Journal of
Ageing and Longevity

MDPI

Article

"I Have Never Visited a Health Center": Ethiopian Centenarians' Perceptions of Their Health Conditions

Samson Chane [1] and Margaret E. Adamek [2,*]

[1] Department of Social Work, Faculty of Social Sciences, Bahir Dar University, Bahir Dar P.O. Box 79, Ethiopia; chanesamson@gmail.com
[2] School of Social Work, Indiana University, Indianapolis, IN 46260, USA
* Correspondence: madamek@iu.edu

Abstract: The global centenarian population is expected to reach 4 million by 2050, yet little is known about the health status of centenarians in Sub-Saharan Africa. A case study examined the health conditions and functionality of nine Ethiopian centenarians. In-depth interviews revealed that all nine were Orthodox Christians and lived with extended family; eight were male. Aside from minor health complaints, centenarians in rural Ethiopia perceived that their sensory/cognitive functionality was normal until their late 90s. Despite a lack of medical care, the centenarians included two survivors, four delayers, and three escapers. Centenarians in rural Ethiopia were embedded in closely knit, religious, multigenerational households and communities and aspired to live resiliently. These findings call for the consideration of the unique health status of centenarians in Global South nations in their own cultural context.

Keywords: centenarians; Ethiopia; health status; sensory impairment

Citation: Chane, S.; Adamek, M.E. "I Have Never Visited a Health Center": Ethiopian Centenarians' Perceptions of Their Health Conditions. *J. Ageing Longev.* **2024**, *4*, 264–273. https://doi.org/10.3390/jal4030019

Received: 1 June 2024
Revised: 30 July 2024
Accepted: 2 August 2024
Published: 6 August 2024

1. Introduction

Various studies indicate a growing number of centenarians, particularly in developed countries [1–4]. The size of the global centenarian population reached 180,000 in 2000 [5], 300,000 in 2010 [6], and 316,000 in 2017 [7]. By 2050 the number of centenarians is estimated to reach up to 4 million [8–10]. China is expected to have the highest number of centenarians followed by Japan, the U.S., Italy, and India [7]. Globally, the centenarian population will grow at a rapid rate and is projected to reach 25 million by 2100 [11,12]. In the developing world, including Africa, there is a scarcity of information about older adults in general and centenarians in particular [5,13–15]. In Ethiopia, the Central Statistical Agency [16] estimated that 5 to 6 million people are age 60 or older, or about 5% of the population. This number is expected to reach 11.5 million by 2050. However, there is no documentation about Ethiopian centenarians in any government reports [15].

Old age involves physical, mental, and behavioral changes that have implications for older adults' health, daily activities, and cognitive status. With the advance of old age, the rate of morbidity increases [17,18] and the level of physical functioning declines [19–21]. Understanding the health status of centenarians from various cultures, including the factors contributing to their longevity, may inform interventions that may enhance the healthy lifespan of the growing number of older adults.

In the Global North, several studies have examined the health conditions, including sensory and cognitive functioning, of centenarians [4,22–25]. Australian centenarians identified ocular disease (70%), arthritis (58%), and hypertension (40%) as common health problems [25]. Research findings from two studies in Portugal found that among 127 centenarians, 46.5% rated their health status as good, very good, or excellent [19,26]. Physical frailty and depression were found to be age-associated health conditions among Portuguese centenarians [26]. The prevalence rate of hypertension among Finnish centenarians reached 19%, whereas in Hong Kong 65% of centenarians had hypertension [27].

Centenarian studies in the U.S. and Canada [28], Greece [29], and Australia [18] indicate prevalence rates of survivors (centenarians who experienced illness before old age); delayers (did not experience illness until their 80 s and 90 s); and escapers (did not experience illness before age 100). Interestingly, nearly one-third of male centenarians (32%) in the New England sample were escapers compared to only 15% of female centenarians (28).

Older people are susceptible to sensory impairment and deterioration of cognitive functioning [30–33]. In France, 57.2% (n = 165) of centenarians had hearing defects [34]. Among Costa Rican centenarians (n = 43), three-quarters (76.7% n = 33) had hearing problems at different levels of severity and 44.2% (n = 19) had visual limitations [35]. According to the Italian Multicentric Study on Centenarians [36], among 126 centenarians, half had a diminished sense of taste.

Centenarians are exceptional people who survive illness and various physical and mental challenges. While not focused on centenarians per se, Aladejare's [37] analysis of macroeconomic indicators in West African nations determined that longevity was lower in nations with higher rates of external debt. Perls [38] advocates for centenarian studies that examine the experiences of older adults of different races and ethnicities as well as those living under varying socioeconomic conditions. In the absence of adequate information about African centenarians, this study aimed to shed light on the health conditions, including sensory and cognitive functionality, of centenarians in Ethiopia. Thus, this study explored the health conditions of centenarians in Ethiopia across their life span based on their own perceptions.

2. Methods

A qualitative case study design was used to explore the health conditions, including sensory and cognitive function, of centenarians. A case study design was a good fit for the purpose of investigating and understanding the health status of Ethiopian centenarians with consideration of their unique context [39–41]. The findings may serve as a source of information to researchers interested in the health status of centenarians in a Global South nation. Accounts of centenarians' health problems and sensory and cognitive impairment can inform stakeholders to take measures to improve the lives of the growing number of the oldest-old, including centenarians.

Nine centenarians were selected through snowball sampling from six *woredas* (local administrative units) found in Bahir Dar City Administration (n = 3), Awi Zone (n = 5), and Debre Markos City Administration (n = 1) in the Amhara Region of Ethiopia. Scarcity of financial resources limited efforts to search for and include more centenarians in the study. Experts working in the Office of Women, Children and Social Affairs, family members, centenarians themselves, and neighbors assisted the first author in identifying study participants.

In the process of recruitment, the first author verified the ages of centenarians, considered their physical strength, memory, and willingness to participate in in-depth interviews and share their perceptions of their physical condition and sensory and cognitive functioning. Data were collected by the first author between December 2015 and January 2019 in the centenarians' homes. Interviews lasted an average of 142 min and were conducted in Amharic. The researcher listened to the voice-recorded interview sessions multiple times during the transcription and translation process followed by cleaning the data and coding. The narrative data were analyzed using descriptive content analysis.

Ethical standards were followed throughout the research process. A letter of permission to conduct the study was secured from the Department of Social Work in the Faculty of Social Sciences at Bahir Dar University. Centenarians and their family members were informed about the study objective and procedures. Centenarians gave informed consent orally to be interviewed. Study respondents were treated in a respectful manner from the initial recruiting contact through to data collection. Pseudonyms were used to protect the confidentiality of study respondents.

3. Results

3.1. Description of Respondents

The mean age of the nine centenarians (eight men, one woman) was 102 years and 3 months. There was an eight-year difference between the youngest and oldest centenarian (see Table 1). Dawit, Akalu, Tamirat, Mersha, and Demeke lived in rural villages in the community, and the other four respondents lived in small rural towns. The nine centenarians had a total of 67 children, 37 of whom were still living at the time of data collection. Bitew, Solomon, and Nebyou lived with their wives, and the rest lived with their children, grandchildren, and great-grandchildren. All respondents were Orthodox Christians; five were monks (Dawit, Akalu, Tamirat, Mersha, and Demeke) and one was a nun (Lakech). Akalu, Lakech, Bitew, and Zelalem were non-literate.

Table 1. Centenarians' Perceived Health Problems, Sensory Organ Defects, and Cognitive Functionality.

Name of Centenarian (Pseudonym)	Sex	Year of Birth	Age during Interview	Health Problems														Problems of Sensory Organs			Problems Related to Cognitive Functionality									
				Dfficulty Walking	Tiredness	Joint Tightness	Back Pain	Hypertension	Anorexia/Loss of Appetite	Diabetes	Dysarthria/Speech Disorder	Dental Problem	Insomnia/Sleeplessness	Severe Headache	Constipation	Anxiety	Urinary Incontinence	Hearing Defect	Conjunctivitis	Blindness	Decrease in Taste	Decrease in Smell	Forgetfulness	Decision-Making	Concentration Difficulty	Decline of Reasoning	Sight Perception	Hearing Pereception	Smell Perception	Decline of Taste
Dawit	M	1906	108	-	-	-	-	X	-	-	X	-	-	-	X	-		-	-	-	-	-	-	-	-	-		-		-
Akalu	M	1913	104	X	-	-	X	-	-	-	-	X	X	-	-	-		-	X	-	-	-	-	-	-	-	X	-		-
Lakech	F	1915	103	X	X	X	X	X	X	-	-	-	-	-	-	-		X	X	-	X	X	X	X	X	X	X	X	X	X
Bitew	M	1916	103	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-
Tamirat	M	1916	102	X	X	X	X	-	X	X	X	-	-	-	-	-	X	X	-	-	X	-	X	X	X	X	-	X	-	X
Mersha	M	1917	101	X	X	X	-	-	-	-		-	-	X	-	X		-	-	X	-	-		X	-	-	X	-	-	-
Solomon	M	1917	100	-	-	-	-	X	-	X	-	X	-	-	-	-		X	-	-	-	-	-	-	-	-	-	X	-	-
Demeke	M	1917	100	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-
Nebyou	M	1918	100	-	-	-	-	-	-	-	-	-	-	-	-	-		X	-	-	-	-	-	-	-	-	-	X	-	-
Total				4	3	3	3	3	2	2	2	2	1	1	1	1	1	4	2	1	2	1	2	3	2	2	3	4	1	2

Dashes in the table indicate "not applicable" (the study participant did not have that health problem).

Mersha, Solomon, and Demeke attended church education and could read and write. Dawit completed eighth grade and earned a certificate for completing a 3-year teachers' training program. Nebyou dropped out of grade nine. Farming was a lifelong occupation for Akalu, Tamirat, Mersha, and Lakech. The remaining centenarians were engaged in non-farm activities, sometimes combining two or three types of occupations. Dawit (108) served as a schoolteacher for many years and then became a farmer and a priest in a rural parish. Bitew (103) was a shoemaker and business owner; Demeke (100) worked as a "bounty hunter" and ended up as a retired farmer. Solomon (100) was an administrator and secretary of senior officials until his retirement. Nebyou (100) spent half of his life as a mechanic. The main sources of income for centenarians were derived from children's support, rent from small plots of farmland, rental houses, and pension.

Perceived Health Problems

Centenarians mentioned 14 health conditions that they had experienced based on their self-perceptions and partly considering medical reports. The health conditions they noted included difficulty walking, tiredness, joint tightness, back pain, hypertension, anorexia/loss of appetite, diabetes, dysarthria/speech disorder, dental problems, insomnia/sleeplessness, severe headache, constipation, anxiety, and urinary incontinence. The number of health problems that each respondent noted varied from none to eight. Tamirat (102) struggled with seven health issues, Lakech (103) noted six, and Mersha (101) mentioned five. Akalu (104), Dawit (108), and Solomon noted three or four health issues. Three respondents (Bitew—103, Demeke—100, Nebyou—100) perceived that they were free from any health problems. Four centenarians mentioned difficulty walking as their health

concern. Tiredness, joint tightness, back pain, and hypertension were noted by only three respondents. Anorexia was mentioned as a health problem by two respondents. Sleeplessness, severe headache, constipation, and anxiety were each noted by one respondent.

Two centenarians (Tamirat, Mersha) attributed their difficulty walking with old age and illness, one (Akalu) to wounds from the battlefield in his twenties during the Italo-Ethiopian war of 1936–1941, and one (Lakech) to falling. The severity and duration of difficulty walking varied. Akalu lived with difficulty walking for the last 80 years and shared: "As I got older and thinner, I felt pain on my hip and left leg and became lame as a result of the wound I received in 1936 fighting against the Italians". Tamirat, Mersha, and Lakech experienced difficulty walking for the last three to ten years. Lakech and Tamirat needed the support of other persons to move inside the house. Lakech shared, "I fell in front of the main gate of the house in 2016 and suffered an injury on my left leg and hip fracture. I could not walk a short distance even to the toilet without the support of my daughter and grandchildren". Tamirat was bedridden for the last three years. In order to receive morning sunlight near his home, he is carried by his children (age 70 and older) and grandchildren. Assisted by family members, Mersha could walk in his compound covering an area of not more than a 60 to 70 m radius where his children, grandchildren, in-laws, and close and distant relatives and neighbors reside. Kebede and Nebyou had difficulty walking and their movements were restricted in the homestead. Dawit, Bishaw, and Solomon are able to walk far independently in the neighborhoods, to the church, and to the marketplace.

Lakech, Tamirat, and Mersha reported tiredness. Different from other respondents, these three centenarians had a poorer health profile and problems with the functionality of their sensory organs. Collectively, these three mentioned ten illnesses, each experiencing five to seven. They noted deterioration of their physical strength that resulted in tiredness. Mersha attributed his tiredness to his restricted mobility as a result of blindness. Akalu experienced joint tightness/pain since his twenties, while Lakech, Tamirat, and Mersha did not experience joint pain until their late nineties. Centenarians noted injury from bullets (Akalu), falling (Lakech), and experiencing multiple diseases (Tamirat and Mersha) as causes of joint pain. They felt joint pain in their hips, knees, and legs that hindered walking and sitting. Akalu, Lakech, and Tamirat experienced back pain that created discomfort with movement and sleeping and barred them from conducting previous activities. Surprisingly, Dawit, 108, noted that he was free from back pain: "I can walk upright, bend down to pick materials from the ground, and tie shoelaces easily".

Dawit, Lakech, and Solomon were hypertensive and took physician-prescribed medication. Dawit (age 108) survived a stroke in 2015 that exposed him to minor dysarthria/speech disorder. Solomon and Lakech were not taking medicine regularly, contributing to a decline in their health. Lakech and Tamirat reported anorexia or loss of appetite. They associated their loss of appetite with sickness, loss of taste and smell, and restriction from dietary salt intake due to hypertension and diabetes. Lakech and Tamirat changed their dietary habits, excluding some foods from their meals. Lakech skipped meals, sometimes eating only once a day. For Lakech and Tamirat, the loss of appetite contributed to low food intake, weight loss, and reduced physical strength and functional capacity. Tamirat and Solomon suffered from diabetes. Since age 98, Solomon took medication daily as prescribed by a physician. Later on, he became fed up with taking medication and declined to adhere to the advice of the physician, including abstaining from alcohol and eating the raw meat that he really enjoyed eating.

Dawit and Tamirat developed minor dysarthria, a type of speech disorder characterized by cessation and slurring of words. Dawit shared, "I had dysarthria after experiencing a stroke in 2015 at the age of 107". Tamirat was not clear how he became a victim of dysarthria. The problem occurred suddenly when he woke up the morning after a stroke. Akalu and Solomon lost part of their molars and premolars in their late 90s because of tooth decay. They faced difficulty with chewing and took a longer time to finish their meals. The loss of teeth restricted them from eating roasted barley, beans, and corn. Solomon

substituted some of the missing teeth with gold crowns. The loss of teeth slightly changed the facial appearance of Akalu and Solomon. On the contrary, six centenarians (Dawit, Lakech, Bitew, Tamirat, Alamirew, and Nebyou) had strong and intact teeth. They had no problem with chewing cereals, meat, vegetables, and fruits.

Akalu experienced insomnia or sleeping difficulty after the age of 100. Bitew stated, "I didn't have enough sleep. I went to the bedroom early and slept for a short time and woke up soon. Then, I thought why and how I lost my property till the dawn". Akalu had a similar sleeping disorder. Bitew and Mersha experienced recurring and painful headaches that lasted 3 to 5 h about twice a week. Mersha worried about his future life and developed anxiety. Besides difficulty walking, tiredness, dysarthria, joint tightness, back pain, diabetes, and anorexia, Tamirat had challenges with urinary incontinence.

3.2. Decline of Sensory Functioning

Old age is characterized by a decline in sensory functioning. Six study participants mentioned functional problems related to hearing (n = 4), sight (n = 3), taste (n = 2), and smell (n = 1). Lakech, Tamirat, and Solomon experienced mild hearing loss. They had difficulties hearing low-pitch sounds from a short distance unless a person sat closely and spoke loudly. During the interview sessions they asked the first author to repeat what he said multiple times. Nebyou (100) faced a severe loss of hearing and used hearing aids for the past six years: "I had hearing problem with my ear. I could hear assisted by hearing aids that my daughter sent me from abroad". Due to his hearing restrictions, he sometimes misunderstands messages.

Three respondents had sight limitations. Akalu and Lakech were diagnosed with conjunctivitis at the ages of 101 and 98, respectively, and had a partial recovery after receiving medical treatment. Mersha (101) remembered the decline of his sight at age 90 or 91. He became completely blind at age 98. Losing his wife and his sight in the same year was an unbearable time for Mersha. He relied heavily on the assistance of his children, grandchildren, and in-laws to use the traditional toilet room and to go to neighbors' houses for a coffee ceremony and social occasions.

After the age of 100, Lakech and Tamirat faced the problem of ageusia, a loss of their sense of taste. They consumed food and drinks without experiencing any flavor. Lakech developed anosmia (loss of sense of smell) at the age of 101. She was the only respondent who reported a decline in the sense of smell. She could not perceive the odors of foods, drinks, or materials. Lakech and Tamirat found foods and drinks tasteless. Lakech explained how the decline in her sense of smell and taste affected the quality of her life: "I had to eat and drink to live without getting the real flavors of foods and drinks".

Interestingly, while impairment of sensory organs affected the respondents' capacity to perceive what they see, hear, smell, and taste to varying degrees, three centenarians—Dawit (108), Bitew (103) and Demeke (100)—reported no sensory functioning problems.

3.3. Decline of Cognitive Functionality

Five centenarians (Akalu, Lakech, Tamirat, Mersha, and Nebyou) identified cognitive problems including forgetfulness (n = 2), problems with decision-making (n = 3), difficulty with concentration (n = 2), and decline of reasoning (n = 2). Lakech and Tamirat became forgetful after the age of 100. They forgot where they put items, and sometimes the names of their grandchildren, or exchanged their names and repeated some points. They needed reminders to refresh their memory and to further explain certain ideas. Lakech and Tamirat had concentration difficulty and a decline of reasoning. They had a short span of concentration (about 30 to 40 min) on the issue under discussion.

During the interview session, they had to take a short break of 15 to 20 min to refresh their attention. Lakech and Tamirat shared what they knew and could remember but acknowledged a decline of logical reasoning, analyzing, and synthesizing ideas. Lakech, Tamirat, and Mersha had limited cognitive capacity to analyze and interpret information, to conduct a cost and benefit analysis, and to deal with complicated ideas to make decisions.

Family members respected the autonomy and dignity of Lakech, Tamirat, and Mersha and discussed matters with them in making decisions that affected them.

3.4. Health-Seeking Behavior

Though the interview questions did not focus on health-seeking behaviors, some study participants shared their efforts to relieve their health issues. Participants primarily used home remedies to treat their ailments. Most could not access or afford health care services. Medical self-neglect was observed with one respondent who experienced six different health problems. He was not interested in consulting physicians which emanated from his pessimistic belief about the impossibility of recovering from illness at "the climax of human age". Other respondents had similar tendencies and rarely used health services.

Instead, respondents relied on family supports to compensate for their physical or cognitive limitations. Those who experienced joint pain made home treatments, soaked their joints in warm water, and applied bandages to get relief. Centenarians who had lost some or all of their teeth preferred foods that could be chewed easily. Akalu, 104, reflected, "I quit eating roasted cereals after the removal of my teeth. My teeth are not strong. I eat boiled beans and corn". Demeke, a standout among his peers, exclaimed, "I lived a healthy life throughout my life. I have never visited a health center or hospital to get medical treatment in my life. Thanks to God I am healthy!"

4. Discussion

Centenarians in Ethiopia reported experiencing health problems including a decline of sensory and cognitive functionality that affected their quality of life and daily activities and compromised their autonomy and privacy. However, some centenarians aged with proper sensory and cognitive functioning and enjoyed successful aging. Labelling all centenarians as bed-ridden, frail, senile, and fatigued is erroneous. In spite of physical and health problems, centenarians in this study had no feelings of death anxiety. They thanked God for allowing them to live a long life.

Findings revealed 14 age-related health conditions experienced by centenarians, including difficulty walking, tiredness, joint tightness, back pain, hypertension, anorexia/loss of appetite, diabetes, dysarthria/speech disorder, dental problem, insomnia/sleeplessness, severe headache, constipation, anxiety, and urinary incontinence. Variations are visible in the rate of morbidity prevailing among this group of centenarians. One respondent had eight health conditions, another had six, and four respondents had three to five health conditions. When we traced the past health history of these six centenarians, two persons experienced illness prior to old age and so are considered survivors. Four did not develop health limitations until their late eighties and nineties and so are delayers. Three centenarians reported that they never experienced illness before the age of 100 and hence are categorized under the escapers morbidity profile. One centenarian who had never been to the doctor in his life (Demeke) identified himself as an escaper.

The findings corroborate the presence of survivors, delayers, and escapers among the Ethiopian centenarians in this study, which is similar to research findings from the U.S., Canada, Greece, Australia, and Hong Kong. A study of 424 centenarians in the U.S. and Canada found that 38% (n= 162) were survivors (experienced illness before old age), 43% (n = 182) were delayers (did not experience illness until their 80s and 90s), and 19% (n = 80) were escapers (did not experience illness before age 100) [28]. Out of 47 Greek centenarians, 15% (n = 7) were escapers [29]. A study of 188 centenarians in Australia similarly ranked the survivors (46%, n= 86), delayers (34%, n = 64), and escapers (19%, n = 36) [18].

Prior studies used different research methods to investigate the health profiles of centenarians and identified several diseases not mentioned by the Ethiopian centenarians such as heart disease, non-skin cancer, skin cancer, osteoporosis, thyroid condition, Parkinson's disease, and chronic obstructive pulmonary disease, depression, and fecal incontinence. Chronic diseases like hypertension frequently appeared among centenarians [23,31] outside of the African continent. Martin and colleagues [27] indicated disparities in the prevalence

rate of diseases among centenarians in different countries. Further study is needed to explain the variations in health conditions of centenarians in different areas of the globe.

The Ethiopian centenarians in this study perceived illness as a personal construction attributable to old age and living conditions. For them, illness in late life is inevitable, and they worried more about experiencing suffering from illnesses rather than death anxiety. Though centenarians had health and functional limitations, they had a limited understanding of the scientific explanations and symptoms of disease processes. Centenarians who perceived themselves as healthy may have hidden diseases that could be detected through medical diagnosis that may change their health profiles which, in turn, may have implications for their morbidity profiles.

Going for medical checkups before illness and post-diagnosis at medical follow-ups is not a common practice among centenarians in Ethiopia. Most of the respondents visited physicians only when they felt sick to the extent of not eating and becoming bedridden for days. Regular medical follow-up and implementing health professionals' medical advice may improve centenarians' health conditions; however, many of them were not doing so. Geographic distance and financial constraints were barriers to centenarians acquiring medical treatment at public clinics and hospitals. Rural centenarians and family members with pressing economic problems could not afford transport, medical, and auxiliary costs associated with travelling a long distance to seek medical care. In the Ethiopian context, there are few, if any, physicians with geriatric expertise [15].

Centenarians had defects of sensory organs (sight, hearing, smelling, and taste) with various levels of severity in their late nineties and beginning of centennial age. These sensory functionality problems tended to occur gradually. Respondents had no in-depth understanding about conditions contributing to health problems and sensory and cognitive limitations. Centenarians attributed their health conditions in general terms to old age. Impairment of sensory organs is not unique to Ethiopian centenarians; rather, it is a prevalent problem across the globe [32,33].

Empirical evidence confirmed that in some cases, sensory and cognitive limitations and health problems may influence each other. Centenarians who have had strokes and fractures may experience a decline in cognitive and physical functioning [42]. Likewise, visual and hearing impairment affect cognitive functioning [43]. Visual impairment may engender depression among centenarians [44]. Kuo and colleagues [45] demonstrated the impact of hypertension on logical reasoning. Visual and hearing impairment increased the risk of falls and hip fractures, mortality, decreased cognitive power, and decreased social interaction [46]. Problems with one sensory organ such as vision, hearing, taste, smell, or touch may affect proper functioning of another sense organ [30,47].

Healthy ageing and longevity are influenced by diverse factors, namely, genetic and environmental factors, social and economic support, personality of individuals, cognition level, psychological well-being, and life satisfaction [48]. Therefore, future research on Ethiopian centenarians may focus on how these variables and other macro-, meso-, and micro-level factors impact the lives of escapers/thrivers, delayers and survivors.

5. Limitations

The study results should be viewed considering the practical limitations of data collection. First, the study had a small number of participants from one rural region of Ethiopia with only one female centenarian. Thus, the findings may not represent the experiences of female centenarians or those from urban areas. Second, the process of age validation in rural Ethiopia is very approximate, especially for centenarians. While none of the nine participants ever had a birth certificate, three reported the exact date, month, and year of their births. As is the customary approach, the other six centenarians noted historical events as a reference point to specify their birth year. Third, self-report of health conditions may be inaccurate. However, in this study centenarians were accompanied by family members/carers in almost all cases, most often their adult child. The carers validated the centenarians' responses and were able to report any missed diagnoses or inaccuracies.

Studies have also shown that self-recall of diagnoses of major chronic conditions may be accurate and the accuracy is not significantly affected by the education, sex, or race of participants [7,21].

6. Implications

Generating crystallized knowledge on the health conditions and sensory and cognitive functionality of Ethiopian centenarians necessitates conducting large-scale multidisciplinary research including mental health, neurology, internal medicine, gerontology, geriatric medicine, and gerontological and health social work. Integrating respondents' self-perceptions with medical reports based on standardized measures and applying different research approaches and models is needed. Medical diagnosis may indicate new results that are not perceived by the centenarians themselves. Just as McCormack [49] recommended "a more expansive and multidisciplinary study of centenarians" (p. 179) in Australia, we likewise call for gerontological scholars to actively engage in research to build a foundation of knowledge on centenarians in Sub-Saharan Africa. Considering that national economic policies can contribute to poverty and subsequently diminish longevity [37], we call for Sub-Saharan nations to step up and provide social protection in the form of basic income support to their aging citizens.

The health statuses of the Ethiopia centenarians in this study signify that as people get older, they are likely to experience age-related health problems. Ethiopia's older population is growing. Thus, Ethiopia is expected to prepare for population aging by enhancing its capacity to accommodate the basic needs of older adults, including adopting evidence-based affirmative measures to provide better access and utilization of health services for older adults. Nationwide studies on the socioeconomic and health conditions as well as the sensory and cognitive functionality of different categories of older adults (young old, middle old, oldest-old, centenarians, and supercentenarians) are needed to extend the findings of the present study.

7. Conclusions

Overall, the relative health of this group of Ethiopian centenarians is remarkable considering the minimal health care they received throughout late life and the lack of geriatric professionals in Ethiopia. Despite their longevity, poverty, and minimal health care, what stands out about this hearty group of older adults is the lack of chronic disease. Instead of labeling the disease-free respondents as "escapers", a more fitting label would be "thrivers". Their lives illustrate the possibility of a healthy old age beyond a century within a context of organic foods, regular exercise (e.g., walking, hauling wood for fuel, farming), and strong family support. Future research could help to illuminate the facets of the lives of Global South centenarians that, while seemingly primitive by Western standards, are the very things that keep them healthy well into late life.

8. Epilogue

The first author has confirmed that seven centenarians have passed away from 2019 to 2023. No follow-up information is available about Bitew and Nebyou.

Author Contributions: Conceptualization, S.C.; methodology, S.C.; validation, S.C. and M.E.A.; formal analysis, S.C.; investigation, S.C.; resources, S.C.; data curation, S.C.; writing—original draft preparation, S.C.; writing—review and editing, M.E.A.; supervision, S.C. and M.E.A.; project administration, S.C. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki. The Department of Social Work in the Faculty of Social Sciences at Bahir Dar University in Bahir Dar University gave consent for the study (2016). The study followed the National Research Ethics Review Guidelines (2014).

Informed Consent Statement: Informed consent was obtained from all participants involved in the study.

Data Availability Statement: Raw narrative data available upon request.

Acknowledgments: The authors are grateful to all of the study participants and to Bahir Dar University.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Cho, J.; Martin, P.; Poon, L.W. The older they are, the less successful they become? Findings from the Georgia Centenarian Study. *J. Aging Res.* **2012**, *2012*, 695854. [CrossRef]
2. Engberg, H.; Christensen, K.; Andersen-Ranberg, K.; Jeune, B. Cohort changes in cognitive function among Danish centenarians: A comparative study of 2 birth cohorts born in 1895 and 1905. *Dement. Geriatr. Cogn. Disord.* **2008**, *26*, 153–160. [CrossRef]
3. Soriano, J.B.; Poulain, M.; Grinberg, D.; Balcells, S.; Busquets, X.; Romaguera, D.; Alonso-Fernandez, A.; Busquets, X.; Balcells, S.; Gingberg, D.; et al. Description of extreme longevity in the Balearic Islands: Exploring a potential Blue Zone in Menorca, Spain. *Geriatr. Gerontol. Int.* **2014**, *14*, 620–627. [CrossRef]
4. Stathakos, D.; Pratsinis, H.; Zachos, I.; Vlahaki, I.; Gianakopoulou, A.; Zianni, D.; Kletsas, D. Greek centenarians: Assessment of functional health status and life-style characteristics. *Exp. Gerontol.* **2005**, *40*, 512–518. [CrossRef]
5. Giraldo, G. Counting to 100: A first look at Cuba's National Centenarian Study. *MEDICC Rev.* **2009**, *11*, 1–19. Available online: https://www.medigraphic.com/pdfs/medicreview/mrw-2009/mrw094e.pdf (accessed on 30 July 2024).
6. Serra, V.; Watson, J.; Sinclair, D.; Kneale, D. *Living Beyond 100: A Report on Centenarians*; International Longevity Centre: London, UK, 2011.
7. Green, C.M. Longevity Blue Zone Centenarians: An expository paper. *Inq. J.* **2021**, *13*. Available online: http://www.inquiriesjournal.com/a?id=1899 (accessed on 30 July 2024).
8. Freeman, S.; Garcia, J.; Marston, H.R. Centenarian self-perceptions of factors responsible for attainment of extended health and longevity. *Educ. Gerontol.* **2013**, *39*, 717–728. [CrossRef]
9. Sadana, R.; Foebel, A.D.; Williams, A.N.; Beard, J.R. Population aging, longevity, and the diverse contexts of the oldest old. *Public Policy Aging Rep.* **2013**, *23*, 18–25. [CrossRef]
10. United Nations. *Population Ageing and Development 2009*; Department of Economic and Social Affairs, United Nations: New York, NY, USA, 2009.
11. Robine, J.M.; Cubaynes, S. Worldwide demography of centenarians. *Mech. Ageing Dev.* **2017**, *165 Pt B*, 59–67. [CrossRef]
12. Tanprasertsuk, J.; Johnson, E.J.; Johnson, M.A.; Poon, L.W.; Nelson, P.T.; Davey, A.; Martin, P.; Barbey, A.K.; Barger, K.; Wang, X.-D.; et al. Clinico-neuropathological findings in the oldest old from the Georgia centenarian study. *J. Alzheimer's Dis.* **2019**, *70*, 35–49. [CrossRef]
13. Aboderin, I. Understanding and Responding to Ageing, Health, Poverty and Social Change in Sub-Saharan Africa: A Strategic Framework and Plan for Research. In Proceedings of the Outcomes of the Oxford Conference on Research on Ageing, Health and Poverty in Africa: Forging Directions for the Future, Oxford, UK, 11–13 April 2005.
14. Ferreira, M.; Kowal, P. Minimum Data Set on Ageing and Older Persons in Sub-Saharan Africa: Process and outcome. *Afr. Popul. Stud.* **2013**, *21*, 19–36. [CrossRef]
15. Chane, S.; Adamek, M. Profiles of Ethiopian centenarians: A qualitative inquiry. *Anthropol. Aging* **2021**, *42*, 126–136. [CrossRef]
16. Central Statistical Agency of Ethiopia (CSA). *The 2007 Population and Housing Census of Ethiopia-Statistical Report*; Central Statistical Agency of Ethiopia: Addis Ababa, Ethiopia, 2007.
17. Jopp, D.S.; Boerner, K.; Cimarolli, V.; Hicks, S.; Mirpuri, S.; Paggi, M.; Cavanagh, A.; Kennedy, E. Challenges experienced at age 100: Findings from the Fordham Centenarian Study. *J. Aging Soc. Policy* **2016**, *28*, 187–207. [CrossRef]
18. Richmond, R.L.; Law, J.; Kay-Lambkin, F. Morbidity profiles and lifetime health of Australian centenarians. *Aust. J. Ageing* **2012**, *31*, 227–232. [CrossRef] [PubMed]
19. Araújo, L.; Teixeira, L.; Ribeiro, O.; Paúl, C. Objective vs. subjective health in very advanced ages: Looking for discordance in centenarians. *Front. Med.* **2018**, *5*, 1–7. [CrossRef]
20. Haslam, A.; Hausman, D.B.; Davey, A.; Cress, E.M.; Johnson, M.A.; Poon, L.W. Associations between anemia and physical function in Georgia centenarians. *J. Am. Geriatr. Soc.* **2012**, *60*, 2362–2363. [CrossRef]
21. Sebastião, E. Perceived poor health is positively associated with physical limitations and chronic diseases in Brazilian nonagenarians and centenarians. *Geriatr. Gerontol. Int.* **2015**, *16*, 1196–1203. [CrossRef]
22. Selim, A.J.; Fincke, G.; Berlowitz, D.R.; Miller, D.R.; Qian, S.X.; Lee, A.; Cong, Z.; Rogers, W.; Selim, B.J.; Ren, X.S.; et al. Comprehensive health status assessment of centenarians: Results from the 1999 Large Health Survey of Veteran Enrollees. *J. Gerontol. Med. Sci.* **2005**, *60A*, 515–519. [CrossRef] [PubMed]
23. Takayama, M.; Hirose, N.; Arai, Y.; Gondo, Y.; Shimizu, K.; Ebihara, Y.; Yamamura, K.; Nakazawa, S.; Inagaki, H.; Masui, Y.; et al. Morbidity of Tokyo-area centenarians and its relationship to functional status. *J. Gerontol. Med. Sci.* **2007**, *62A*, 774–782. [CrossRef]
24. Freeman, S.; Kurosawa, H.; Ebihara, S.; Kohzuki, M. Understanding the oldest old in northern Japan: An overview of the functional ability and characteristics of centenarians. *Geriatr. Gerontol. Int.* **2010**, *10*, 78–84. [CrossRef]

25. Richmond, R.L.; Law, J.; Kay-Lambkin, F. Physical, mental, and cognitive function in a convenience sample of centenarians in Australia. *Am. Geriatr. Soc.* **2011**, *59*, 1080–1086. [CrossRef] [PubMed]
26. Martin, P.; Gondo, Y.; Arai, Y.; Ishioka, Y.; Johnson, M.A.; Miller, L.S.; Woodard, J.L.; Poon, L.W.; Hirose, N. Cardiovascular health and cognitive functioning among centenarians: A comparison between the Tokyo and Georgia centenarian studies. *Int. Psychogeriatr.* **2019**, *4*, 455–465. [CrossRef] [PubMed]
27. Riberio, O.; Duarte, N.; Teixeira, L.; Paúl, C. Frailty and depression in centenarians. *Int. Psychogeriatr.* **2018**, *30*, 115–124. [CrossRef] [PubMed]
28. Evert, J.; Lawler, E.; Bogan, H.; Perls, T. Morbidity profiles of centenarians: Survivors, delayers, and escapers. *J. Gerontol.* **2003**, *58*, M232–M237. [CrossRef] [PubMed]
29. Galanakis, M.; Darviri, C.; Pelekasis, P.; Tigani, X. Demographic and anthropometric variables related to longevity: Results from a Greek centenarians' study. *J. Basic Appl. Sci.* **2015**, *11*, 381–388. [CrossRef]
30. Duran-Badillo, T.; Salazar-González, B.C.; Cruz-Quevedo, J.E.; Sánchez-Alejo, E.J.; Gutierrez-Sanchez, G.; Hernández-Cortés, P.L. Sensory and cognitive functions, gait ability and functionality of older adults. *Rev. Latino Am. Enfermagem* **2020**, *28*, e3282. [CrossRef] [PubMed]
31. Kliegel, M.; Moor, C.; Rott, C. Cognitive status and development in the oldest old: A longitudinal analysis from the Heidelberg Centenarian Study. *Arch. Gerontol. Geriatr.* **2004**, *39*, 143–156. [CrossRef] [PubMed]
32. Jopp, D.S.; Boerner, K.; Rott, C. Health and disease at age 100: Findings from the Second Heidelberg Centenarian Study. *Dtsch. Arztebl. Int.* **2016**, *113*, 203–210. [CrossRef]
33. Silver, M.H.; Jilinskaia, E.; Perls, T.T. Cognitive functional status of age-confirmed centenarians in a population-based study. *J. Gerontol. B Psychol. Sci. Soc. Sci.* **2001**, *56*, 134–140. [CrossRef]
34. Herr, M.; Arvieu, J.J.; Robine, J.M.; Ankri, J. Health, frailty and disability after ninety: Results of an observational study in France: Health after ninety. *Arch. Gerontol. Geriatr.* **2016**, *66*, 166–175. [CrossRef]
35. Madrigal-Leer, F.; Martìnez-Montandòn, A.; Solìs-Umaña, M.; Helo-Guzmàn, F.; Alfaro-Salas, K.; Barrientos-Calvo, I.; Camacho-Mora, Z.; Jimènez-Porras, V.; Estrada-Montero, S.; Morales-Martìnez, F. Clinical, functional, mental and social profile of the Nicoya Peninsula centenarians, Costa Rica, 2017. *Aging Clin. Exp. Res.* **2020**, *32*, 313–321. [CrossRef]
36. Italian Multicentric Study on Centenarians. Assessment of sense of taste in Italian centenarians. *Arch. Gerontol. Geriatr.* **1998**, *26*, 177–183. [CrossRef]
37. Aladejare, S.A. Does external debt promote human longevity in developing countries? Evidence from West African countries. *Fudan J. Humanit. Soc. Sci.* **2023**, *16*, 213–237. [CrossRef]
38. Perls, T. Successful aging and its subtypes in centenarians: The Chinese experience. *J. Am. Geriatr. Soc.* **2023**, *71*, 1362–1364. [CrossRef]
39. Creswell, J.W. *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*; Sage: Newcastle upon Tyne, UK, 2003.
40. Saldana, J. *Fundamentals of Qualitative Research*; Oxford University Press: Oxford, UK, 2011.
41. Yin, R.K. *Case Study Research: Design and Methods*, 3rd ed.; Sage: Newcastle upon Tyne, UK, 2003.
42. Dello Buono, M.; Urciuoli, O.; De Leo, D. Quality of life and longevity: A study of centenarians. *Age Ageing* **1998**, *27*, 207–216. [CrossRef]
43. Sun, J.; Li, L.; Sun, J. Sensory impairment and all-cause mortality among the elderly adults in China: A population-based cohort study. *Aging* **2020**, *12*, 24288–24300. [CrossRef]
44. Toyoshima, A.; Martin, P.; Sato, S.; Poon, L.W. The relationship between vision impairment and well-being among centenarians: Findings from the Georgia Centenarian Study. *Int. J. Geriatr. Psychiatry* **2018**, *33*, 414–422. [CrossRef]
45. Kuo, H.K.; Jones, R.N.; Milberg, W.P.; Tennstedt, S.; Talbot, L.; Morris, J.N.; Lipsitz, L.A. Effect of blood pressure and diabetes mellitus on cognitive and physical functions in older adults: A longitudinal analysis of the advanced cognitive training for independent and vital elderly cohort. *J. Am. Geriatr. Soc.* **2005**, *53*, 1154–1161. [CrossRef]
46. Cimarolli, V.R.; Jopp, D.S. Sensory impairments and their associations with functional disability in a sample of the oldest-old. *Qual. Life Res.* **2014**, *23*, 1977–1984. [CrossRef]
47. Liu, C.J.; Chang, P.S.; Griffith, C.F.; Hanley, S.I.; Lu, Y. The nexus of sensory loss, cognitive impairment, and functional decline in older adults: A scoping review. *Gerontologist* **2021**, *62*, 457–467. [CrossRef]
48. Martin, P.; Poon, L.W. Healthy aging among centenarians and near-centenarians: Findings from the Georgia centenarian study. *Maturitas* **2024**, *185*, 108001. [CrossRef]
49. McCormack, J. The emergence of centenarians and supercentenarians in Australia. *Geriatr. Gerontol. Int.* **2005**, *4*, 178–179. [CrossRef]