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## A Qualitative Assessment of Preventive Geriatric Care

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### ABSTRACT

There was a projected growth of up to 80% between 1990 and 2025 in an older adult of Nigeria above 60 years of age. This projected growth assumes an increased workload for almost every healthcare provider to ensure optimal geriatric care. This study aimed to assess preventive geriatrics as a way of geriatric health care. Self-administered questionnaires were distributed among elderly people (60 years and above) residing in the Akure South Local Government Area for at least a year. The survey included several sections to assess multiple aspects such as sociodemographic information, assessment of primary preventive geriatrics, secondary preventive geriatrics as well as tertiary preventive geriatrics as methods of receiving geriatric health care. The response rate was around 96% of the respondents. The mean ( $\pm$  standard deviation) age of the cohort was 72.3 ( $\pm$ 8.4) years. The primary ( $\chi^2 = 39.498$ ,  $df = 12$ ,  $p\text{-value} = 0.000$ ), secondary ( $\chi^2 = 58.5003$ ,  $df = 12$ ,  $p\text{-value} = 0.000$ ), and tertiary ( $\chi^2 = 35.8994$ ,  $df = 12$ ,  $p\text{-value} = 0.000$ ) preventive geriatrics were shown to be a way of geriatric health care. Geriatric health care should focus on prevention, medication use, personalized health management, fall prevention, and vaccination uptake. The study thus recommends that institutions in geriatric care provide educational programs, gratuitous medical evaluations, and social support strategies that can reduce the burden of preventive geriatric care for Nigerian elderly.

### INTRODUCTION

Geriatric health care emerged because of advances in the field of preventative geriatrics. Fertility rates are currently declining quickly and are still low, and as people live longer and expectantly, death rates are also declining (Roser *et al.*, 2013). Humans have always been plagued by the fear of dying and the certainty of aging, and they have always wished to delay aging and resist death (Sainani & Sainani, 2015). According to Peel, McClure, and Bartlett (2015), “healthy aging” is a continuous process that maximizes chances for maintaining and promoting physical, social, and mental wellness, independence, quality of life, and successful life cycle transitions. The acknowledged rise in the elderly population with chronic illnesses and disabilities has resulted in an unparalleled burden.

The triple burden of communicable, non-communicable, and social and economic issues falls on older persons in sub-Saharan Africa. Heart and blood vessel diseases, including hypertension, stroke, cancer, accidents, diabetes, heart disease, musculoskeletal disorders, and respiratory accidents (Park, 2013), dementia (Adebisi *et al.*, 2015), and child abuse (Cadmus & Owoaje, 2012), are frequently caused by them. In healthcare systems across the globe, prevention is seen as the magic bullet, and numerous stakeholders are crucial to both preventing and enhancing the health of older persons. Their living arrangements need to be as comfortable as feasible if this group is to feel at ease. Consequently, “prevention” continues to be the cornerstone of national governments’ and scientific organizations’ health policies.

### Rationale/ Justification for the Review

In developing nations, the trend of population aging is

changing quickly. Now, the population of people over 60 is growing at a rate of 2.5% annually in less developed nations compared to 0.9 in more developed nations. The projections for 2045–2050, which anticipate the growth rate of over-sixties in the least developed nations to be 3.7% compared to 0.2% for the same age group in the more developed countries, highlight this trend. According to the UN (2002), this is eighteen times higher than in the more developed nations.

According to this trend, the world’s senior population will be increasingly concentrated in less developed areas. Thus, it is the rate and velocities at which a nation encounters.

### Objectives

#### General Objective

Preventive geriatrics is a method of providing geriatric healthcare, and this paper aims to describe it.

#### Specific Objectives

1. One method of providing geriatric health care is to look at those key preventative geriatrics.
2. To ascertain whether receiving geriatric health care involves secondary preventative geriatrics.
3. To prove that one method of providing geriatric health care is tertiary preventive geriatrics.

### Hypotheses

H<sub>0</sub>1: Primary preventive geriatrics is not a way of geriatric care.

H<sub>0</sub>2: Secondary preventive geriatrics is not a way of geriatric care.

H<sub>0</sub>3: Tertiary preventive geriatrics is not a way of geriatric care.

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## LITERATURE REVIEW

### Problems of the Elderly:

These include,

#### Problems Due to the Ageing Process

These are the kinds of limitations that come with growing older. These include emphysema, glaucoma, nerve deafness, osteoporosis with decreased mobility, senile cataracts, loss of certain senses, mental attitude changes, etc.

#### Problems Associated with Long-Term Illness

Compared to younger people, elderly folks are more likely to suffer from some chronic conditions. These are heart and blood vascular degenerative diseases: Degenerative conditions affecting the heart and blood arteries become more significant beyond the age of forty. Atherosclerosis develops over time because of lipids forming and the inner walls of the arteries breaking and destroyed. This results in decreased blood flow, blood clot formation, blood vessel ruptures, and elevated blood pressure.

#### Cancer

Beyond middle age, there is an increased chance of cancer. In developed nations, the primary cause of death is cancer. The incidence of cancer rises dramatically beyond the age of forty. After the age of 65, prostate cancer frequently develops.

#### Accidents

Because of a certain amount of calcification that occurs with age, bones might break easily. At home, accidents occur more frequently than outside. Fractures of the femur are a common issue among the elderly.

#### Diabetes

Diabetes is a long-term condition brought on by improper metabolism of carbohydrates. Because of the ageing population, it is the primary cause of death.

#### Diseases of the Locomotor System

Older adults are susceptible to a wide range of joint and non-joint disorders, including spondylarthritis, osteoarthritis, rheumatoid arthritis, myositis, neuritis, fibrositis, and gout. Compared to other chronic diseases, these illnesses cause older persons the greatest amount of misery and incapacity.

#### Respiratory Illnesses

Respiratory conditions like emphysema, asthma, and chronic bronchitis are very important in the final decades of life.

#### Genitourinary System

The most common complaints include an enlarged prostate, painful urination, nighttime urination, and frequent and urgent urination.

#### Psychological problem

##### Mental Changes

Alzheimer's disease, cataracts, and resistance to change are a few mental health issues that older people face. The elderly's living conditions deteriorate because of income declines, which has negative psychological and social effects.

##### Sexual Adjustment

Male sexual activity declines and female reproduction quits between the ages of 40 and 50. Issues with the body and mind could surface during this stage. Depression, envy, and irritability are all extremely frequent.

##### Emotional Disorders

Social maladjustment leads to emotional illnesses. A person's pleasure throughout this phase of life is mostly dependent on how well they have adapted to their age. Anger, disengagement, sadness, exhaustion, and even suicide might result from a lack of coping mechanisms (Lee & Park, 2013). Social issues like homelessness, poverty, loneliness, victimization, and bullying are examples of additional issues.

##### Preventive Geriatrics

The theoretical underpinnings of preventive techniques used in geriatric care are very different from those of other age-related medical specialties (Gupta, 2015).

#### Preventive Strategies Can be Grouped into Three Levels

##### Primary Prevention

A healthy lifestyle, which includes eating balanced food, getting regular exercise, and abstaining from drugs, is intended to prevent disease.

##### Secondary Prevention

Can be defined as a measure that stops the progression of the disease in the initial phase and prevents complications. This means early diagnosis (screening tests, case detection programs) and appropriate treatment of pathological conditions that arise or are discovered at a later age, especially reversible pathologies, to eliminate or minimize the remaining damage.

##### Tertiary Prevention

Refers to minimizing residual disability through the detection and treatment of chronic diseases that are debilitating and established. In addition, it entails reintegrating the crippled patient into society as a self-sufficient, financially successful, and socially engaged person. Medical, psychological, social, and occupational rehabilitation are all included in rehabilitation (Gupta, 2015; Lee & Park, 2013).

##### Preventive Strategies

The preventive strategies include.

### **Adapting a Healthy Lifestyle**

A healthy lifestyle involves engaging in moderate physical activity that enhances cardiovascular and respiratory function, reduces blood pressure, treats dyslipidemia and impaired glucose tolerance, strengthens muscles and joints, enhances mobility and balance, enhances cognitive abilities, and enhances sleep. Having a healthy diet also helps older people stay healthier; non-slip mats should be installed, especially in bathrooms, to help reduce falls and accidents. Outside the house, all pathways need to be level, and hard and have non-slip matting on the stairwell's steps and handrails on both sides. Well-lit rooms, the hallway, stairway, restroom, and toilet, as well as colored doorknobs and electrical switches A lever door handle that is easy to use even for fingers with arthritis should be placed at the top and bottom of the stairs.

### **Immunization**

The elderly are not covered by the widespread immunization campaigns that are methodically put into place in emerging nations. Furthermore, immune system performance is compromised in the elderly. As a result, infections greatly increase in older adults. For older people, vaccinations against diseases like the flu, pneumococcal pneumonia, tetanus, and chickenpox is beneficial.

### **Screening**

Screening is the proactive search in a healthy population for an undetected illness or defect using diagnostic testing, clinical checks, or other quick procedures. Mammograms for breast cancer, clinical eye exams for cataracts, smear tests for cervical cancer, occult blood tests for colon cancer, blood pressure monitors for hypertension, and blood sugar monitors for diabetes can all be performed on older adults regularly. Prostate cancer (PSA level, rectal exam, prostate-specific antigen), etc.

### **Rehabilitating**

An essential component of geriatric prevention is rehabilitation. To train and retrain the individual to the highest degree of functional performance, it necessitates the combined and coordinated use of medical, social, educational, and professional resources. A multidisciplinary team including geriatricians, social workers, clinical psychologists, occupational therapists, and physiotherapists is needed for implementation (Lee & Park, 2013).

### **Theoretical Framework**

The Forced Compliance Theory by Festinger and Carlsmith (1959) and the Theory of Planned Behaviour by Montano and Kasprzy (2008) served as the study's theoretical frameworks.

### **Planned Behaviour Theory**

Attitudes toward conduct are affected by beliefs about what influences a particular behaviour's performance

and consequences, according to the theory of planned behaviour. Subjective norms are influenced by motivations to comply with societal standards and beliefs about those norms. Perceived behavioural control is influenced by the existence or absence of factors that make behaviours easier or harder to carry out. Because older individuals' intentions and beliefs affect their behaviour and attitudes, this theory is relevant to the study. Healthcare professionals' care for elderly persons is influenced by available resources and demographic considerations. A health worker's intentions are determined by his perception of norms and beliefs, i.e., his understanding of how caring for elderly people influences health.

### **Forced Compliance Theory**

People of higher authority or rank can coerce others of lower rank to make statements or do actions that impair their judgment, according to the coercive compliance theory, which was applied in this study. It can be inferred that the power and influence of higher-ranking authorities can alter the opinions of individuals occupying lesser positions. This idea enables us to force changes on public health personnel, who may not always have a welcoming demeanor, to ensure that the elderly receive better and more individualized care. Four stages that can result in transformation were recognized by Cooper & Faizo (1984), namely:

i. The attitude needs to have detrimental effects, as evidenced by the previously mentioned literature, Healthcare professionals' perspectives on elderly patients.

ii. You experience guilt and dissonance when you select bad behaviour. Bad behaviour makes people not understand one another. If someone makes you act unfavorably, you won't experience dissonance—instead, you'll experience togetherness. According to Festinger, a negative attitude makes a person uncomfortable and affects him on a spiritual level.

iii. Festinger says that having a pessimistic outlook unnerves a person and has a spiritual impact.

iv. Individuals (such as medical personnel) are conscious that their actions typically cause dissonance. This illustrates the miscommunication that exists between managers and nurses. The transition from negative to positive opinions toward healthcare providers when analyzing older persons' healthcare experiences suggests that attitudes toward healthcare compliance influence older adults' rates of compliance. assistance from the hospital's medical personnel. These two methods are suited for the study because they emphasize the necessity of implementing every option for providing seniors with proper care.

## **METHODOLOGY**

### **Study Area**

Akure is the capital city of Ondo State and is in southwest Nigeria. It serves as the hub of Ondo State's economy and is one of Nigeria's top producers of crops and natural resources. It is situated where Latitude 70 17' and

Longitude 50 14' converge. The study was conducted in the communities surrounding Akure that are impacted by the explosion of Akure city development, as well as in the Akure-South Local Government Area of Ondo State.

### Sample Design

This cross-sectional study involved senior citizens (65 years of age and up) who had lived in the Akure South Local Government Area for a minimum of one year. The study was restricted to senior citizens who had been living in the neighborhood for a minimum of a year to minimize any bias resulting from an influx of older individuals who might be tourists.

### Sampling Technique

A multi-phase sampling method was used. In the Local Government, one political ward was chosen at random from each of the three districts. After that, two villages were chosen at random from among the ward's constituent communities using a straightforward random selection approach. At the community level, residences were numbered, with a unique number assigned to each. Forty dwellings were chosen at random from a table of random numbers. Each home had one senior person interviewed, and in cases where there were multiple eligible individuals, a respondent was chosen by lottery. A total of 240 older people were given questionnaires based on this.

### Instruments for Data Collection

Data was gathered from the target group using a straightforward questionnaire with 15 items that included both closed- and open-ended questions. The sociodemographic information was the primary focus of section A of the questionnaire, whereas section B dealt with the major research questions. The four-Likert scale used in the questionnaire is as follows: 1 = Strongly Disagree, 3 = Agree, and 4 = Strongly Agree. The researcher and her research assistants administered the questionnaire, which was self-administered as well. 230 surveys were accurately completed and submitted. The respondents were informed about the In-depth Interviews (IDI) and their verbal consent was sought for a pre-interview data analysis appointment. The researcher and two study assistants (one taking notes, the other recording audio on tape) moderated these.

### Data Analysis

The method of geriatric care known as preventative geriatrics was explained using descriptive statistics. Additionally, cross-tabulations were utilized to display how the sociodemographic variables varied in preventative geriatrics. The relationship between the sociodemographic characteristics and the aged people's preventative geriatrics was evaluated using chi-square testing. After that, the binary logistic regression only included the significant variables found in the Chi-square tests. Using this, the sociodemographic factors that influence psychological well-being were determined. SPSS version 15.0 was used for all analyses.

## RESULTS AND DISCUSSIONS

The respondents' descriptive data are shown in Table 1. Their ages were  $72.3 \pm 8.4$  years, with a range of 65 to 106 years. Women made up a bigger percentage (58.7%), and Christians made up roughly 47.8%. In one-half of the cases, the marriage was still intact. 35.7% had a school certificate. This study included six Yoruba tribe members out of 10. Precisely 50% of the participants were independent contractors.

**Table 1:** Frequency Distribution of Demographic Data of the Respondents

Variables	Frequency	Percentage
<b>Age (in years)</b>		
60-64 years	85	37.0
65-69 years	105	45.6
70 and above	40	17.4
<b>Total</b>	<b>230</b>	<b>100</b>
<b>Gender</b>		
Male	95	41.3
Female	135	58.7
<b>Total</b>	<b>230</b>	<b>100</b>
<b>Religion</b>		
Christianity	110	47.8
Islam	100	43.5
ATR	20	8.7
<b>Total</b>	<b>230</b>	<b>100</b>
<b>Marital Status</b>		
Single	15	6.5
Married	115	50.0
Widow/Widower	55	23.9
Divorced	45	19.6
<b>Total</b>	<b>230</b>	<b>100</b>
<b>Level of Education</b>		
Primary	50	21.7
Secondary	82	35.7
Tertiary	73	31.7
No Formal Education	25	10.9
<b>Total</b>	<b>230</b>	<b>100</b>
<b>Tribe</b>		
Yoruba	140	60.9
Igbo	65	28.2
Hausa	25	10.9
Others	0	0.0
<b>Total</b>	<b>230</b>	<b>100</b>
<b>Occupation</b>		
Civil servant	75	32.6
Self Employed	115	50.0
Others (Trading)	40	17.4
<b>Total</b>	<b>180</b>	<b>100</b>

Source: Field Survey 2023

**Testing of Hypotheses**

**Hypothesis 1: Primary Preventive Geriatrics is Not a Way of Geriatric Health Care**

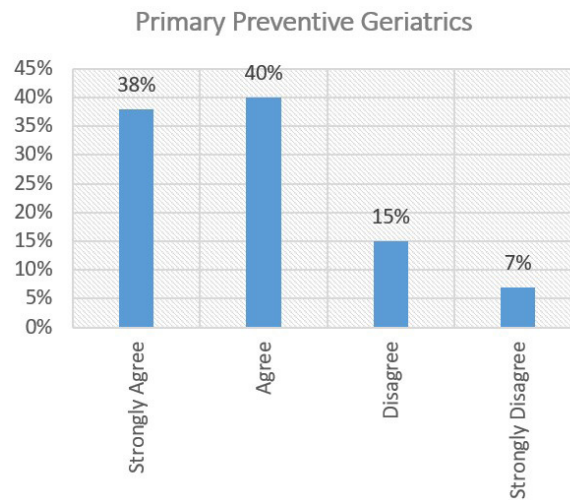
The outcome of hypothesis 1 on primary prevention as a method of providing geriatric healthcare is shown in

Table 2 above. The p-value is 0000, the d.f. is 12, and the  $\chi^2$  is 39.498. The null hypothesis is rejected since the p-value (0.0000) is smaller than the significance level of  $\alpha$  (0.05). As a result, primary preventive geriatrics is a method of providing geriatric healthcare.

**Table 2:** Primary Preventive Geriatrics as a Way of Geriatric Health Care

S/N	Items	SA	A	D	SD	Statistic
1	Self-control on smoking and alcohol consumption	100	84	35	11	$\chi^2 = 39.498$ df = 12 p-value=0.000
2	Taking mental status by activities such as solving crosswords	96	78	31	25	
3	Consuming enough water in the day	77	91	45	17	
4	Improvement of sleeping and resting patterns	89	115	21	5	
5	Going for an annual eye examination	75	98	36	21	
	<b>Summary</b>	<b>87</b>	<b>93</b>	<b>34</b>	<b>16</b>	
		<b>38%</b>	<b>40%</b>	<b>15%</b>	<b>7%</b>	

Source: Field Survey 2023



**Figure 1:** Primary preventive geriatrics

**Hypothesis 2: Secondary Preventive Geriatrics is Not a Way of Geriatric Care**

The outcome of hypothesis 2 on secondary preventive geriatrics as a method of providing geriatric healthcare is shown in Table 3 above. The p-value is 0000, d.f. is 12, and

the  $\chi^2$  is 58.5003. The null hypothesis is rejected because the p-value (0.0000) is smaller than the significance level of  $\alpha$  (0.05). As a result, this study concludes that secondary preventive geriatrics is a method of providing geriatric healthcare.

**Table 3:** Secondary Preventive Geriatrics as a Way of Geriatric Health Care

S/N	Items	SA	A	D	SD	Statistic
1	Performing necessary imaging measures such as echography, angiography, bone densitometry, etc.	91	84	48	7	$\chi^2 = 58.5003$ df = 12 p-value=0.000
2	Requesting laboratory tests such as CBC diff	111	94	21	4	
3	Performing physical examination of the body systems with emphasis on eyes, ears, oral cavity, heart, blood pressure, lung, muscle and joints, nerves, fluency, etc.	119	85	24	2	
4	Fasting blood sugar two hours after a meal, hemoglobin A1C, lipid profiles, liver and kidney function tests urine analysis urine culture, etc.	76	98	35	21	
5	Measuring the blood pressure, assessment of musculoskeletal, colorectal cancer screening, stool examination for occult blood, immune fecal occult blood test (iFOBT), breast, cervix, prostate, and memory problems	94	81	47	8	

Summary	98	88	35	9
Percentage of Summary	43%	38%	15%	4%

Source: Field Survey 2023

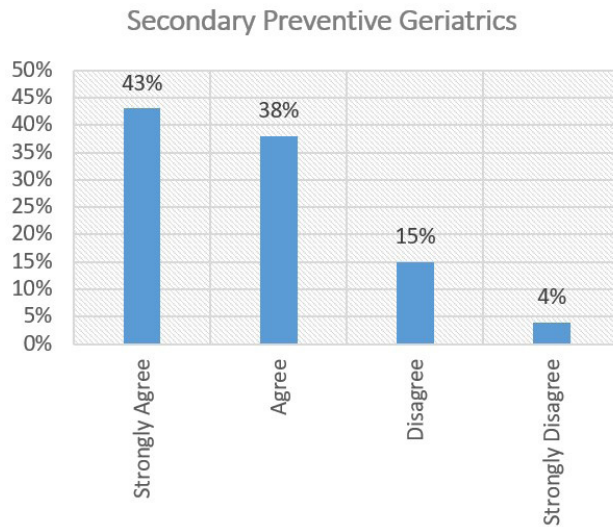


Figure 2: Secondary preventive geriatrics

**Hypothesis 4: Tertiary Preventive Geriatrics is Not a Way of Geriatric Health Care**

The outcome of hypothesis 3 on tertiary preventive geriatrics as a method of geriatric health care is shown in Table 4 above. With d.f. = 12 and p-value = 0000, the

$\chi^2 = 35.8994$ . The null hypothesis is rejected because the p-value (0.0000) is smaller than the significance level of  $\alpha$  (0.05). As a result, this study concludes that tertiary preventive geriatrics is a method of providing geriatric health care.

Table 4: Tertiary Preventive Geriatrics as a Way of Geriatric Health Care

S/N	Items	SA	A	D	SD	Statistic
1	Checking the blood pressure and blood sugar (glucometer	75	97	47	11	$\chi^2 = 35.8994$ df = 12 p-value=0.000
2	Getting vaccines like Annual flu, hepatitis B, varicella-zoster virus, diphtheria, and tetanus every 10 years one complementary dose,	108	75	31	16	
3	Getting calcium, vitamin D, bisphosphonate, and aspirin if administered by a physician	88	95	36	11	
4	Rehabilitation for one with chronic diseases & and care for terminal illness	96	75	48	11	
5	Getting pneumococcal vaccine every 5 years	115	85	29	1	
	<b>Summary</b>	<b>97</b>	<b>85</b>	<b>38</b>	<b>10</b>	
	<b>Percentage of Summary</b>	<b>42</b>	<b>37</b>	<b>17</b>	<b>4</b>	

Source: Field Survey 2023

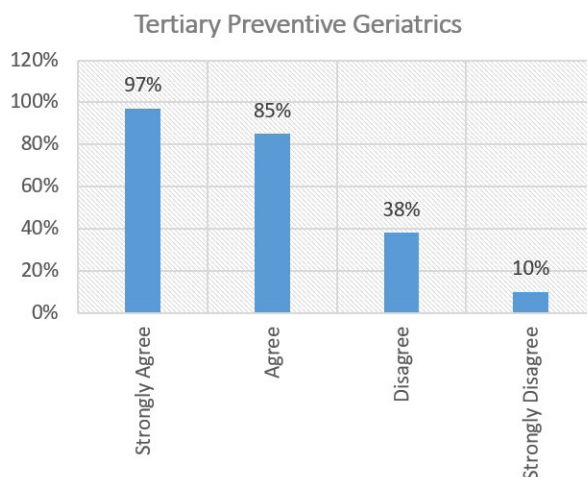


Figure 3: Tertiary preventive geriatrics

### Discussion of Findings

The preventative geriatrics approach to geriatric healthcare was the focus of this investigation. The respondents' average age was  $72.3 \pm 8.4$  years, with roughly 58.7% of them being female. This study demonstrated that the hierarchy of geriatric care included primary, secondary, and tertiary preventative care.

The high percentage (78%) of agreement demonstrated in this study that primary preventive geriatrics is a way of geriatric health care was corroborated in the study of Chu & Chen, (2016) who revealed that balance of the movements by walking, Use of Assistive Technology Devices (ATDs), like cane, walker, wheelchair, special toilet, comfortable shoes, anti-slip socks, special seats and the other assistive and protective devices are methods of providing geriatric health care. This finding was also in line with the study of Volkert and Sieber, (2011), where it was concluded that geriatric health care can be provided by modifying dietary regimens using vegetables, fruits, low-fat, low salt and low-sugar diets and protein intake of 0.8 g/kg body weight daily. Reddy, Jogendra, and Rosendorff, (2014) also supported the findings of this study where it was found that home blood pressure monitoring (HBPM) is one critical activity for elderly people's health care. The findings of this study did not negate the study of Sonmez, Yilmaz, Uckaya, Kilic, and Tapan, (2010) which showed that blood glucose self-monitoring, body weight monitoring, smoking, and alcohol consumption self-control are methods of providing geriatric health care.

Furthermore, the support of more than four-fifths (81%) of the respondents in this study is consistent with the study of Chen, Yan, Yang, Chen & Yeh, (2017) that emphasized the performance of physical examination of the body systems with such as eyes, ears, oral cavity, heart, blood pressure, lung, muscle and joints, nerves, fluency, etc. are methods of providing geriatric health care. Their findings revealed further that request laboratory tests such as CBC diff. Fasting blood sugar two hours after a meal, hemoglobin A1C, lipid profiles, liver and kidney function tests urine analysis and urine culture, etc. as well as performing necessary imaging measures such as echography, angiography, bone densitometry, measure blood pressure, assessment of musculoskeletal, colorectal cancer screening, stool examination for occult blood, immune fecal occult blood test (iFOBT), Methylated Septin-9 (MS-9) DNA blood test are also significant methods of providing geriatric health care.

Moreover, the finding of this study revealed as well that tertiary preventive geriatric is a way of providing geriatric health care as it was supported by (79%) of respondents in the study. This finding was corroborated in the study of Lechleitner, (2016) who opined that the correction of malnutrition and physical activity can prevent Sarcopenia, which was earlier defined by Xiang, Tang, Ma, Yan & Jiang, (2015) as the presence of low muscle mass, low muscular strength, low physical performance, and presence of a high-fat mass and has the worst prognosis in an elderly body. It was also not contrary to the findings

of Pfortmueller, Lindner, and Exadaktylos, (2014) where it was found that one other main problem of the elderly people is falling and its consequences. This dilemma in the elderly population is a major source of injury, which causes disability and hospitalization. It has a significant impact on the loss of quality of life, increasing senior home admissions and healthcare costs.

### CONCLUSIONS

The study concluded that prevention, medication use, individualized health management, prevention of falls, and immunization uptake should be the main priorities of geriatric health care.

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