

An Assessment of The Dynamic Balance of Seniors In Home For Aged In Kerala

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Article Received: Article Accepted: Article Published:

Aging refers to the shifts in physiological and psychological patterns of a human being. Often it creates rupture and imbalances to the whole patterns of the human being. Considering the fact that the world's population is aging rapidly, old age and associated issues require utmost attention and specialised research, especially in the context of a fast paced globalisation, technological advancements and a definitive shift in human relationships. By 2025, most of the population in the developed and developing countries of the world will consist of the aged and the elderly. Demographic data reveals that by 2050, there will be two billion elderly people on the planet. The above mentioned shift in demographics and the alienation faced by the elderly resulting in the aggravation of physiological and psychological traumas is already evident in geriatric studies from Japan. The 4th emerging crisis in Kerala and newly emerging crisis in India is going to be the problems of elderly. At the modern era due to job requirement and urbanization of the young people, the ideal family system has been completely broken and the majority following western culture and nuclear family system came into existence rapidly. The elderly is the main victim of this system. They become unwanted by other family members due to their reduced physical capabilities and intellectual capacity. So, they are fully dependant on the younger generations. With increasing age, medical situation and dependence in ADL become more common, and many people move to an institutional care facility. From 2016 to 2017, the Orphanage Control Board is receiving 5 to 6 to applications each moth seeking permission to start old age homes Kerala. There are 565 old age homes at present in Kerala accommodating 10500 persons. The rising of old age home is mainly due to the migration of youth to other countries and increase in the nuclear family. The ministry of statistics has published are porton the elderly in India in 2016. It puts the elderly people at 12.6 % of the state population, the highest in India.

The quality of life in later years greatly depends on what you can do without pain if possible. Designing effective exercise programme helps to maintain good quality life. For that the present physical attributes needs to be assessed. Many independent individuals often due

To their sedentary life style, functions dangerously close to their maximum ability level during their normal activities. Climbing chairs or getting out of a chair requires maximum effort for many older adults (Evans, 1995) Among the functional fitness, balance plays a vital role of a person's ability to move independently and function effectively, especially as we start older. Good balance help us to prevent from falling and other related injuries. As we age our body undergoes lots of changes due to sudden changes in sugar level, blood pressure, lack of circulation, low iron level, start using of some medication ,some neurological conditions etc. All these leads to a gradual change in our balance mechanism. Hence the researcher intends to assess the level of balance of elderly staying in the old age homes of Kerala.

STATEMENT OF THE PROBLEM

The purpose of the study was to assess the dynamic balance of seniors in home for aged in Kerala. The sub purpose was to determine whether there would be difference in the dynamic balance in senior's age wise The further sub purpose was to determine whether there there would be difference in the dynamic balance in seniors between males and females

Delimitation

1. The study was delimited to elderly men and women from the home for aged in Kerala.
2. The study was delimited to older people above the age of 60.
3. The study was delimited to six districts across the state of Kerala.
4. The study was further delimited to the assessment of selected function al fitness component namely dynamic balance.
5. Participants who have severe health problems were excluded from the study.

HYPOTHESES

Keeping the purpose of the study, the following hypotheses were formulated.

Hypothesis1: It was hypothesized that there would be difference in the components of functional capacity in senior's age wise.

Hypothesis2 : It was hypothesized that there would be difference in the components of functional capacity in seniors between males and females.

SIGNIFICANCE OF THE STUDY

The study would be significant in the following ways

1. The study would help to know the present status of dynamic balance of elderly staying in the old age homes.
2. The result of the study would be an eye opener for the policy makers, social welfare departments and for the long-term care takers.
3. The study would provide relevant information for the authorities to make necessary changes for the health promotion of elderly staying in the old age homes.
4. The study would help to implement better fitness promotion of elderly staying in the old age home

METHODOLOGY

Selection of Subject

The selected old age homes comes under the Social Justice Department and were recognized by the Orphanage Control Board.

The districts were selected on the basis of the highest and lowest proportion of elderly population in each of the SCRs

The present study was conducted among thousand (1000) men and women above the age of 60 from six districts by selecting two districts from each of the three socio-cultural Regions in Kerala.

- The entire state of Kerala was thus divided into North, Central, and South Zone. Among which 2 districts were selected from each zone for viable and approximately accurate results.
- The survey was carried out in 489 males and 511 females.

From north region, district selected for the study are Kannur and Malappuram. From central region districts selected for the study was Palakkad and Ernakulum and from south region, districts selected for the study was Trivandrum and Pathanamthitta

Selection of Variables

Functional capacity variable

Socio-Demographic variables Dynamic balance

- *Age
- *Gender
- *Educational status
- *Occupation
- *Marital status

SELECTIONS OF TEST ITEMS

Senior Fitness Test Battery (Functional Fitness variable)

Variables	Tests	Unit of measurements	Risk
Agility/dynamic balance	8 foot up and go test	seconds	More than 9 second

SELECTIONS OF TEST ITEMS

Socio Demographic Variables

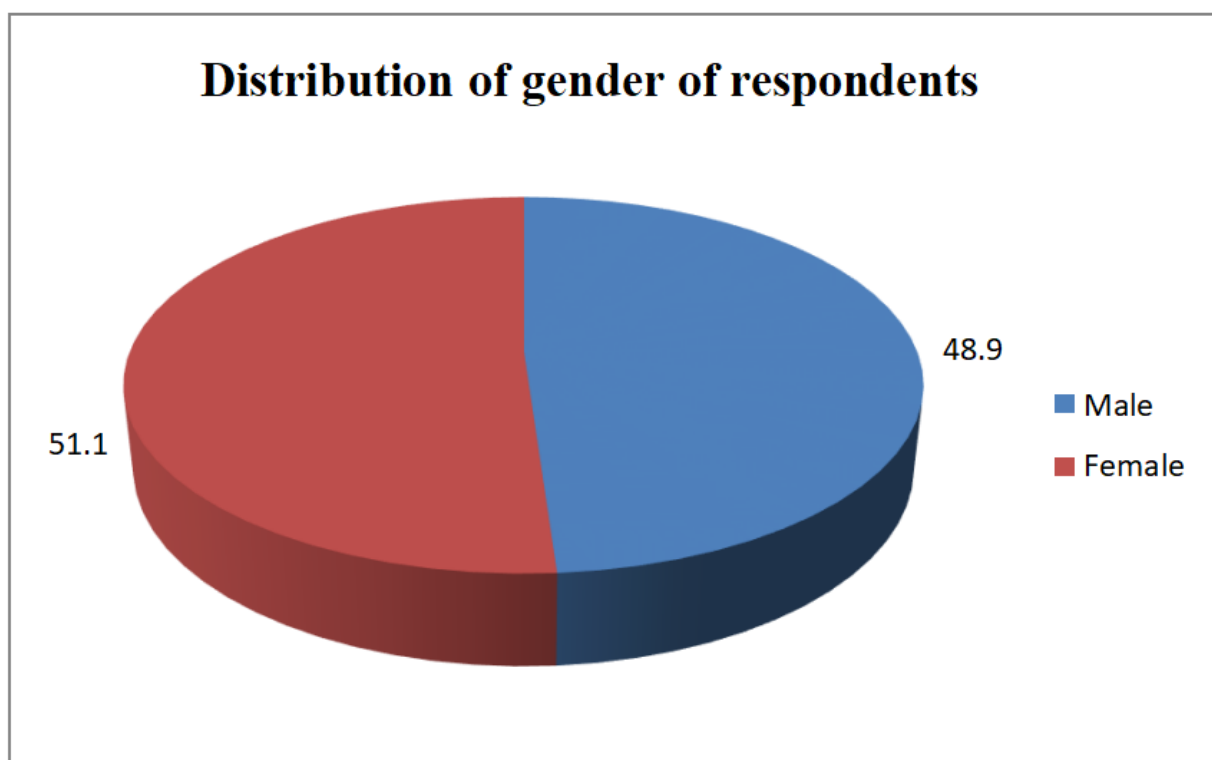
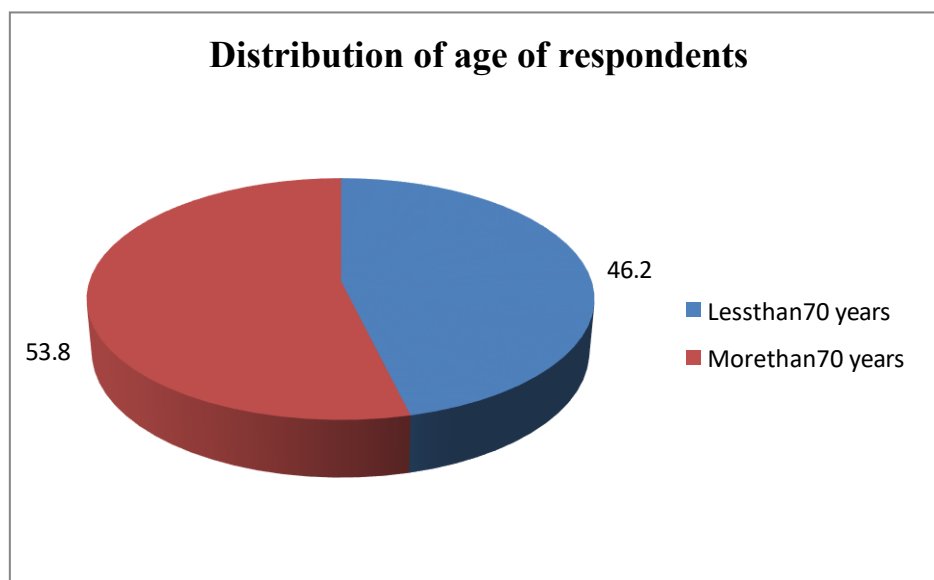
- ☐ Age
- ☐ Gender
- ☐ Occupation-
- ☐ Literacy
- ☐ Marital status

Socio Demographic variable data's collected through Self report method (Fixed "Yes or No")

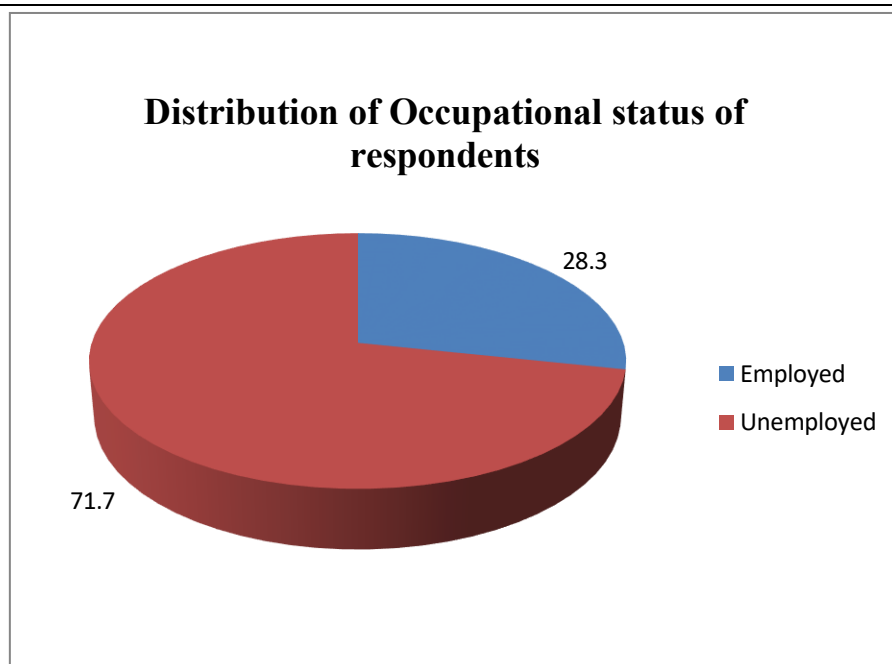
STATISTICAL TECHNIQUES

- ☐ Descriptive statistics that is mean, standard deviation and percentile has been computed.
- ☐ Independent sample t test carried out for comparing respondent's age, based on dynamic balance.
- ☐ Calculated P value less than 0.05 was considered as statistically significant. All the analysis was carried out with the help of SPSS v.23 for WINDOWS

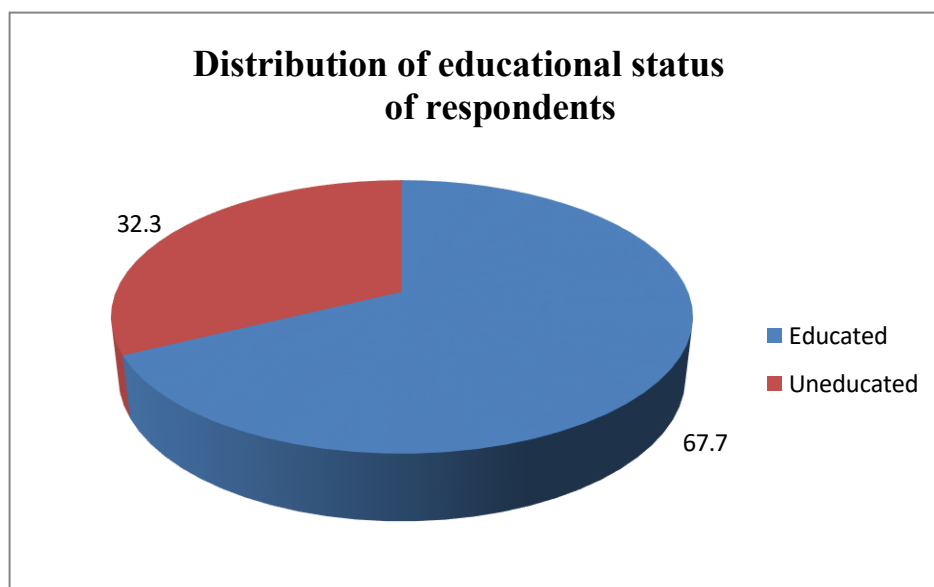
ANALYSIS FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS BASED ON SOCIO-DEMOGRAPHIC



FREQUENCY AND PERCENT AGE DISTRIBUTION OF RESPONDENTS BASED ON SOCIO – DEMOGRAPHIC DETAILS



FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS BASEDON SOCIO – DEMOGRAPHIC DETAILS



DESCRIPTIVE STATISTICS RELATING TO DYNAMIC BALANCE OF RESPONDENTS

		Agility/dynamicbalance(sec.)
N		1000
Mean		16.78
SD		9.63
Percentiles	5	0

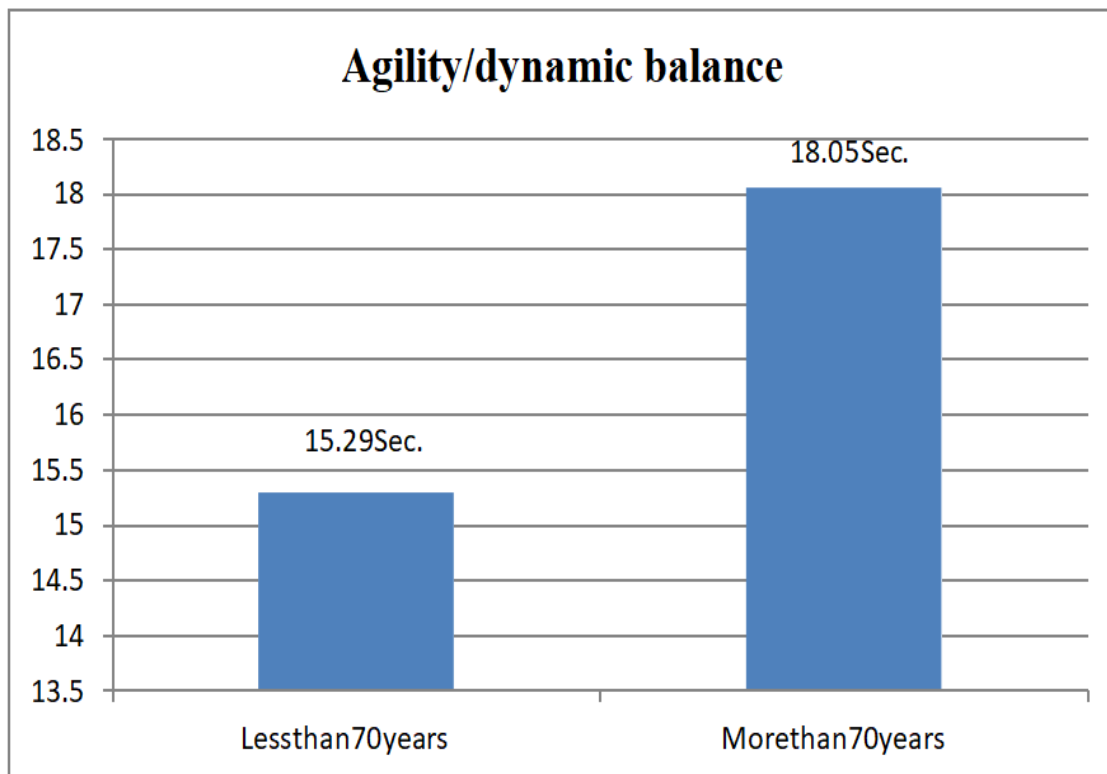
	10	7
	15	11
	20	11
	25	12
	30	13
	35	13
	40	14
	45	14
	50	15
	55	16
	60	17
	65	18
	70	19
	75	20
	80	22
	85	24
	90	32
	95	35

Comparison Of Dynamic balance Based On Age

Data And Test of Significance (T Test) For Comparing Components of Functional Capacity Based On Age of Respondents

Functional Capacity	Age	N	Mean	SD	t	
Agility/dynamic balance	Lessthan70 years	462	15.29	8.13	4.559	
	Morethan70 years	538	18.05	10.60		

Diagrammatic Representation For Comparing Functional Capacity Based On Age Of Respondents.



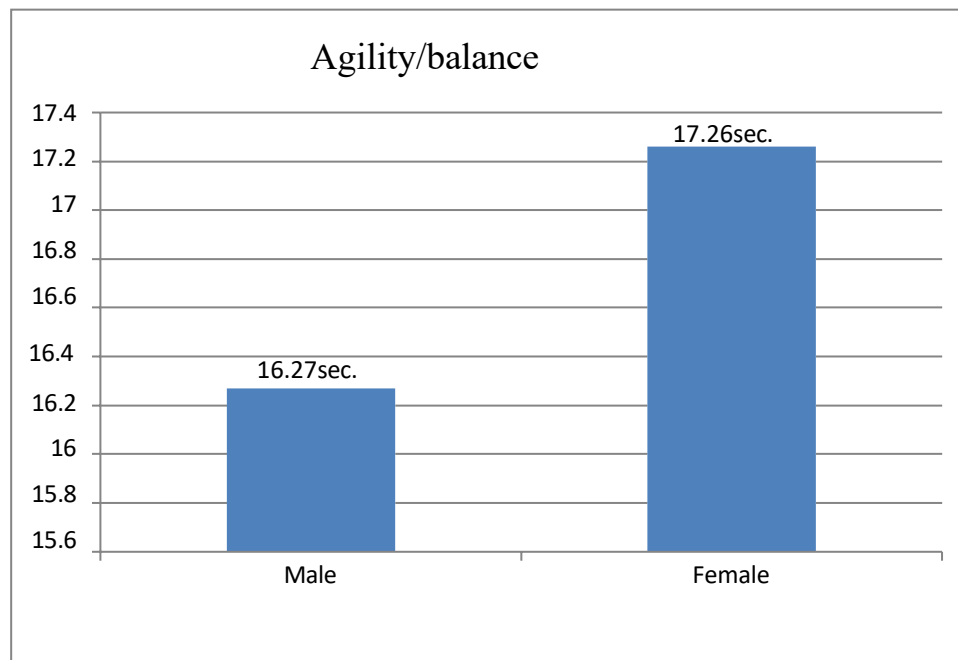
Comparison of Components of dynamic balance Based on Gender

Data And Test Of Significance (TTest) For Comparing dynamic balance Based On Gender

	Gender	N	Mean	SD	t	df	
Agility /dynamic balance	Male	489	16.27	10.58	1.616	998	
	Female	511	17.26	8.60			

**:Highly significant (P<0.01). NS: Not Significant (P>0.05)

Diagrammatic Representation For Comparing dynamic balance Based On Gender Of Respondents



DISCUSSION OF FINDINGS

Socio-demographic

Majority of respondents belongs to more than 70 years of age group. Majority of respondents belongs to female class. Majority of respondents belongs to married category. Majority of respondents belongs to educated category. Majority of respondents belongs to unemployed category.

Agility/Dynamic balance

In Agility/dynamic balance the Mean score was 16.78 sec. with SD 9.63 and more than 50% of respondents scored 15 sec. or above in agility/dynamic balance. As per the Senior Fitness Test (SFT), if a respondent score is more than 9 sec. means that he/she is at risk in terms of agility/dynamic balance. Hence it was clear that majority of the respondents were poor in terms of agility/dynamic balance. Since agility/balance plays an important role in functional tasks of the elderly that require quick maneuvering such as getting off a bus, entering or getting up to attend to something in the kitchen, to go to the bath room, or to answer the phone etc.

DISCUSSION OF HYPOTHESIS

Hypothesis 1: It was hypothesized that there would be difference in the dynamic balance in senior's age wise.

The results of the study revealed significant difference in agility/dynamic balance in senior's age wise.

The null hypothesis was rejected and the research hypothesis was thus accepted.

DISCUSSION OF HYPOTHESIS

Hypothesis 2: It was hypothesized that there would be difference in the dynamic balance in seniors between males and females.

The results of the study revealed there is no significant difference between males and females in agility/balance.

CONCLUSION

90% of the seniors had poor Agility/dynamic balance.

It was observed that seniors below the age of 70 years had better dynamic balance than elders above 70 years.

No difference was observed between males and female's seniors with regard to agility/dynamic balance.

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