Physical Health of the Elderly and Associated Factors in Rural Niger

Amani HACHIMOU, Group of Research et Action for Development (GRADE Africa), Niamey (Niger).
Aboubacar Chaibou NOUROUDINE, Group of Research et Action for Development (GRADE Africa), Niamey (Niger).

Contact Information:
GRADE Africa
BP: 186 Niamey, Niger
Tel: +227 97673167
Email: hachimou.amani@yahoo.fr

Abstract

Elderly health problems have many implications for public health programs in Sub-Saharan Africa. However, there is little evidence on the health of the elderly, particularly those residing in rural areas. This paper aimed to identify factors associated with the physical health of older persons in rural Niger. The data used are from the National Harmonized Survey on Living Conditions of Households (EHCVM-2020) conducted by the National Institute of Statistics of Niger. Based on the United Nations (UN) definition of the elderly, a sample of people aged 60 and over was considered for the analyses.

According to the logistic regression results, the risks of self-reported poor physical health are more prevalent among the following older persons: those residing in the regions of Maradi, Tahoua and Agadez, very older persons (80+ years), women; those who do not carry out any economic activity; those not controlling their household income, those from large households and female-headed households. The high prevalence of physical morbidity observed suggests that there is an urgent need to develop geriatric care services in developing countries like Niger. There is an immediate need to improve financial incentives for the elderly, given the health and social security challenges they face in Niger.

Key words: Rural, Physical health, elderly, Niger.

Introduction

Demographic patterns across all nations have changed considerably over the past century, recognized as an achievement for humanity. Factors, such as decreased mortality rates, decreased birth rates, and migration trends, contribute to changes in population structure, and thus, can be directly related to population aging (Bloom DE and Luka DL, 2016). In sub-Saharan Africa, population aging is taking place in the midst of challenges such as lack of health infrastructure and services (Bigombe B, Khadiagala GM 2003). This situation is compounded by the increase in non-communicable diseases such as cancer, cardiovascular disease and several other health problems later in life (UNFPA & HAI 2012).

In Niger, the proportion of elderly people has increased from 4.9% in 1977 to 4.5% in 2012 (Niger CENSUS Report 2012). It is clear that, given this rate and trend, the country is far from 10% considered the threshold of population aging. However, this reality hides the fact that the number of elderly people is increasing at a rapid pace. From 249,474 individuals in 1977, the number of people aged 60 and over rose to 496,120 in 2001 before reaching 756,074 in 2012. This means that the number of elderly people has almost doubled. Based on the 2012-2035 population projections, their number is estimated at 911,846 elderly in 2021, or 3.8% of the total population. It will be 1,043,862 elderly in 2025. Although the provision of services and care has improved significantly through the improvement of the minimum package of activities by level of care and the contribution of private health structures, the health needs of the elderly remain insufficiently covered. In addition, there is a lack of specific health care services for the elderly. It is also important to note the absence of a document of procedures, protocols, and standard norms for the care of the elderly, which limits the specific care of this vulnerable group by the providers.

This increase is accompanied by health problems of the elderly and the challenges that this poses to public health programs. In rural areas, the scarce health infrastructure is unevenly distributed and long distances to health services and lack of economic means limit the use of health care (Niger Ministry of Health 2011). A study by *Niger Bureau of Statistics (2013)* found that 48% of households are poor and households with at least one person aged 65 and over face a higher risk of experiencing food insecurity.

In Niger, in terms of public policy, only retired persons, a small portion of the elderly, receive social protection (Moussa 2013). Intergenerational supports and care at the family and community level remain the most common mode of assistance and support for older adults. At this old age considered as the age of retirement and rest, as the elderly are still active (51.2%, Niger Bureau of Statistics 2013), poor physical health is the source of fear and discomfort among them because it may diminish their productivity or reduce them to beggars and dependents (UN World Population Ageing 2017). Although many people can now expect to live longer, the risk of having at least one chronic disease such as hypertension or diabetes increases with age. Policies and programs for the elderly can only be effective if they are evidence-based. In this context, it is relevant to know more about the health of the elderly in Niger, and very few (if any) studies have been conducted on the physical health of the elderly.

Objectives

This paper aims to identify the associated factors of physical health of the elderly in rural Niger:

- ✓ Identify the main physical health problems encountered by the elderly;
- ✓ Identify and examine the factors associated with the physical health of the elderly;
- ✓ Propose courses of action that could inform health care strategies for the elderly.

Data & methods

Data

The data used come from the Harmonized Survey on Household Living Conditions (EHCVM-2019) conducted by the National Institute of Statistics of Niger. The main objective of the survey is to produce indicators on Household Living Conditions and to lay the groundwork for longitudinal poverty monitoring, considering the 2011 survey as the first in a series of panel surveys. The General Health module of this survey collected information on the main health problem faced by household members in the four weeks prior to the survey, the last health visit, and access to health care. Based on the United Nations (UN) definition of the elderly as those aged 60 years and older, the target population for this paper is persons aged 60 years and older who reported being ill (health problem) in the 30 days prior to the survey.

- ***Dependent variable and measures***

During the survey, the household head was asked the following question about each member of the household, including the elderly: **Did [Name] have a health problem, illness, or accident in the past 30 days?** Thus, our dependent variable is the physical health of the elderly. It is dummy and has modality **1**: poor physical health (if the elderly person had at least one health problem (illness) in the last 30 days) and modality **0**: no poor physical health (if the elderly person had no health problems during the same period). Accidents were excluded from our analyses because of their occurrence regardless of age. Health problems included the following: fever/malaria, diarrhea, dental problem, skin problem, eye disease, blood pressure problem, typhoid fever, stomach problem, sore throat, cough, cold, flu, diabetes, and meningitis.

- ***Independent variables***

The study searches to identify the effects of following and context of residence, household and individual characteristics on the physical health of the elderly.

Features	**Study variables**
Context of residence	Region of residence
Household characteristics	Type of house, radio ownership, cell phone ownership, and fuel type, household size, hhold head gender, age of hhold head, education level of hhold head, welfare of household.
Individual characteristics	Age, sex, marital status and educational attainment, exercise of an economic activity, household asset control.

Methods

Bivariate analysis and multivariate analysis are the two methods discussed. At the descriptive level, Chi-square (and Cramér's V) tests are used to assess the association (and its strength) between the physical health of the elderly and context of residence, household and individual characteristics. The net effects of context of residence, household and individual characteristics on the physical health of the elderly are explored through binomial logistic regression models. If P is the probability of an elderly person experiencing poor physical health, this model is provided by the following mathematical formula: Logit (P) = Log (P/1-P) = $B0 + B_1X_1 + B_2X_2 + B_3X_3 +...+ B_kX_k + E$ where Xj denotes each of the k independent variables; Bj denotes the net effect of Xj on the probability of an elderly person

experiencing physical ill health, E represents the prediction error. The net relative risk of each of the independent variables is determined from the adjusted Odds Ratios obtained by exponentiating Bj in the models. In this study, a relationship is considered significant when the associated probability is less than the significance level set at 5%.

Sample characteristics

The sample distributions by region follow the pattern of the country's population distribution (see Table 1). Indeed, the elderly in the regions of Tillaberi (19.4%), Zinder (18.8%) and Maradi (17.02%) are more represented in the sample than those in the regions of Diffa and Agadez because of their high weight in the national population. They are more numerous in large households. In addition, 3.5% of the elderly surveyed live alone. Analysis of the sample shows that 68.0% of the elderly surveyed come from poor households and 75% live in non-permanent housing. Most of the people in the sample come from male-headed households (86.38%), households whose heads are 55 years of age or older (54.98%), and households whose heads have never been to school (94.38%). Women represent 40% of the study sample compared to 60% of men. The distribution of the sample by five-year age groups shows that people under 70 years of age are more represented in the study. The shares of those aged 60-64 and those aged 65-69 are 36.17% and 23.06% respectively. The distribution by marital status indicates that one out of two elderly people is monogamously married (35.19%) and one out of four elderly people is widowed or divorced (26.98%). It appears that 64% of the elderly in the sample are employed and 67.91% control the household income.

Table 1: Distribution (%) of older persons according to individual and household characteristics.

Variables	Sample (n=1175)	Percent (%)	Variables	Sample (n=1175)	Percent (%)
Region of residence			**Education du CM**		
Agadez	110	9.36	None	1109	94.38
Diffa	100	8.51	Primary	39	3.32
Dosso	175	14.89	Secondary and +	27	2.3
Maradi	200	17.02	**Gender of older persons**		
Tahoua	141	12.00	Masculin	705	60
Tillaberi	228	19.4	Féminin	470	40
Zinder	221	18.81	**Age of older persons**		
Household size			60-64 yrs	425	36.17
1pers	41	3.49	65-69 yrs	271	23.06
2pers	87	7.4	70-74 yrs	244	20.77
3-5pers	467	39.74	75-79 yrs	116	9.87
6-9pers	417	35.49	80 yrs and over	119	10.13
10-24pers	163	13.87	**Marital status**		
Household size			Monogamy	625	53.19
Poor	802	68.26	Polygamy	233	19.83
No poor	373	31.74	Widowed/divorced	317	26.98
Type of house			**Occupation**		
No permanent	884	75.23	Occupied	759	64.6
Permanent	291	24.77	None occupied	416	35.4

Variables	Sample (n=1175)	Percent (%)	Variables	Sample (n=1175)	Percent (%)
Gender of hhold head			**Control of hhold assets**		
Male	1 015	86.38	Control	798	67.91
Female	160	13.62	No control	377	32.09
Age of hhold head					
less 25 yrs	20	1.7			
25-34 yrs	48	4.09			
35-44 yrs	82	6.98			
44-54 yrs	66	5.62			
55-64 yrs	313	26.64			
65 yrs and over	646	54.98			

Study results

Types of self-reported physical health problems.

The data show that older people in Niger face a variety of physical health problems. The most common physical health problems are fever/malaria (56.41%), cough/cold (12.48%), stomach/esophageal reflux (9.82%), and blood pressure (7.82%). Eye disease (4.99%) and diarrhea (4.16%) were also common among the elderly. The analyses indicate that skin problem, diabetes and dental problem are less frequent among the elderly.

Table 2: Distribution (%) of self-reported health problems of the elderly.

Self-reported health problems	Sample	Pourcent (%)
Fever/Malaria	339	56.41
Cough, cold	75	12.48
Stomach problems	59	9.82
BloodPress problem	47	7.82
Eye disease	30	4.99
Diarrhea	25	4.16
Skin problem	14	2.33
Diabetes	5	0.83
Dental problem	4	0.67
Sore throat	3	0.5
Total	**601**	**100.00**

Physical health of older persons and associated factors: Bivariate descriptive analyses

Descriptive bivariate analyses were used to assess (See table 3) the association between the physical health of the elderly and their context of residence, household and individual characteristics.

The results show that the overall prevalence of self-reported poor physical health among the elderly is 53.10%. The analyses revealed regional disparities that show that the prevalence of self-reported poor physical health appears to be higher among the elderly in the regions of Agadez (63.29%) and Maradi (59.7%). On the other hand, the Diffa region has the lowest rate of self-reported poor physical health at

37.64%. With regard to household size, physical health improves as the number of household members increases. Older people from one-person households and those from 3-5 person households have 68.39% and 56.47% of the sick, respectively, compared to 44.32% among people from households with 10 or more members.
Analyses by education level show higher levels of sick elderly people among those with secondary education (or higher). People from non-poor households (64.61%) show more physical ill health than those from poor households (48.72%). Households headed by young and old people seem to expose more old people to poor physical health. Indeed, 62.1% of elderly people from households headed by young people under 25 years of age and 56.19% of households headed by people 65 years and older are ill. When the head of the household is between 25 and 64 years old, the prevalence of poor physical health is relatively low (between 47% and 50%).
Older people from female-headed households seem to face more ill health (66.58%) than those from male-headed households (50.99%).

Analyses by education level show higher levels of ill health among elderly from households headed by people with secondary education (or higher). The results show that elderly women (54.7%) have more sick people than men (52.1%).

The analyses highlight a positive association between the physical health of the elderly and their age. The proportion of sick elderly people increases with age. Indeed, among people aged 80 and over, 3 out of 5 (62.8%) report poor physical health, compared to 2 out of 5 among people aged 60-64 (48.0%). Regarding marital status, widows/divorced persons suffer more from poor physical health (60.5%), followed by monogamous married persons (54.55%). Those who are not engaged in any economic activity are more affected by poor physical health (54.4). Older people who control household resources have more poor physical health than those who do not (48.7%).

The results show that the prevalence of self-reported poor physical health is high among the elderly from the regions of Agadez (63.29%) and Maradi (59.7%); those with secondary education and above (58.47%); women (54.7%); those aged 80 years and above (62.8%); those from one-person households (68.39%) and households of 3 to 5 persons (56.47%); those from non-poor households (64.61%); widows/divorced (60.5%), those with no economic activity (54.4%), those from female-headed households (66.58%); those with control over household resources (55.1%); those from youth-headed households (62.1%); and those of advanced age (56.19%)

Table 3: Proportions (%) of older persons with poor physical health according to context of residence, individual and household characteristics.

Characteristics	**Sample (n=601)**	**Proportions (%) weighted**	**Characteristics**	**Sample (n=601)**	**Proportions (%) weighted**
Region of residence		**Pr = 0,000**	**Education du CM**		**Pr = 0,000**
Agadez	**67**	63.29	None	**570**	53.17
Diffa	**35**	37.64	Primary	**17**	47.21
Dosso	**78**	44.92	Secondary and +	**14**	58.47
Maradi	**119**	59.7	**Gender of older persons**		**Pr = 0,000**

Characteristics	Sample (n=601)	Proportions (%) weighted	Characteristics	Sample (n=601)	Proportions (%) weighted
Tahoua	**80**	60.09	Male	**352**	52.1
Tillaberi	**97**	43.56	Female	**249**	54.7
Zinder	**125**	55.75	**Age of older persons**		**Pr = 0,000**
Household size		**Pr = 0.000**	60-64 yrs	**199**	48.0
1pers	**26**	68.39	65-69 yrs	**144**	56.5
2pers	**56**	61.51	70-74 yrs	**123**	53.7
3-5pers	**246**	56.47	75-79 yrs	**64**	53.7
6-9pers	**205**	50.6	80 yrs and over	**71**	62.8
10-24pers	**68**	44.32	**Marital status**		**Pr = 0,000**
Household size		**Pr = 0,000**	Monogamy	**325**	54.4
Poor	**372**	48.72	Polygamy	**94**	40.8
No poor	**229**	64.61	Widowed/divorced	**182**	60.5
Type of house		**Pr = 0,000**	**Occupation**		**Pr = 0,000**
No permanent	**458**	52.41	Occupied	**383**	52.5
Permanent	**143**	54.74	None occupied	**218**	54.4
Gender of hhold head		**Pr = 0,000**	**Control of hhold assets**		**Pr = 0,000**
Male	**500**	50.99	Control	**183**	48.7
Female	**101**	66.58	No control	**418**	55.1
Age of hhold head		**Pr = 0,000**	**Global Prevalence**	**601**	**53.10**
less 25 yrs	**13**	62.06			
25-34 yrs	**20**	47.49			
35-44 yrs	**33**	43.06			
44-54 yrs	**33**	49.16			
55-64 yrs	**152**	50.57			
65 yrs and over	**350**	56.19			

Physical health of older persons and associated factors: Logistic regression analysis.

Logistic regression models were used to identify the net effects of the context of residence, household characteristics and individual characteristics of the elderly on their physical health.

Context of residence, household characteristics, and physical health of older adults.

The region of residence is a factor of disparity on the physical health of the elderly (see Table 5). Indeed, the results show that, controlling for other variables, elderly people from the regions of Diffa (OR = 0.358; p<0.001), Dosso (OR = 0.611; p<0.001), Tillabéri (OR = 0.562; p<0.001) and Zinder (OR = 0.902; p<0.001) are less likely to report poor physical health than those from the Agadez region. On the other hand, elderly people from the Maradi region are more likely to fall ill than those from the Agadez region. It should be noted that there was no difference in physical health between the elderly in the Tahoua region (OR = 01.004ns; p = 0.174) and those in the Agadez region.

Household size is a discriminating factor in the physical health of the elderly in Niger. Indeed, people from small households are less prone to poor physical health than those from large households. The

counterintuitive result shows that when an elderly person lives alone (OR = 0.793; p<0.001) or with two members in the household (OR = 0.864; p<0.001), he or she is less exposed to poor physical health than when he or she lives in a household with 10 or more members.
Household poverty is a factor significantly associated with physical health among the elderly in Niger. Older people from poor households were 40% less likely to report illness (OR=0.793; p<0.001) than those from non-poor households.
The type of housing was identified as a factor predisposing the elderly to poor physical health. When households were built with permanent materials, older adults from these households were 6% less likely to experience poor physical health (OR= 0.948; p<0.001) than those from households with non-permanent materials.
Membership in female-headed households, those younger than 25 years, and those 65 years (or older) predisposes older adults to poor physical health. Analyses show that older people from male-headed households (OR=0.806; p<0.001) and from those aged 25-54 (OR=0.681; p<0.001; OR=0.613; p<0.001; OR=0.694; p<0.001) are 20% and 30% less likely to experience ill health, respectively, than those from households headed by people aged 65 (or older). The risks of experiencing poor physical health did not differ between older adults from households headed by those aged 55 to 64 (OR=1.009ns; p<0.001) and those headed by those aged 65 or older.
In addition, the education level of the household head was an explanatory factor for the physical health of the elderly. Older people from households headed by people with no education (OR =0.709; p<0.001) or with primary education (OR =0.655; p<0.001) were less likely to report illness than those from households headed by people with secondary education or higher.

According to the logistic regression results, the risks of poor perceived physical health are more frequent among older people from the regions of Maradi, Tahoua and Agadez; those from large households; those from non-poor households; those from households with non-final materials; those from households headed by women, young people under 25 years of age, and people 55 years of age (or older); and those with secondary education or more.

Individual characteristics of the elderly and physical health.

The individual factors of the elderly examined in this article were age, marital status, occupation, and household income control. According to the logistic regression results, elderly men (OR =1.092; p<0.001) are more predisposed to poor physical health than women. Older adults' risk of poor physical health increases with age. Indeed, people aged 60-64 years are 40% less likely to become ill (OR =0.591; p<0.001) than those aged 80 years and over. The risks of becoming ill decrease from monogamous to polygamous marital status. These risks increase from 30% lower among monogamous seniors (OR =0.726; p<0.001) to 60% lower among polygamous seniors (OR =0.392; p<0.001). As expected, economic activity reduces the predisposition of the elderly to poor physical health. Indeed, employed individuals were 17% less likely to become ill (OR =0.829; p<0.001) than those who were not. When controlling for household income, the odds of experiencing poor physical health were lower when older people controlled for household income (OR =0.830; p<0.001).
According to the logistic regression results, the risks of self-reported poor physical health are more frequent among female elderly; those aged 80 years and over; widowed/divorced elderly; those who are not employed; those who do not control for household income.

Table 4: Odds of poor physical health according to context of residence, individual and household characteristics.

Characteristics	Sample (n=601)	Odds Ratios weighted	Characteristics	Sample (n=601)	Odds Ratios weighted
Region of residence		***	**Education du CM**		***

Characteristics	Sample (n=601)	Odds Ratios weighted	Characteristics	Sample (n=601)	Odds Ratios weighted
Agadez	**67**	Réf	None	**570**	0.709***
Diffa	**35**	0.358***	Primary	**17**	0.655***
Dosso	**78**	0.611***	Secondary and +	**14**	Réf
Maradi	**119**	1.300***	**Gender of older persons**		***
Tahoua	**80**	1.004ns	Masculin	**352**	1.092***
Tillaberi	**97**	0.562***	Féminin	**249**	Réf
Zinder	**125**	0.902***	**Age of older persons**		***
Household size		***	60-64 yrs	**199**	0.591***
1pers	**26**	0.793***	65-69 yrs	**144**	0.865***
2pers	**56**	0.864***	70-74 yrs	**123**	0.717***
3-5pers	**246**	1.004ns	75-79 yrs	**64**	0.600***
6-9pers	**205**	1.078***	80 yrs and over	**71**	Réf
10-24pers	**68**	Réf	**Marital status**		***
Household size		***	Monogamy	**325**	0.726***
Poor	**372**	0.594***	Polygamy	**94**	0.392***
No poor	**229**	Réf	Widowed/divorced	**182**	Réf
Type of house		***	**Occupation**		***
No permanent	**458**	Réf	Occupied	**383**	0.829***
Permanent	**143**	0.948***	None occupied	**218**	Réf
Gender of hhold head		***	**Control of hhold assets**		***
Male	**500**	0.806***	Control	**183**	Réf
Female	**101**	Réf	No control	**418**	0.830***
Age of hhold head		***			
less 25 yrs	**13**	1.109***			
25-34 yrs	**20**	0.681***			
35-44 yrs	**33**	0.613***			
44-54 yrs	**33**	0.694***			
55-64 yrs	**152**	1.009ns			
65 yrs and over	**350**	Réf			

Discussion

The results of the study revealed regional disparities in self-reported physical ill health among the elderly. They reveal the regions of Maradi, Tahoua and Agadez as the most at-risk areas for them. Regional disparities in the physical health of the elderly have been observed by other previous studies. In a study conducted in Cameroon, Barthélémy Kuate-Defo (2005) identified older people in the Haa, Famleng, and Demdeng health regions as having the highest propensity to perceive their health as average or poor compared to those in the Djaa and Sedembom health regions. In a study conducted in Uganda, Fred Maniragaba et al, (2019) highlighted that older people living in the Eastern region were more likely to have good physical health than those in the Central region. According to Fred Maniragaba

et al, (2019), existing regional disparities in physical health of older adults could result from cultural and lifestyle differences, including diet. They could also result from occupational status, as well as disparities in the availability and accessibility of health services and health care support.

The results of this study identified large households as being at greater risk of poor physical health for older adults than small households. Older adults living alone or in pairs were less predisposed to poor physical health than those living in large households. The study by Lizhen Ye et al (2021) reached the same results as ours. According to these authors, people living alone had a lower risk of physical frailty. This may be because they are more likely to manage all household and other daily living tasks on their own, which provides more opportunities for physical activity. Another explanation is that older adults living alone may not be able to recognize health problems due to social and financial vulnerability and lack of appropriate formal/informal personal support. In contrast to our study, Wang X et al (2022) found that, compared with older adults living with their spouse or children, those living alone are associated with lower economic status, higher prevalence of chronic illness, multimorbidity, depressive symptoms, and a higher percentage of safety incidents. These findings infer that older adults living alone are more vulnerable to physical, mental, and social health impacts, underscoring the need for societal attention and support to help them maintain multilateral aspects of health and functioning as well as their independence.

Our results revealed that non-poor households predispose older adults to poor physical health. Consistent with our results, Supa Pengpid and Karl Peltzer (2022) found that physical inactivity increased with higher socioeconomic status. It is possible that individuals with higher socioeconomic status are less likely to be physically active because of less physical labor. Contrary results were found in India by Mohd. Rashid Khan, et al (2022) in a study that found higher risks of multimorbidity in older adults with vulnerable socioeconomic status. Elderly people from lower socioeconomic groups are at higher risk of multimorbidity. In the same vein, Saurav Chandra Acharya Samadarshi et al (2020) reveals that adequate income predicts 2.73 times higher quality of life than inadequate income.

The results of the study also showed that older people from households headed by those with a high school education or higher are more likely to report illness. Our results are consistent with Nicole Atchessi's (2016) findings that populations with more education and those living in urban areas and with better access to services report being sick more often (Sen, 2002). Barthélémy Kuate-Defo's (2005) findings show that individuals with a high school education or equivalent have a relatively higher risk of overall physical and psychological frailty. However, previous studies have concluded that people with low levels of education are, on average, frailer than people with higher levels of education.

Logistic regression results indicate that the risk of poor physical health is more prevalent among older women. Gender differences in health status and activity limitations among the elderly tend to be explained by socioeconomic and family differences. According to Barthélémy Kuate-Defo (2005), these differences could reflect a sex difference in knowledge of personal risk level or perception of likely risk of disease. Men might be more likely to underestimate or keep quiet about certain health problems or disabilities, as the social context tends to favor a "brave" attitude on their part, whereas the woman would consider herself a member of the weaker sex.

The results of the study show that people aged 80 and over are more prone to poor physical health. Studies such as the one conducted by Lizhen Ye et al (2021) have proven that comorbidities can occur due to a common risk factor or the outcome of a particular disease leading to other diseases. This risk likely increases with age because of physical and functional vulnerabilities. Research shows that aging

contributes to multimorbidity through loss of physical and functional health, including frailty, which later leads to greater complications such as falls, disability, immobility, and mortality.

Widowed/divorced older people are more likely to report illness than polygamous and monogamous brides. According to the results found by Barthélémy Kuate-Defo (2005), the living conditions associated with widowhood darken the perception of health status. Widowhood has an independent effect on poor health perception at older ages.

Unoccupied older people are more likely to report illness than occupied older people. Barthélémy Kuate-Defo (2005) reached a similar conclusion that employed older people, whether paid or unpaid, have the lowest propensity to perceive their health as poor, and elderly homemakers have the most unfavorable health perceptions. It is possible that employed persons are more likely to be physically active because of work.

Older adults who do not control for income in their home household are at greater risk of poor physical health than those who control for income. Our results are consistent with Fred Maniragaba et al (2019). According to the author, older adults whose assets were controlled by themselves or their spouses were more likely to have good physical health compared with their counterparts whose assets were controlled by their children. This could be partly explained by the fact that control of assets leads to earlier decision making on issues related to improving the health of the older person.

Strengths and limitations

The strengths of this study lie in its national coverage and the inclusion of many sociodemographic and socioeconomic variables. Also, it is one of the few studies to assess factors associated with the physical health of the elderly in Niger. Limitations of the study include the absence of information related to health behavior, physical activity, lifestyle, and dietary and personal habits in the data. In addition, the study assessed health status by self-report. Diagnosis by a health professional may be less subject to bias than self-report. The study was based on cross-sectional data, so it was not possible to establish causality between the physical health of the elderly and the associated factors. Because the survey questionnaire was addressed to household heads, they may have overestimated, underestimated, or misreported a health problem.

CONCLUSION

The present study has provided new insights into the physical health of the elderly and associated factors in Niger. The high prevalence of physical morbidity observed suggests that there is an urgent need to develop geriatric care services in developing countries like Niger. There is also an immediate need to improve financial incentives for the elderly, given the health and social security challenges they face in Niger. The study results argue for creating an enabling environment and building the capacity of older people to maintain control over their household assets. Health policy makers are also encouraged to integrate structures to support community health workers in developing home visiting strategies for the elderly. It is also necessary to conduct more advocacy with policy makers and partners to increase engagement to research on the health of older people in sub-Saharan Africa, as many stakeholders still believe that older people's issues are exclusively Northern issues.

References

1. Abdramane Berthe, Lalla Berthé-Sanou, Blahima Konaté, Hervé Hien, Fatoumata Tou, Maxime Drabo, Fatoumata Badini-Kinda, Jean Macq (2013), les personnes âgées en Afrique subsaharienne : une population vulnérable, trop souvent négligée dans les politiques publiques, Santé Publique 2013/3 (Vol. 25), pages 367 à 371.
2. Attafuah PYA, Everink I, Abuosi AA, et al. Quality of life of older adults and associated factors in Ghanaian urban slums: a cross-sectional study. BMJ Open 2022;12:e057264. doi:10.1136/bmjopen-2021-057264.
3. Banjare P, Pradhan J (2014) Socio-Economic Inequalities in the Prevalence of Multi-Morbidity among the Rural Elderly in Bargarh District of Odisha (India). PLoS ONE 9(6): e97832. doi:10.1371/journal.pone.0097832.
4. Blanchet C, Hamel D, Lamontagne P, Lasnier B, Nolin B et S Tessier. (2015). Facteurs favorables à la santé et problèmes de santé chroniques chez les aînés québécois. Collection Vieillissement et santé. Institut national de santé publique du Québec. Québec. 20 p.
5. Bloom DE, Luca DL. The global demography of aging: facts, explanations, future. In: Piggott J, Woodland A, editors. Handbook of the economics of population aging. Oxford: Elsevier; 2016. pp. 3–56.
6. Kuate-Defo, B. (2005). Facteurs associés à la santé perçue et à la capacité fonctionnelle des personnes âgées dans la préfecture de Bandjoun au Cameroun. Cahiers québécois de démographie, 34(1), 1–46.
7. Lizhen Ye , Liset E. M. Elstgeest, Xuxi Zhang , Tamara Alhambra-Borrás, Siok Swan Tan and Hein Raat, 2021, Factors associated with physical, psychological and social frailty among community-dwelling older persons in Europe: a cross-sectional study of Urban Health Centres Europe (UHCE), BMC Geriatrics (2021) 21:422.
8. Maniragaba F, Nzabona A, Asiimwe JB, Bizimungu E, Mushomi J, Ntozi J, et al. (2019). Factors associated with older persons' physical health in rural Uganda. PLoS ONE 14(1):e0209262. https://doi.org/10.1371/journal.pone.0209262
9. Mohd. Rashid Khan, Manzoor Ahmad Malik, Saddaf Naaz Akhtar, Suryakant Yadav and Ratna Patel, 2022. Multimorbidity and its associated risk factors among older adults in India. BMC Public Health (2022) 22:746.
10. Nicole Atchessi (2016). Recours aux soins de santé des indigents et des personnes âgées en Afrique de l'Ouest. Cas du Burkina Faso et du Nigeria, Thèse de doctorat, Université de Montréal. 240pages.
11. Pengpid S, Peltzer K. Prevalence and associated factors of physical inactivity among middle- aged and older adults in India: results of a national cross- sectional community survey. BMJ Open 2022;12:e058156. doi:10.1136/bmjopen-2021-058156.
12. Saurav Chandra Acharya Samadarshi and al. 2020. Quality of life and associated factors amongst older adults in a remote community, Nepal-12p.
13. Tappen, R.M.; Newman, D.; Gropper, S.S.; Horne, C.; Vieira, E.R. Factors Associated with Physical Activity in a Diverse Older Population.Geriatrics2022, 7, 111.

14. Teresa Seeman and Xinguang Chen, 2022. Risk and Protective Factors for Physical Functioning in Older Adults with and Without Chronic Conditions: MacArthur Studies of Successful Aging, Journal of Gerontology: SOCIAL SCIENCES, Vol. 57B, No. 3, S135–S144.
15. Wang X, Hu J, Wu D. Risk factors for frailty in older adults. Medicine 2022; 101 :34(e30169).
16. World Health Organization (2004) Towards age-friendly primary health care. Available:http://whqlibdoc.who.int/publications/2004/9241592184.pdf. Accessed 2014 May 15.
17. World Health Organization (2008) Age-friendly primary health care centers toolkit. Available:http://www.who.int/ageing/publications/AF_PHC_Centretoolkit.pdf.Accessed 2014 May 15.