important public health problems. With the increase in life expectancy globally, there is an urgent need to promote research on ageing and ageing-related diseases to increase healthy and productive longevity for the elderly population [241,242]. Also, several reports have shown that frameworks that promote healthy ageing are lacking in developing countries [243]. Therefore, as the population of older persons in South Africa continues to grow, studies focused on understanding the ageing process are essential, especially in areas where there has been little recent research. Furthermore, frailty, falls, and sarcopenia are conditions among older persons that require attention considering the exponential growth of the ageing population [244]. As osteoporosis and sarcopenia may go underdiagnosed and undertreated [245]. Although we found studies on falls and osteoporosis, much more are needed to understand the burden and risk factors in our setting. Studies on the assessment of frailty indicators are also required to aid early interventions.



The use of alcohol and tobacco is associated with a range of adverse health outcomes, including cancer, cardiovascular disease, and respiratory disease. Alcohol use is also associated with functional and psychiatric issues for older adults, sleep disorders, falls, other injuries and accidents [242]. Several studies focused on alcohol and tobacco use among the elderly have been published elsewhere, some of which include the use of alcohol among older persons during the pandemic [246], patterns of alcohol use and alcohol disorders [247], the association between smoking in older persons and developing frailty [248]. While much can be learnt from research conducted elsewhere, there is still a need for local research to understand the patterns of alcohol and tobacco use and risk factors among older persons in South Africa, as well as effective interventions to reduce their use among this population.

Eye health is, an essential aspect of overall health and well-being, but our review shows a lack of research on eye health among older persons in South Africa. This finding is consistent with the disproportionate distribution of eye health research, with more seen in high-income countries than in low- and middle-income countries [249]. In the same vein, the demand for eye health services is expected to rise further as the world's population ages, especially given the widespread inequality in access and the constraints due to limited resources [250]. Studies on access to eyecare services among the older population will be relevant. Vision impairment is one of the most common eye-related conditions in older persons. The most causes include cataracts, refractive error, age-related macular degeneration, glaucoma, and diabetic retinopathy [250]. We need more research to understand the burden of these conditions in South Africa. An association between vision impairment and cognitive decline and dementia has been studied extensively in high-income countries with few ongoing studies from LMICs [249]. As more work remains to be

done to achieve universal eye health [251], we need to consider similar studies in our setting.

Chronic respiratory diseases will continue to be a significant cause of morbidity and mortality worldwide as populations age and urbanization increases [251]. Globally, there may be a lack of true estimates of the burden on Chronic Obstructive Pulmonary Disease (COPD) in the older population, which could limit the implementation of required evidence-based interventions [251]. More studies are also needed to understand the burden of COPD among older persons in South Africa, as well as effective interventions to prevent, diagnose and manage COPD in this population.

Mental health and cognitive health are important in older population. Mental health conditions such as depression and anxiety contribute to years lived with disability among older persons [252]. Also, older people with substance abuse issues could be misdiagnosed. Stigma surrounding mental health problems also pose a problem, more research is thus needed in these areas. Also, 'elder abuse' including physical, verbal, psychological, financial, sexual, abandonment, neglect, can cause physical injuries and long-term psychological issues like depression and anxiety [252]. We found few studies on elder abuse, therefore, more studies are required.

In May 2017, the World Health Assembly approved the Global Action Plan on dementia public health response 2017-2025, which aims to "raise dementia awareness and establish dementia-friendly initiatives, reduce dementia risk, diagnose, treat, and care, conduct research and innovation, and support dementia carers". Our review identified only five studies that looked at the prevalence and risk factors for dementia, suggesting that this could also be a fruitful area for increased research locally [252].

Our review is not without limitations. Firstly, study selection was done by one reviewer. However, extraction of information from the included

studies were verified by a second reviewer. Furthermore, our research was limited to studies conducted in English. Finally, no risk of bias assessment was performed to determine the quality of included studies.

## Conclusion

In conclusion, this scoping review of research conducted on diseases affecting older persons in South Africa has highlighted that the majority of studies focused on communicable and non-communicable diseases, mental health and musculoskeletal disorders and determinants of health.

### What is known about this topic

- Numerous countries in sub-Saharan Africa, including South Africa are witnessing an increase in the number of older persons;
- Interventions are required to help older people live longer, healthier lives in South Africa;
- Researching the health conditions affecting this population is a crucial step towards formulating these interventions.

### What this study adds

- The majority of the studies on health conditions affecting older persons focused on infectious diseases, non-communicable diseases, mental health, musculoskeletal conditions, and cognitive health;
- The epidemiology of these conditions needs to be more described;
- Fewer topics related to alcohol and drug use, ageing and frailty, falls, blood disorders, cancer, reproductive health, and eye health were reported requiring further research.

## Competing interests

The authors declare no competing interests.

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## Authors' contributions

This study was conceived by Jane Simmonds, Charles Parry and Charles Shey Wiysonge. The search strategy and search were conducted by Chinwe Iwu-Jaja, with the help of a librarian. The selection of eligible studies and data extraction were done by Chinwe Iwu-Jaja and validated by Anelisa Jaca. Charles Shey Wiysonge supervised the entire study. Chinwe Iwu-Jaja wrote the first draft of the manuscript. All authors made contributions to subsequent drafts. The final version was read and approved by all authors.

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## Tables and figures

**Table 1:** summary of key themes from research on health conditions among older persons in South Africa between 2010 and 2022

**Table 2:** summary of key themes from research on determinants of health among older persons in South Africa between 2010-2022

**Figure 1:** PRISMA flow diagram of the process for study selection

**Figure 2:** number of studies published between 2010-2022 (literature search was conducted up till 8 February 2022)

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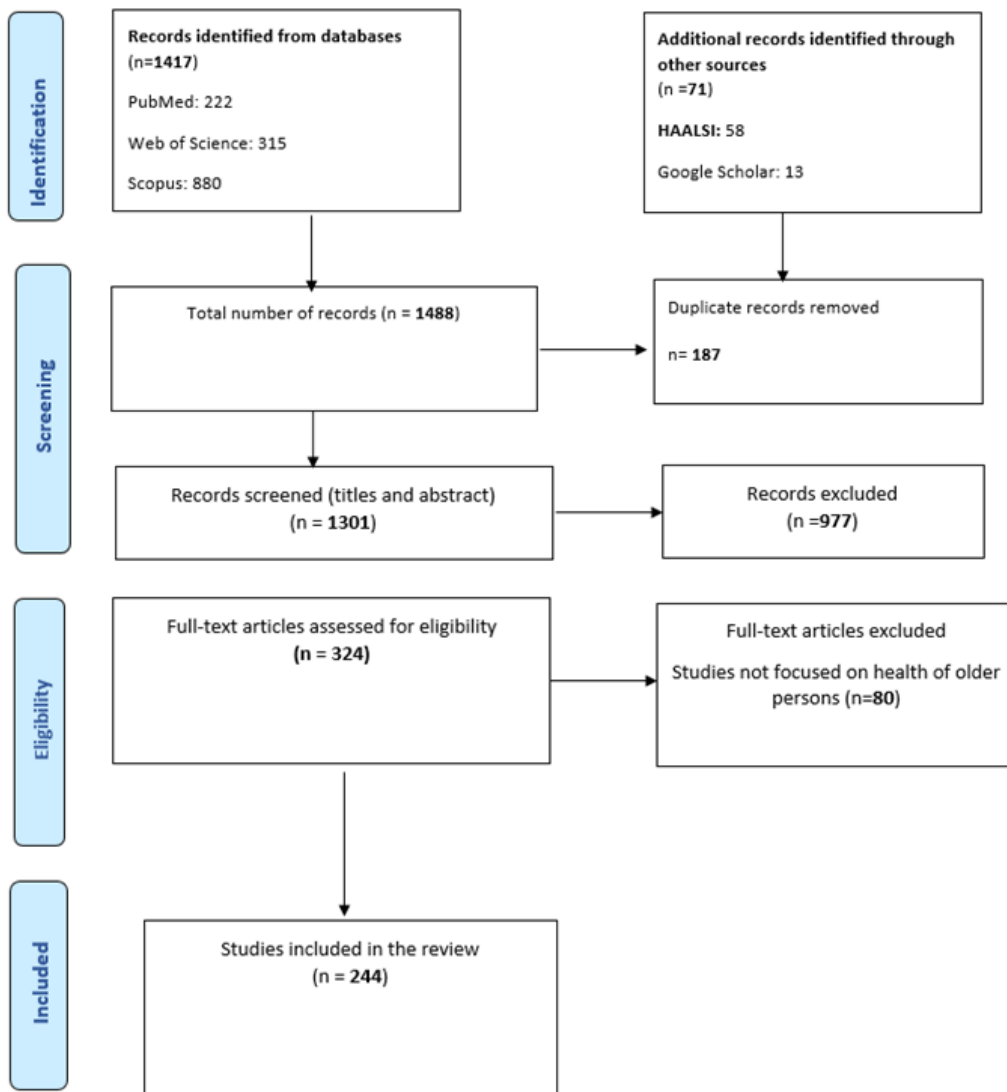
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**Table 1:** summary of key themes from research on health conditions among older persons in South Africa between 2010 and 2022

Health focus	Number of studies	Key themes
Determinants of health	72	Life support, violence against elderly, health policy and expenditure, access to health care
Communicable diseases	46	HIV alone (prevalence and risk factors, adherence to ART, side effects of ARTs, and disclosure stigma, the wellbeing of persons living with HIV,); HIV and other comorbidities such as dementia and cardiometabolic diseases
Non-communicable diseases	39	The burden of NCDs such as hypertension, diabetes, obesity, kidney disease, dyslipidaemia, chronic respiratory diseases, their risk factors and impact on the quality of life. Also includes cancers-prevalence and correlates of cervical and prostate cancer
Mental health	28	Prevalence and risk factors for depression, wellbeing and social support for persons with mental health problems, mental health and multimorbidities
Cognitive health	24	Incidence and prevalence of cognitive impairment, especially dementia: correlates of cognitive dysfunction; sleep disorders; screening tools for cognitive impairment
Musculoskeletal conditions	8	prevalence of osteoporosis, hip fractures, back pain and their impact on the quality of life
Ageing and frailty	6	Experiences of older persons with ageing
Medicine use	5	Adherence to chronic medications, drug-drug interactions, adverse drug reactions, clinicians' prescribing patterns
Falls	4	Prevalence and preventive measures
Dental/Oral health	4	Prevalence of dental diseases
Eye health	3	Prevalence of cataracts and causes of visual impairments.
Hearing disorders	2	Prevalence of hearing impairment and effect on quality of life
Alcohol, tobacco, and other drug use	1	Relationship between alcohol consumption and high-risk sexual behaviour among elderly
Blood disorders	1	Anaemia
Reproductive health	1	Sexual behaviour

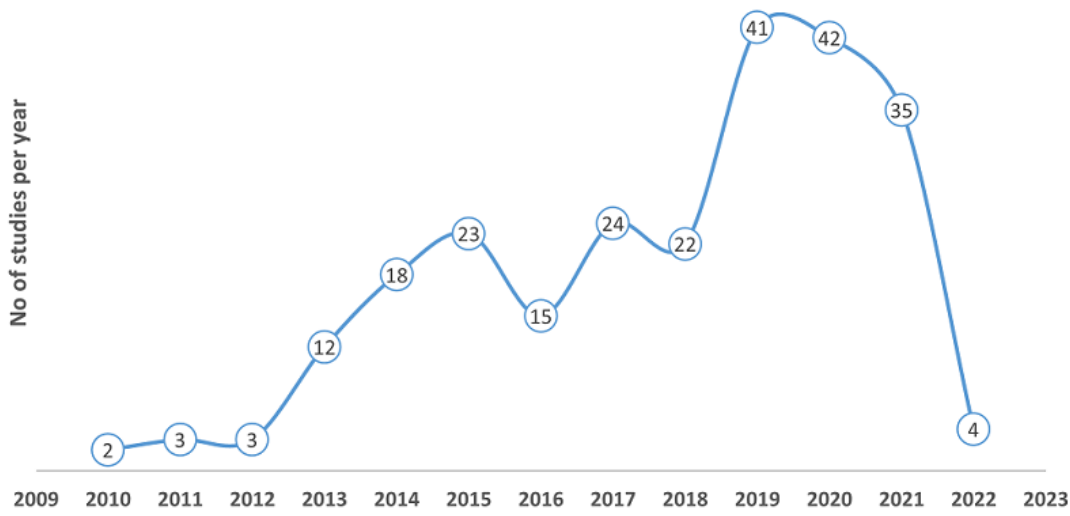
**Table 2:** summary of key themes from research on determinants of health among older persons in South Africa between 2010-2022

Health focus	Number of studies	Key themes
Life>	22	Physical activity and its correlates Vitamins deficiency and supplementation consumption habits, use of sugars and beverages malnutrition BMI dietary guidelines
Quality of life and wellbeing	19	Determinants of quality of life: socioeconomic factors such as living arrangements and the impact of diseases
Care and support of older persons	8	Care and support mechanisms for older persons: social support and access to such support systems, e.g., the support offered to older persons living with HIV
Disability	9	How disability impacts the quality of life including hand grip strength
Access to health care	6	Experiences regarding access to health care and predictors of access to care
Violence and Eldercide	3	Homicides, intimate partner violence
Mortality	3	Causes of mortality
Health expenditure	1	Health expenditure on persons living with HIV
Health policy affecting older persons	1	impact of health policy affecting older persons



**Figure 1:** PRISMA flow diagram of the process for study selection





**Figure 2:** number of studies published between 2010-2022 (literature search was conducted up till 8 February 2022)