

## **Research Article**

### **Study on Prevalence of Anxiety Neurosis among the Geriatric Population in Urban Chidambaram**

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**Abstract:** Old age is a part of human development and it is the final phase of the life cycle. The somatic changes and failure to adapt during any time of life cycle can result in physical and emotional illness such as depression, anxiety, and grief. The constant state of worry and the anxiousness may seriously affect the older people's quality of life by causing them to limit their daily activities and have difficulty in sleeping. The main objective was to find out the prevalence of anxiety neurosis among the geriatric population in urban area of Chidambaram. 2. To assess the common factors of worry among the older adults. 3. To find out the association of anxiety with selected socio-demographic variables and different factors of worry. A descriptive cross-sectional, community based study was conducted in urban field practice area of Rajah Muthaiah Medical College, Annamalai University. 252 elders were selected randomly; anxiety and various factors for worries were measured using Geriatric Anxiety Scale (GAS). In results 55.5 % of the respondents had anxiety disorder. 44.9 % elders were concerned about their finance 41.3 % of geriatric populations were concerned about their health. Factors of worry like concern about finance, health, and the children and afraid of dying, becoming the burden to the family and friends were significantly associated with anxiety. Females were significantly associated with anxiety.

**Keywords:** Geriatric population, anxiety neurosis

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#### **INTRODUCTION**

The proportion of the elders in the population and the life expectancy of humans are increasing. In the world, this trend has been seen in both developed and developing countries. India is in the phase of demographic transition. Number of elderly Indians has increased more than fourfold over the past 60 years [1]. The old age is the normal part of the human development and it is the final phase of the life cycle. The somatic changes and the failure to adapt during any time of life cycle can result in physical and emotional illness such as depression, anxiety, and grief. Constant state of worry and anxiousness may seriously affect older people's quality of life by causing them to limit their daily activities and have difficulty in sleeping. If untreated, GAD may also lead to depression. Late-life anxiety can often be "silent"—missed or difficult to diagnose as older adults tends to somatize psychiatric problems; have multiple psychiatric, medical, and medication issues; and present anxiety differently than do younger patients. Yet, anxiety disorders surpass the other well-known "geriatric giants" in their prevalence among older adults (10-20%), being twice as common as the dementias (8%) and four to eight times more prevalent than major depressive disorder (1-3%) [2].

The prevalence of anxiety disorders has been reported to range from 5.34 % to 21.35 % for gero-psychiatric patients in India. Population-based study on geriatric population by Tiwari and Srivastava, found that nearly 9% of the subjects were diagnosed with anxiety neurosis [3]. A cross sectional, epidemiological, community-based study conducted in a rural area of Singanodi, Raichur District, and Karnataka found that generalized anxiety was present in 10.7% of the studied population [4, 5]. Studies conducted on anxiety disorders in urban geriatric population in India are limited and no study is conducted on prevalence of anxiety disorders among the geriatric population in Tamil Nadu. So the present study was conducted with the objective of .To find out the prevalence of anxiety neurosis in the geriatric population in a urban area of hidambaram. To assess common factors of worry among elderly people. To find out the association of anxiety with selected socio-demographic variables and different factors of worry.

#### **METHODOLOGY**

A descriptive cross-sectional, community based study was conducted in urban field practice area of Rajah Muthaiah Medical College, Annamalai

University. Chidambaram town is a municipality in Cuddalore district in the Indian state of Tamil Nadu. Chidambaram covers an area of 4.8 km<sup>2</sup> (1.9 sq mi) and had a population of 62,153 as of 2011 census. Urban field practice area of Rajah Muthaiah Medical College has 5 areas and 28 streets. Total population of urban field practice area is 12,525. Pilot study was conducted to find out the prevalence of anxiety. The prevalence estimated by the pilot study was 53%. The geriatric population in urban field practice area consists of 760 persons. Keeping this as prior information, for a relative precision of 5% and 95 % of confidence interval, the estimated sample size was found to be 235 persons above 60 years old. However, 252 elderly persons have been selected for this study. Out of 28 streets in urban field practice area 5 streets were selected randomly by lottery method. All the households in the above selected streets have been surveyed. A total of 252 elderly populations has been obtained. Valid informed consent was got from all the subjects. Those who were not willing to participate or who did not give consent or terminally ill person or who were deaf or suffering from known psychiatric illness or Person with terminal stage of dementia or Alzheimer's disease or the person with severe cognitive impairment were excluded from the study. Data were collected by house to house visit and interviewing all the selected subjects by the investigator for 6 months, from 1/6/2014 to 1/11/2014 using the questionnaire. Questionnaire had questions for collecting socio - demographic data and Geriatric anxiety scale (GAS) – scale to measure anxiety. The scale was translated to the local language Tamil and then another person who was not aware of this translation was asked to translate it again to English and it was compared with the original English version scale. The GAS was a 30-item self-reported anxiety scale designed for use of older adults. First 25 items were used for scoring; last 5 items were used to assess common aspects of worry among older adults. The respondents were asked to answer the questions in reference to what they felt in past one week. GAS contains three subscales which were Somatic, Affective, and Cognitive subscales. Response for each item range from 0 to 3. 0 for not at all, 1 for sometimes, 2 for most of the time and 3 for always. Total score was obtained by adding the scores of the items 1-25. 1 – 11 was normal, 12 – 21 was mild anxiety, 22 – 27 was moderate anxiety and 28 – 54 was severe anxiety.

#### **Data analysis:**

Data collected was entered in Microsoft 2007 excel sheet, compiled and analyzed using IBM SPSS version 20 statistical package. Descriptive statistics was used. Chi-square and ANOVA test were used to find out the significant association between anxiety and various factors.

#### **RESULTS**

Among the 252 study subjects majority of the subjects i.e. 87 (34.5%) belonged to the age group 60 – 64. Majority of the subjects who participated in our study were males. 53.6 % of the subjects were males. 33.7 % of the elders were illiterate. 62.7 % of study population were unemployed. Majority of the subjects (57.1%) had annual income <21,000 and 63.5 % of them were married and living with spouse at present. Table 1 shows the distribution of the socio-demographic variables age and sex of the respondents.

Table 2 and fig 1 shows the distribution of anxiety disorder among the respondents. Among the 252 study subjects 23.8 % of the respondents had severe anxiety and 23.4 % of the subjects had mild anxiety. 8.3 % had moderate anxiety and 44.4% were normal. The prevalence of anxiety was 55.5%

Table 4 shows the factors of worry among the respondents. 44.9 % elders were concerned about their finance most of the time or always, 41.3 % of geriatric population were concerned about their health most of the times or always. 39.2 % of elders were worried about their children most of the times or always. Only 11.1% elders were afraid of dying and 27 % of the geriatric population were afraid of becoming the burden to the family and friends most of the times or always.

Therefore finance was the most common factor of worry among the elders and they were least bothered about dying. Next to finance many elders were bothered about their health. One way ANOVA was used to find the association of age and sex with anxiety. Females had more anxiety disorders than males and the differences were statistically significant. Age was not significantly associated with anxiety.( Table 3)

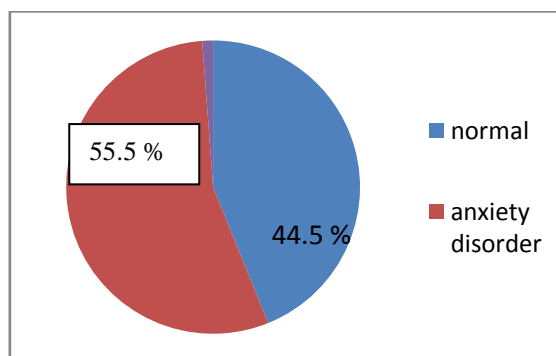
Chi square test was used to find the association between anxiety and various factors of worry. All the areas like concern about finance, concern about health, concern about the children, afraid of dying and afraid of becoming the burden to the family and friends were significantly associated with anxiety.( Table 4)

**Table 1: Distribution of socio – demographic variables of the respondents**

Age	Frequency	Percentage %
60 – 64	87	34.5
65 – 69	65	25.8
70 – 74	61	24.2
75 – 79	22	8.7
80 – 84	17	6.8
<b>Total</b>	<b>252</b>	<b>100</b>
Sex	Frequency	Percentage %
Male	135	53.6
Female	117	46.4
<b>Totals</b>	<b>252</b>	<b>100</b>

**Table 2 – Distribution of anxiety status of the respondents**

Anxiety status	Frequency	Percentage %
Normal	112	44.4
Mild	59	23.4
Moderate	21	8.3
Severe	60	23.8
<b>Total</b>	<b>252</b>	<b>100</b>



**Fig 1: Anxiety status of elderly population**  
55.5% were having anxiety disorder

**Table 3: Association of anxiety with socio-demographic variables age and sex**

Variable	N	GAS Mean	GAS Std. Deviation	ANOVA F	Level of significance p value
<b>age</b>					
60-64	87	17.64	13.988	0.945	0.453
65-69	65	16.12	13.470		
70-74	61	15.52	14.684		
75-79	22	21.68	16.802		
80-84	13	17.00	17.991		
>=85	4	8.50	9.609		
Total	252	16.91	14.456		
<b>Sex</b>	<b>N</b>	<b>GAS Mean</b>	<b>GAS Std. Deviation</b>	<b>ANOVA F</b>	<b>Level of significance p value</b>
Male	135	14.33	14.365	9.573	0.002**
Female	117	19.89	14.040		
Total	252	16.91	14.456		

\* p < 0.05 significant, \*\* p < 0.01 very much significant

**Table 4: Association of anxiety with factors of worry**

		GAS-Q26. Concerned about finance				Total	X <sup>2</sup> 58.648 p value 0.000**
		Not at all	Sometimes	Most of the times	Always		
Anxiety	Yes	31	17	54	38	140	
	No	69	22	16	5	112	
Total		100	39	70	43	252	
		GAS-Q27 Concerned about their health				Total	X <sup>2</sup> 58.648 p value 0.000**
		Not at all	Sometimes	Most of the times	Always		
Anxiety	Yes	34	25	45	36	140	
	No	71	18	17	6	112	
Total		105	43	62	42	252	
		GAS-Q28 Concerned about their children				Total	X <sup>2</sup> – 53.769 P value– 0.000**
		Not at all	Sometimes	Most of the times	Always		
Anxiety	Yes	40	19	41	40	140	
	No	82	12	10	8	112	
Total		122	31	51	48	252	
		GAS-Q29 Afraid of dying				Total	X <sup>2</sup> – 30.216 p value– 0.000**
		Not at all	Sometimes	Most of the times	Always		
Anxiety	Yes	100	13	20	7	140	
	No	109	2	0	1	112	
Total		209	15	20	8	252	
		GAS-Q30 Afraid of becoming a burden to the family				Total	X <sup>2</sup> – 63.048 p value– 0.000**
		Not at all	Sometimes	Most of the times	Always		
Anxiety	Yes	47	34	42	17	140	
	No	93	10	5	4	112	
Total		140	44	47	21	252	

(\* p value < 0.05 – significant, \*\* p value < 0.01 – very much significant)

**DISCUSSION**

The Present study was conducted to estimate the prevalence of anxiety among the geriatric population in urban Chidambaram. Prevalence of anxiety in the present study was 55.5 % .Our findings were similar to the findings of Bryant et al who did a systematic review of literature on anxiety in people over 60, published between 1980 and 2007 and he found that prevalence of anxiety symptoms ranged from 15% to 52.3% in community samples, and 15% to 56% in clinical samples [6]. This wide range of prevalence may be due to conceptual and methodological inconsistencies in the literature [5]. In a study conducted by Ritchie et al the prevalence was 30% for anxiety disorders which was lower than our study [7]. Another study done by Chou *et al.*; found that 33.7% of the older adults had Generalized Anxiety Disorder (GAD). The prevalence of anxiety disorders has been reported to range from 5.34 % to 21.35 % for gero-psychiatric patients in India [8]. Study done on 500 community-dwelling triethnic elders reported prevalence rates of 11.3% in blacks, 12.4% in Hispanics, and 21.6% in non-Hispanic whites age 75 and older [8]. This difference may be due to the difference in the race. The reason for the high prevalence of anxiety disorder in our study may be due to difference in the diagnostic scale (GAS) used. Tools used in the different studies for assessing anxiety were

different. In our study female sex was significantly associated with anxiety and our finding was similar to the studies [9].

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