

“A Study to Assess the Prevalence of Geriatric Syndromes by Using Rga-Screening Tool Among Elderly People Residing at Sanniyasikuppam, Village, Puducherry”.

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Abstract:

Frailty, sarcopenia, weight loss, and dementia are common but often under-recognized geriatric syndromes that adversely affect the health and quality of life of older adults. **Objective:** To assess the prevalence of geriatric syndromes using the Rapid Geriatric Assessment (RGA) screening tool and determine their association with selected demographic variables. A quantitative descriptive research design was adopted among 100 elderly people aged 65–85 years residing in Sanniyasikuppam, Puducherry. Participants were selected using purposive sampling based on predetermined inclusion and exclusion criteria. The study was conducted for **6 weeks** following Institutional Ethics Committee clearance. Data were collected using the Rapid Geriatric Assessment (RGA) screening tool, including assessment of frailty, sarcopenia, weight loss, and cognitive impairment. Among the participants, 42% had pre-frailty, 21% had frailty, 22% had sarcopenia, 64% were at risk of weight loss, and 31% had dementia. Association: Significant associations were identified between selected demographic and health-related variables and the geriatric syndromes assessed. **Conclusion:** Geriatric syndromes were prevalent among elderly people, particularly weight loss, highlighting the importance of early screening and appropriate preventive and management interventions.

Keywords: Elderly, Geriatric Syndromes, Frailty, Sarcopenia, Weight Loss, Dementia, Rapid Geriatric Assessment.

I. INTRODUCTION

Frailty, sarcopenia, weight loss, and dementia are common geriatric syndromes in elderly people across all care continuums. Despite their negative impact on older adults' quality of life, disability, and mortality, they are frequently under-recognized. The Rapid Geriatric Assessment (RGA) was developed at Saint Louis University as a brief screening tool to identify these four geriatric syndromes.

STATEMENT OF THE PROBLEM

“A study to assess the Prevalence of Geriatric syndromes by using RGA-screening tool among elderly people in rural area at Sanniyasikuppam” Puducherry.

OBJECTIVES OF THE STUDY

- To assess the Prevalence of Geriatric syndrome among elderly people by using Rapid Geriatric Assessment -Screening tools
- To associate the Prevalence of Geriatric syndromes among elderly people with their selected demographic variable

II. MATREIAL AND METHODS

Research methodology is a way to solve the problem systematically. It considers the logic behind the methods used in the context of research study (Polit and Beck, 2000). This chapter includes the research approach, research design, setting of the study, variables, population, sample size, sampling technique, criteria for sample

selection, description of the tool, content validity, reliability, pilot study, method of data collection and plan for data analysis

RESEARCH APPROACH

A Quantitative research approach was adopted for the study.

RESEARCH DESIGN

Descriptive research design was adopted for this present study.

SETTING OF THE STUDY

The setting chosen for this study was Sanniyasikuppam village, Puducherry.

POPULATION

All Geriatric people who are present during data collection period.

SAMPLE

Geriatric people at the age limit of 65 years to 85 years who met the inclusion criteria.

SAMPLE SIZE

Sample size is the number of subjects involved in the study. Sample size consists of 100 Geriatric people.

SAMPLING TECHNIQUE

Purposive Sampling technique was adopted for this study.

STUDY DURATION

The duration of the study was 6 weeks after the Institution Ethical Committee (IEC) clearance.

SAMPLE SELECTION CRITERIA

Inclusion criteria:

- Elderly peoples who are residing at Sanniyasikuppam, Puducherry.
- Both male and female elderly peoples.
- Elderly peoples who are present at the time of data collection.
- Elderly peoples who are willing to participate in the study

Exclusion criteria:

- Elderly peoples who are all not willing to participate in the study
- Elderly peoples more than 85years.

TOOL AND INSTRUMENTS

Development of data collection of tools.

Section A: Socio-Demographic variables.

Section B: RGA-screening score system.

DESCRIPTION OF DATA COLLECTION INSTRUMENTS

Section A: This section consist of socio-demographic information from the elderly people such as age, gender, religion, educational status, occupational status, marital status, family income, dietary pattern ,BMI, bad habits.

Section B: It consist of RGA-screening score system used to grade the Geriatric syndromes. Rapid Geriatric Assessment (RGA) is consists of four short screening questionnaires: The FRAIL scale for Frailty, the SARC-F scale for sarcopenia, the Simplified Nutritional Appetite Questionnaires (SNAQ) for Anorexia of aging (AA) ,and the Rapid Cognitive screen (RCS) for Cognition. Its can help to quickly identify most Geriatrics syndrome.

1.THE SIMPLE “FRAIL” QUESTIONNAIRES SCREENING TOOL

Fatigue: Are you fatigued?

Resistance : Cannot walk up one flight of stairs?

Aerobic: Cannot walk one block?

Illness: Do you have more than 5 illness?

Loss of Weight : Have you lost more than 5% of your weight in the last 6 months?

SCORING	INTERPRETATION
0	Normal
1-2	Pre Frail
3-5	Frailty

2. SARC-F SCREEN FOR SARCOPENIA (LOSS OF MUSCLE):

COMPONENT	QUESTION	SCORING
Strength	How much difficulty do you have in lifting and carrying 10 kg?	None=0 Some=1 A lot or unable=2
Assistance in walking	How much difficulty do you have walking across a room?	None=0 Some=1 A lot or unable=2

Rise from a chair	How much difficulty do you have transferring from a chair, table or bed?	None=0 Some=1 A lot or unable=2
Climb stairs	How much difficulty do you have climbing a flight of ten stairs?	None=0 Some=1 A lot or unable=2
Falls	How many times have you fallen in the last year?	None=0, 1-3 Falls=1 4 or more falls=2
Total SARC-F Score: 10		TOTAL SCORE: 4 or more indicates Sarcopenia.

SCORING	INTERPRETATION
0	Normal
1-3	Mild sarcopenia
4-10	Sarcopenia

3. SNAQ (Simplified Nutritional Assessment Questionnaire):

My appetite is Food tastes

- very poor
- poor
- Average
- Good
- very good

When I eat	Normally I eat
a. I feel full after eating only a few mouthfuls	a. Less than one meal a day
b. I feel full after eating about a third of a meal	b. One meal a day
c. I feel full after eating over half a meal	c. Two meals a day
d. I feel full after eating most of the meal	d. Three meals a day
e. I hardly ever feel full	e. More than three meals a day

SCORING: a=1, b=2, c=3, d=4, e=5

A score < 14 indicates significant risk of at least 5% weight loss within 6 months. Total SNAQ Score: 20

SCORING	INTERPRETATION
20	Normal
≤14	weight loss (high risk)

4. RAPID COGNITIVE SCREEN (RCS):

- Please remember these five objects. I will ask you what they are later.**

[Read each object to patient using approx. 1 second intervals.] Apple, Pen, Tie, House, Car

- [Give patient pencil and the blank sheet with clock face]. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o' clock?**

[2 pts/hr markers ok: 2pts/time correct]

- What were the five objects I asked you to remember?** [1 p/eat]

- I'm going to tell you a story. Please listen carefully because after wards, I'm going to ask you about it.**

Jill was a very successful stock broker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chennai. She then topped work and stayed at home to bring up her children .when they were teenagers, she went back to work. She and Jack lived happily ever after. What state did she live in? [1pt]

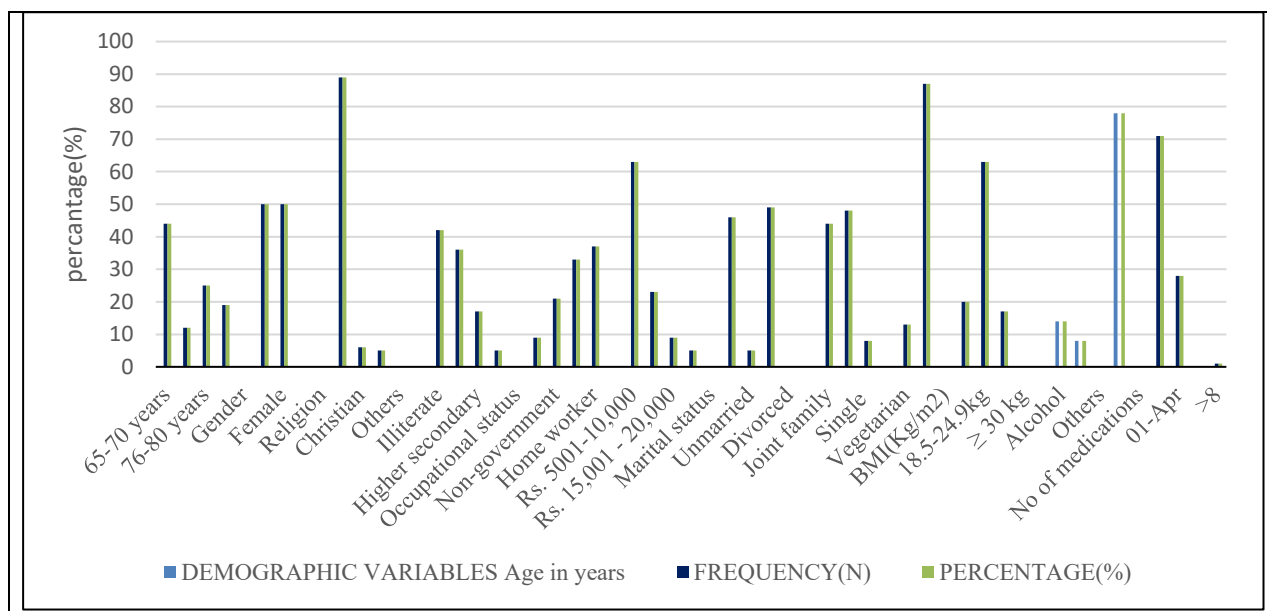
SCORING	INTERPRETATION
8-10	Normal
6-7	Mild Cognitive Impairment
0-5	Dementia

Table 1: Frequency and percentage wise distribution of demographic variables among elderly people.

Sl.No	Demographic Variables	Frequency(N)	Percentage (%)
1	Age in years		
	65-70 years	44	44
	71-75 years	12	12
	76-80 years	25	25
	81-85 years	19	19
2	Gender		

	Male	50	50
	Female	50	50
	Transgender	0	0
3	Religion		
	Hindu	89	89
	Christian	6	6
	Muslim	5	5
	Others	0	0
4	Educational status		
	Illiterate	42	42
	Primary education	36	36
	Higher secondary	17	17
	Graduate	5	5
5	Occupational status		
	Government	9	9
	Non-government	21	21
	Daily wage	33	33
	Home worker	37	37
6	Family Income		
	Rs. 5001-10,000	63	63
	Rs. 10,001 - 15,000	23	23
	Rs. 15,001 - 20,000	9	9
	Above Rs. 20,000	5	5
7	Marital status		
	Married	46	46
	Unmarried	5	5
	Widow	49	49
	Divorced	0	0
8	Type of family		
	Joint family	44	44
	Nuclear family	48	48
	Single	8	8
9	Dietary pattern		
	Vegetarian	13	13
	Non- vegetarian	87	87
10	BMI(Kg/m2)		
	<18.5 kg	20	20
	18.5-24.9kg	63	63
	25.0-29.9kg	17	17
	≥ 30 kg	0	0
11	Habit of Smoking		
	Alcohol	14	14
	Smoking	8	8
	Others	0	0
	None	78	78
12	No of medications		

	0	71	71
	1-4	28	28
	5-7	0	0
	>8	1	1



Bar diagram representation distribution of demographic variables among elderly people.

Table 1: shows frequency and Percentage wise distribution of demographic variables among elderly people. Among the 100 elderly participants, 44% were aged 65–70 years, 50% were female, 89% were Hindu, and 42% were illiterate. Regarding occupation and income, 37% were homemakers and 63% had a monthly family income of ₹5,001–10,000.

Nearly half were widowed (49%) and from nuclear families (48%). The majority were non-vegetarians (87%), had normal BMI of 18.5–24.9 kg/m² (63%), did not smoke (78%), and were not taking medications (71%).

Section B: Assessment of the Prevalence of Geriatric syndrome among elderly people by using Rapid Geriatric Assessment -Screening tools.

Table 2:- Frequency and percentage wise distribution of the level of frailty among elderly people to identify undiagnosed Geriatric syndrome.

LEVEL OF RAPID GERIATRIC ASSESSMENT	FREQUENCY (n)	PERCENTAGE (%)
NORMAL	37	37
PRE – FRAIL	42	42
FRAILITY	21	21
Total	100	100
Mean+Standard deviation	1.43+1.402	

Table –2 shows frequency and percentage wise distribution of the level of frailty among elderly people. Majority of the elderly people 42(42%) had pre frailty level of rapid geriatric assessment, 37(37%) had normal level of rapid geriatric assessment and 21(21%) had frailty level of rapid Geriatric Assessment. The mean and standard deviation of the level of Rapid Geriatric Assessment among elderly people is (1.43+1.402) respectively.

Frequency and percentage wise distribution of the level of frailty among elderly people

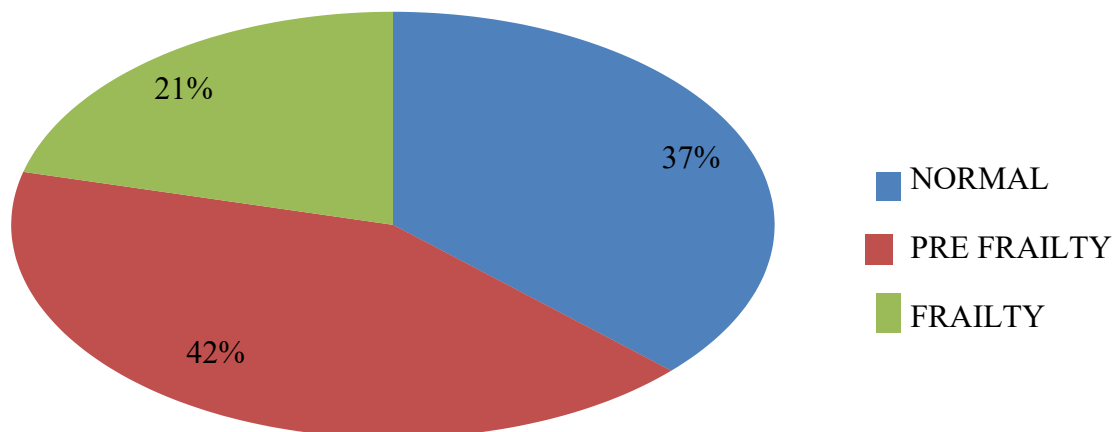


Table 3:- Frequency and percentage wise distribution of the level of Sarcopenia among elderly people to identify undiagnosed Geriatric syndrome.

LEVEL OF SARCOPENIA	FREQUENCY(n)	PERCENTAGE (%)
NORMAL	78	78
SARCOPENIA	22	22
Total	100	100
Mean+Standard deviation	2.06+2.054	

Table –3 shows frequency and percentage wise distribution of the level of **Sarcopenia** among elderly people. Majority of the patients 78(78%) had normal level of Sarcopenia, and 22(22%) had Sarcopenia. The mean and standard deviation of the level of Sarcopenia among elderly people is (2.06+2.054) respectively.

Frequency and percentage wise distribution of the level of Sarcopenia among elderly people

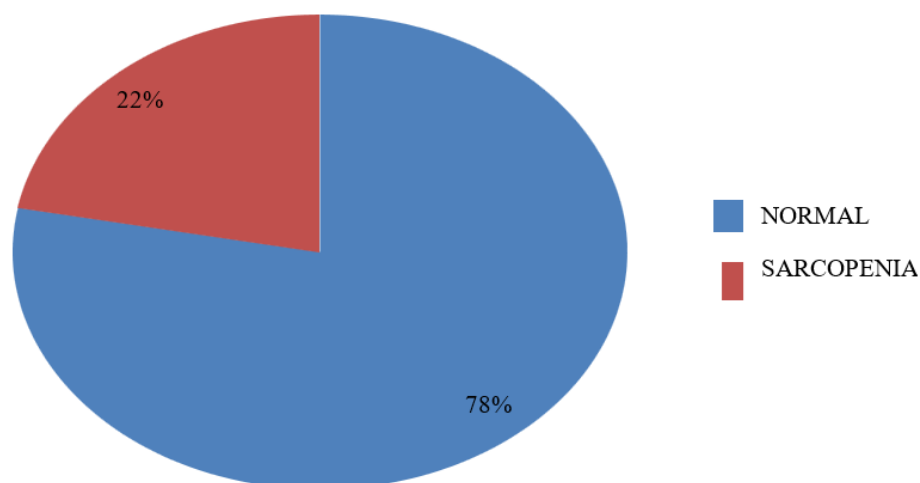


Table 4:- Frequency and percentage wise distribution of the level of weight loss through Simplified Nutritional Assessment Questionnaire (SNAQ) among elderly people to identify undiagnosed Geriatric syndrome.(n= 100)

LEVEL OF SNAQ	FREQUENCY (n)	PERCENTAGE (%)
NORMAL	36	36
RISK LEVEL	64	64
Total	100	100
Mean+Standard deviation	12.10+3.552	

Table –4 shows frequency and percentage wise distribution of the level of **weight loss** Simplified Nutritional Assessment Questionnaire (SNAQ) among elderly people. Majority of the elderly people 64(64%) had risk level of weight loss and 36(36%) had normal level of weight loss The mean and standard deviation of the level of weight loss among elderly people is (12.10+3.552) respectively.

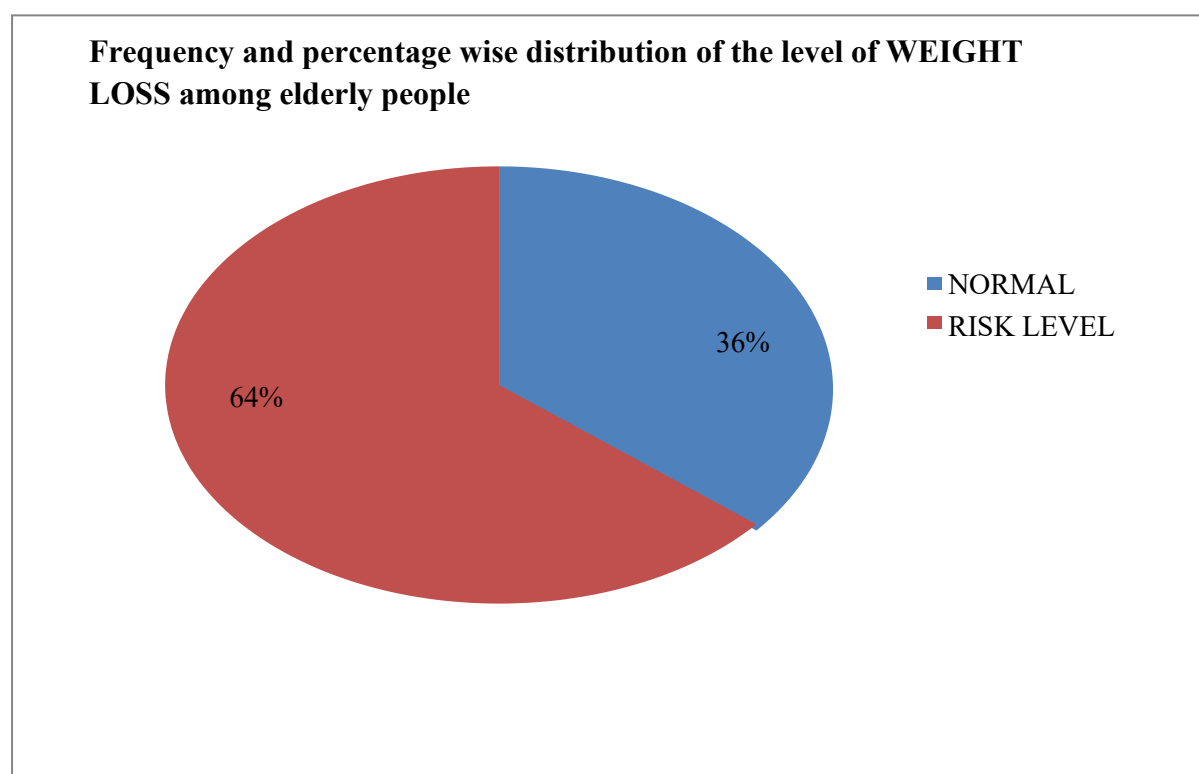


Table 5:- Frequency and percentage wise distribution of the level of Rapid cognitive screen among elderly people to identify undiagnosed Geriatric syndrome.(n = 100)

Level Of Rapid Cognitive Screen	Frequency (N)	Percentage (%)
Normal	40	40
Mild Cognitive Impairment	29	29
Dementia	31	31
Total	100	100
Mean + Standard Deviation	6.68+2.201	

Table –5 shows frequency and percentage wise distribution of the level of Rapid cognitive screen among elderly people. Majority of the elderly people 40(40%) had normal level of cognitive, 31(31%) had Dementia level of rapid cognitive screen and 29(29%) had mild cognitive impairment level of Rapid cognitive screen. The mean and standard deviation of the level of **Dementia** -Rapid cognitive screen among elderly people is (6.68+2.201) respectively.

Percentage wise distribution of the level of Rapid cognitive screen among elderly people

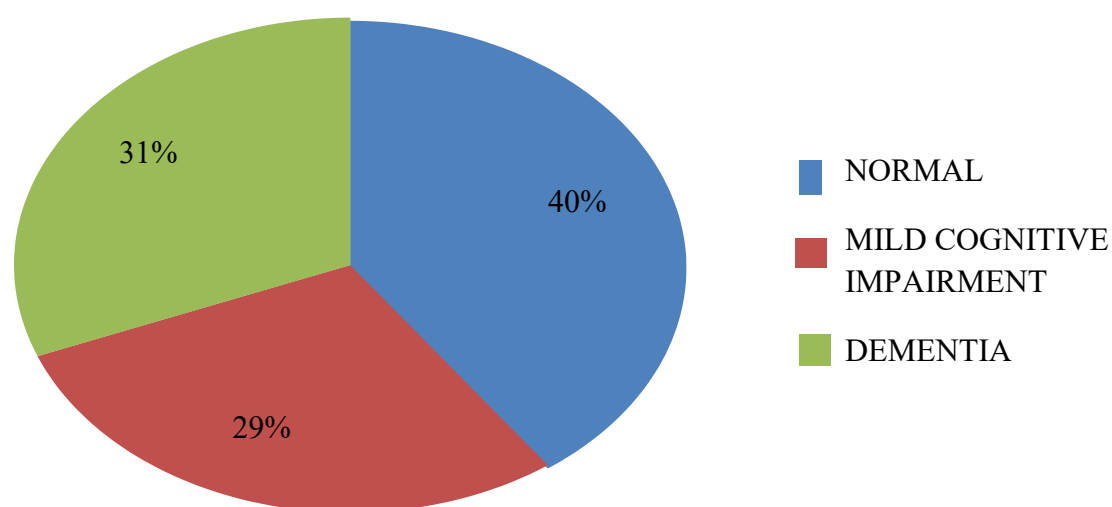
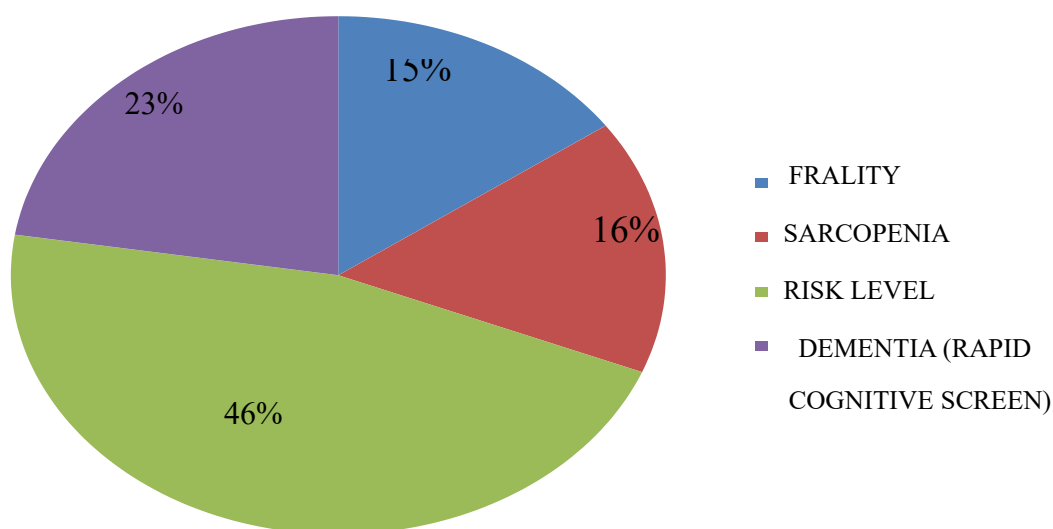


Table 6:- Frequency and percentage wise distribution of the Prevalence of Geriatric syndromes by using RGA-screening tool among elderly people (65-85) in rural area.(N = 100)

Prevalence Of Geriatric Syndromes	Frequency (N)	Percentage(%)
Frailty (rapid geriatric Assessment)	21	15.2
Sarcopenia	22	15.9
Risk level (simplified nutritional assessment questionnaire snaq)	64	46.4
Dementia (Rapid cognitive screen)	31	22.5

Table -6 shows frequency and percentage wise distribution of the Prevalence of Geriatric syndromes by using RGA-screening tool-(Simplified Nutritional Assessment Questionnaire SNAQ) among elderly people (65-85) in rural area. Majority of the elderly people are risk level of weight loss 64(46.4%) respectively.

**PREVALENCE OF GERIATRIC SYNDROMES BY USING RGA-
SCREENING TOOL AMONG ELDERLY PEOPLE (65-85)**



Section C: Association between Geriatric Syndromes and Selected Demographic Variables

The findings of Table 7 revealed that **age, educational status, occupational status, family income, type of family, BMI, and number of medications** had a statistically significant association with the level of **frailty** among elderly people. This indicates that selected sociodemographic and health-related factors may influence the development and severity of frailty among older adults.

The findings of Tables 8 and 9 showed that **age, educational status, occupational status, type of family, and number of medications** were significantly associated with the level of **sarcopenia**, while **age, educational status, occupational status, and number of medications** were significantly associated with **weight loss (SNAQ)**. These findings suggest that demographic characteristics and medication-related factors may contribute to nutritional and physical health problems among elderly people.

The findings of Table 10 revealed that **educational status, dietary pattern, BMI, and number of medications** had a statistically significant association with the level of **dementia (Rapid Cognitive Screen)** among elderly people. Overall, the findings indicate that geriatric syndromes such as frailty, sarcopenia, weight loss, and cognitive impairment are associated with selected demographic and health-related factors, highlighting the need for an **instructional module focusing on the prevention and management of physical and mental ailments among elderly people**.

ESULTS – Major Findings

The study findings revealed that among 100 elderly people, **42% had pre-frailty, 21% had frailty, 22% had sarcopenia, 64% were at risk of weight loss, and 31% had dementia**, while 29% had mild cognitive impairment. The mean $\pm$ SD scores were **1.43 $\pm$ 1.402 for frailty, 2.06 $\pm$ 2.054 for sarcopenia, 12.10 $\pm$ 3.552 for weight loss, and 6.68 $\pm$ 2.201 for cognitive status**. Overall, weight loss was the most prevalent geriatric syndrome identified.

III. CONCLUSION

The study concludes that **geriatric syndromes such as frailty, sarcopenia, weight loss, and cognitive impairment are prevalent among elderly people**. Routine screening using the **Rapid Geriatric Assessment (RGA)** can facilitate early identification and appropriate management of these conditions.

RECOMMENDATION

It is recommended that **RGA screening be incorporated into routine geriatric assessment**, with appropriate physical, nutritional, and cognitive interventions to improve the health and quality of life of older adults.

IMPLICATIONS:

The study has implicated Nursing Practice, Nursing Education, Nursing Administration and Nursing Approach

NURSING PRACTICE

- The effective use of Rapid Geriatric assessment screening tools will assess the undiagnosed Geriatric syndromes and early identification of disease will provide enormous saving in both money and suffering. Since the most people are suffering from Geriatric syndromes.
- Nurses can motivate the clients to follow the self-care management of specific nursing interventions and prevent complications.
- The education about management Geriatric syndromes through Instructional Module effect to improve the knowledge and practice among patients with Geriatric syndromes.
- The attendant manager should have the ability to rouse and motivate the health team by planning and participating in various educational programmes and honing their knowledge and skills.

NURSING EDUCATION

- Nursing curriculum should incorporate geriatric syndromes to enhance student nurses' knowledge and skills in caring for older adults.
- Nursing education should emphasize the use of the Rapid Geriatric Assessment (RGA) screening tool for early identification of geriatric syndromes.
- Adding mild muscular unwinding procedures in reciprocal restorative modalities to the nursing curriculum is critical.
- Impart health education measures and components of health education.
- Lifestyle modification needed to prevent or control disease progression, disability status and improve quality of life

NURSING RESEARCH

- The findings of the study help the Community Health Nurses and students to develop inquiry by providing baseline. The general aspect of the study can be made by further replication of the study.
- A nurse researcher can provide supportive care measures which may improve the Knowledge regarding Geriatric syndromes.
- There is a good scope for nurses to conduct research in this area to find the people who are prone to get Geriatric syndromes by using Rapid Geriatric Assessment-Screening tools Score. This study may help to put forth recommendations for future purpose.

NURSING ADMINISTRATIONS

- **Health administrators** should organize and encourage healthcare personnel to participate in educational programmes to strengthen geriatric healthcare services.
- **Nurse administrators** should conduct in-service education programmes and ensure adequate staffing at Primary Health Centers to improve the knowledge and management of geriatric syndromes.
- Nurse administrator should arrange seminar, conference, workshop, related to Geriatric syndromes for improving knowledge and attitude towards Geriatric syndromes clients.
- The administrator serves as a resource person for other nurses, students, clients and relatives

RECOMMENDATIONS

- Similar study can be conducted in other parts of the country with large sample.
- The Jacobson's progressive muscle relaxation therapy will assist cancer patients to decrease pain and stress along these lines improve quality of life.
- Similar research can be carried out to determine the degree of stress experienced by staff nurses providing community and home health care as well as care in mental health hospitals.
- The same study can be conducted in different settings
- The study can be done as a longitudinal study.
- Qualitative research can also be conducted on this topic through focus group discussion.

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