

Aging in South Asia: Attitudes/Beliefs of Elders in Southern India and Long-term Care
of the Elderly in Southern Sri Lanka

by

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Thesis submitted in partial fulfillment of
the requirements for the degree of Master of Science
in the Duke Global Health Institute
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ABSTRACT

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Abstract

Developing nations in Asia are posed to experience a significant increase in the population of older adults living in their respective societies. Over the coming decades, India, the second most populous country in the entire world, is poised to experience a significant increase in its elder population. India's population of adults 60 years of age or older is projected to increase from 8% to 19% of the country's total population by the year 2050. Figures predict that by mid-century, 323 million people in India will be aged 60 years or older, more than the total current U.S. population. As the demographic structure of India is making a dramatic shift, concerns regarding the health and wellbeing of the growing Indian elder population are emerging, as is the growing concern for social policy. In addition, Sri Lanka is the fastest aging nation in South Asia. Multiple factors, including an increase in the number of people considered to be the "oldest old" (80+ years of age), a decrease in the number of working age adults, and increases in disability amongst the elderly, could necessitate an increased need for institutionalization of elderly Sri Lankans into long-term care facilities.

This project aims to study aging in south Asia from two different perspectives. An analysis of existing data from Southern India was done to examine the attitudes and beliefs of Indian elders towards aging and support systems for the elderly. Mental health of Indian elders was assessed and logistic regression analysis was conducted to examine possible correlations between attitudes and beliefs of the elderly and elder mental health. In addition, a qualitative descriptive study of Sri Lankan elder homes was carried out in the southern district of Galle, Sri Lanka. A convenience sampling method was used to identify six elder homes located in the area, and visits were made to each of the homes. During the visits, elder home managers were interviewed in order to gain

general information on the functioning and history of the elder homes, as well as general information on the residents living at the facilities.

Results from the Kerala Aging Survey revealed that psychological distress was present for over one third of elders in Kerala. Rates of psychological distress were higher for women, the poor, and those with advanced age. Elder women appear to be especially vulnerable to psychological distress in old age. Elders believe that children are responsible for supporting parents in their old age; lack of satisfaction with support received from children was associated with the presence of psychological distress amongst elders. For the qualitative study on Sri Lankan elders homes, it was found that both familial and community support are significant factors in the long-term care of elderly Sri Lankans. Though many elder home residents had been diagnosed with a chronic NCD or disability, lack of familial support was consistently identified as the driving force necessitating the elderly to reside at the long-term care facilities. With little or no financial assistance from the government, the facilities themselves all relied heavily on donations from the community to function on a daily basis.

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1. Attitudes and Beliefs of South Indian Elders Towards Aging and Support Systems for the Elderly

1.1 Introduction

Over the coming decades, India, the second most populous country in the entire world, is poised to experience a significant increase in its elder population. According to the United Nations Population Division (UN, 2011), India's population of adults 60 years of age or older is projected to increase from 8% to 19% of the country's total population by the year 2050. These figures predict that by mid-century, 323 million people in India will be aged 60 years or older, more than the total current U.S. population (UN, 2011; Arokiasamy et al., 2011; Population Reference Bureau, 2012). As the demographic structure of India is making a dramatic shift, concerns regarding the health and wellbeing of the growing Indian elder population are emerging, as is the growing concern for social policy.

Nowhere in India could healthcare for the elderly be more effected than throughout the southern state of Kerala. According to India's Registrar General and Census Committee (2006), the state of Kerala currently has the highest proportion of elderly adults in its population (12.3%). Additionally, Kerala is predicted to have the largest increase in its elder population, with 18.3% of its population predicted to be aged 60 or older by the year 2026 (Subaiya, L. & Dhananjay W. B., 2011). Increases in life expectancy and decreases in fertility rates have accounted for much of the demographic transition occurring in Kerala and throughout India. (Rajan, Sarma, & Mishra, 2012; Arokiasamy et al., 2011; Population Reference Bureau, 2012).

While much research has been done on the graying of India and the factors that have resulted in its aging population, little research can be found on the perspective of

aging in India from those effected most by the demographic shift, the aged adults themselves. Research has shown that elders' attitudes towards aging and support systems are significantly related to mental health in the elderly (Lai, 2009). Support systems for the elderly have been found to have a major impact on happiness in old age, and the data reports that feelings of neglect and lack of support from of elders can negatively influence mental health and life satisfaction in old age (Ramanathan, et al., 1994; Lena et al., 2009; Patel & Prince, 2001).

Research has shown that attitude towards aging was associated with mental health (Lai 2009). For example, one study conducted among Chinese elders suggests that there was an association between a positive attitude towards aging and better mental health (Lai, 2009). In addition, results from this study also revealed high levels of social support, such as having someone to provide care when ill, were significantly related better mental health in elder Chinese adults (Lai, 2009). Very few studies in India have assessed elders' attitudes and beliefs towards aging and support systems. The limited data that is available reveals that Indian elders' attitudes towards support systems indicate that many elders feel that they lack support and feel neglected in their old age (Lena, Ashok, Padman, Kamath, & Kamath, 2009; Patel & Prince, 2001).

A descriptive study in the southern state of Karnataka India, that measured 213 elder adults' attitudes towards life in old age, reported that half of all the elder study participants felt neglected by their family members, and 68% of the study participants felt that the attitude of people towards the elderly was that of neglect. (Lena et al., 2009). Forty-seven percent of elders in the study also reported that they felt they were not happy in life, with 13% of respondents stating the reason they felt sad was due to be being neglected (Lena et al., 2009).

In addition, a study done in Goa, India, also indicates that feelings of neglect and lack of support amongst elders may contribute to the presence of mental health disorders in old age. Patel & colleagues (2001), reveal that many elders participating in their qualitative study believed that support from children was often contingent upon inheritance, and care for parents often deteriorated after property rights had been transferred to children. Findings from focus group discussions conducted with Indian elders revealed that lack of support or neglect from children also attributed to mental health disorders in the study population (Patel et al., 2001).

These findings are especially significant, because the prevalence of depression amongst elders may be higher in India than in other countries throughout the world. The World Health Organization (2001) reports the overall prevalence of depressive disorders amongst the elderly varies between 10-20% (Gellis & McCracken, 2008). A 2011 study that reviewed six community-based studies on depression in India, found the overall prevalence of depressive disorders in Indian elders to be 21.9% (IQR 11.6%-31.1%) (Barua, Ghosh, Kar, & Basilio, 2011). Similarly, Barua & Kar (2010) reported the prevalence of depression for elders in Udupi, Kundapura to be 21.7%. Data from a south Indian study in Vellore revealed the prevalence of depression among 204 elders age 60 years and older was 35% (Biswas, et al., 2009). In addition, Jariwala, Vansal, Patel, & Tamakuwala (2010) reported a depression prevalence of 39.04% amongst elders in Surat City.

As the population of adults 60+ years of age is expected to rise in India, assessing the mental health of the elderly will be necessary to promote healthy aging among this aging population. The attitudes and beliefs of elders towards aging and support systems may influence mental health in old age. Currently, data is limited on the attitudes and

beliefs of elders in India, though the available data indicate that elders may have negative perceptions toward aging and support systems for elderly. Further research assessing the mental health of the elderly and how elders' attitudes/beliefs influence mental health in old age are needed. The specific objectives of this paper are to analyze the attitudes and beliefs of Indian elders towards aging and support systems for the elderly. Associations between elders' attitudes and beliefs towards aging and the presence of psychological distress in old age will be examined. In addition, associations between elders' attitudes and beliefs towards support systems for the elderly with the presence of psychological distress in elders during old age will be examined.

1.2 Methods

This project involved the analysis of existing de-identified data from the Kerala Aging Survey (KAS). The Kerala Aging Survey (KAS) was cross-sectional household survey administered in 2005 to 5, 013 elderly persons living throughout Kerala. The KAS survey was administered in order to examine the determinants of healthy aging, social security, property rights and institutional provisions in the context of care for the elderly. In addition, the survey also encompassed aspects such as children and grandchildren, attitudes and beliefs, old age support systems, Subjective Well-Being Inventory (SUBI), general health enquiry, labor force participation, pensions, lifestyle and life satisfaction, health problems and health utilization, disability, Activities of Daily Living (ADL) scale, Instrumental Activities of Daily Living (IADL) scale, falls, behavioral factors, food frequency, eating behavior and nutritional assessment. Though the KAS covered multiple components, the following discussion and analysis are limited to the survey data encompassing socio-economic characteristics, attitudes and beliefs, old age support systems, and the general health enquiry.

The data from this survey had been stripped of any identifiers that could link subjects to the study results. All data had already been collected through face-to-face interviews and mailed questionnaires. No new information was collected and participants were not compensated for the data analysis. Written consent was acquired at the time of the original data collection. No additional consent was obtained for the purpose of analysis. IRB exemption was received to analyze the data.

The sample for the KAS was based on data collected from the second Kerala Migration Survey (2003) conducted by the Centre for Development Studies in Thiruvananthapuram, Kerala (details, Zachariah and Rajan, 2005). The Kerala Migration Survey covered 10,000 households and enumerated 47,830 members. All elderly members (5,013) in the 10,000 households throughout Kerala were to be used as the sample of the KAS. Elderly persons were considered those individuals who were 60 years of age and older

1.2.1 Variables of Interest

1.2.1.1 Attitudes and Beliefs Towards Aging

A series of five questions assessing Indian elders' attitudes and beliefs towards aging were analyzed. Study participants were asked, "At what age does a person become old?" Responses were recorded as a single written number, and study participants were asked to determine old age for both men and women. Additionally, participants recorded a single numeric value defining what they believed to be "the ideal retirement age". Further expanding on retirement, elders were asked, "When you were young did you prepare for retired life?" Lastly, by asking, "Do you think people these days treat older people with less respect than they used to?" perceived respect for the elderly was assessed.

1.2.1.2 Attitudes and Beliefs Towards Support Systems for the Elderly

Attitudes towards sources of support and satisfaction with current support systems were assessed through responses to five different survey questions. The question, “Who should be responsible for taking care of parents in their old age?” was asked with the following possible response options: children, should be independent, other. Additionally, study participants were asked, “Where is the best place for old people to live?” (With children, alone, other). To assess current support, participants were asked to categorize their satisfaction with the help from their children as either: largely satisfied, somewhat satisfied, or not at all satisfied. Lastly, study participants were asked if they knew of old age homes, and if they would like to join an old age home.

1.2.1.3 Psychological Distress: Elder Mental Health

The 12-item General Health Questionnaire (GHQ-12) was used to assess for psychological distress in the study population. The GHQ-12 is used to screen for general, non-specific psychiatric morbidity in the community setting (Hankins, 2008; Vieweg & Hedlund, 1983). The validity of the GHQ-12 has been established and the screening tool has been translated into multiple languages. (Goldberg et al., 1997; Gautum et al., 1987). The GHQ-12 has been shown to work efficiently in developing countries, and evidence shows that gender, age, and educational level do not have a significant effect on the validity of the GHQ (Goldberg et al., 1997). For this study, internal consistency of the GHQ12 was measured with a Cronbach’s alpha = 0.963.

All questions on the GHQ-12 ask respondents to assess changes in their moods, feelings, and behaviors over the past month. For example, the first question of the assessment tool asks, “Have you recently been able to concentrate on whatever

you're doing?" and, "Have you recently lost much sleep over worry?" Each question then has four possible answers: "less than usual", "no more than usual", "rather more than usual", and "much more than usual" (Makowska et al., 2002). The standard GHQ-12 scoring method, which was utilized in this study, then assigns a numerical value of either 1 or 0 to responses on the questionnaire. Responses of "less than usual" or "no more than usual" are considered positive and receive a zero. Responses of "rather more than usual" or "much more than usual" are considered negative and receive a value of one (Makowska et al., 2002). In sum, the lowest score possible on the questionnaire is zero (less than optimal mental health), and the highest score is 12 (optimal mental health).

Recommendations for determining the threshold, at which the GHQ-12 score is deemed positive, and therefore indicating the presence of psychological distress, have varied. GHQ-12 validity studies across nine countries, and found that the 2/3 was the most common threshold score reported. Additionally, a GHQ-12 validity study conducted in Kerala's neighboring state of Tamil Nadu found that the optimal threshold for screening was 2/3, with a sensitivity of 87.4% and a specificity of 79.2% (Kuruvilla et al., 1999). Therefore, a 2/3 scoring threshold was utilized in this study, with a score of three or higher indicating psychiatric morbidity or the presence of psychological distress.

1.2.1.4 Socioeconomic Status

Because data regarding annual or household income was not reported on the KAS survey, a proxy variable was used to measure socio-economic status. The survey question, "Do you feel shortage of money for the following?" with the following response categories: none, basic necessities (food, clothing, housing), and medical care

(healthcare, medicines), was used as the proxy variable for socio-economic status. Those who did not report a shortage of money were considered to have a higher socioeconomic status. Those who reported a shortage of money for basic necessities or medical care were considered to have a lower socioeconomic status.

1.2.1.5 Data Analysis

STATA for Windows version 11.1 was used for data management and analysis. Descriptive data were analyzed using standard technique, and means and standard deviations were computed when appropriate. Cross-tabulation was used to analyze categorical data. Considering the dichotomous nature of the outcome variable (positive or negative GHQ-12 results), unadjusted and adjusted logistic regression models were used to identify if certain “attitudes and beliefs towards aging” and certain “attitudes and beliefs towards support systems for the elderly” would increase the likelihood that one would score positive on the GHQ-12. The odds ratio (OR) and 95% confidence interval (CI) were analyzed to assess the association between attitudes and beliefs, and positive GHQ-12 scores.

1.4 Results

Of the 5,013 eligible elderly persons living in households throughout Kerala, 4,940 completed the Kerala Aging Survey. Over half of the respondents (54%) were women, and the majority of respondents (73.7%) were from rural parts of Kerala. According to Population Census of India (2011), approximately 52.28% of the population in Kerala lives in rural areas, with a large influx of people moving from rural to urban areas over the past ten years. The ages of respondents ranged from 60-108 with a mean age of 70 (sd = 7.61). In regards to socioeconomic status, the majority of respondents (51.5%) did not report having a shortage of money. Approximately 15% of elders

reported a shortage of money for basic necessities, and 33% reported a shortage of money for medical care.

Elders identifying as Hindu (59.2%), Christian (23.4%), and Muslim (17.4%) religions were represented in the sample. The relatively higher proportion of Christians and Muslims in this sample is representative of Kerala, which is one of the most diverse states in India. According to the Government of India (2011), the distribution of Hindu, Muslim, and Christian religions in Kerala is 56%, 19%, and 25% respectively. Compare this to the country of India as a whole, where Hinduism is practiced by a larger majority of the population (80%), and Christian (2%) and Muslim (13%) religions are practiced by a much smaller part of the population (Government of India, 2011).

Table 1: Demographic Profile of Elders Surveyed

	N=4,940	%
Women	2,668	54.0%
Men	2,272	45.9%
Age range, years		
Age Category	60-108	
	60-64	1,334
	65-69	1,323
	70-79	1,609
	80+	674
Sector		
	Rural	3,643
	Urban	1,297
Religion		
	Hindu	2,925
	Christian	1,156
	Muslim	859
Socioeconomic Status		
<i>Do you feel a shortage of money for the following:</i>		
	None	2,547
	Basic Necessities	754
	Medical Care	1,639

1.4.1. Attitudes and Beliefs Towards Aging

Answers to the survey questions regarding attitudes and beliefs towards aging are listed below in **Table 2**. Thirty-six percent of respondents reported 60 as the age in which both men and women become old, making it the most common age answered. Sixty was also the most common age elder respondents (30%) reported to be the ideal retirement age. Both men and women reported 60 as the most ideal age to retire. In regard to retirement, only 25% of respondents stated they had prepared for retired life when they were young. Fewer women (18%) than men (32%) reported having prepared for retirement. Additionally, 64% of those with a higher socioeconomic status (those who reported no shortage of money) had prepared for retirement, compared to only 11% of those with a lower socioeconomic status (those who reported a shortage of money for basic necessities) having prepared for retirement.

Table 2: Attitudes and Beliefs of Elders Towards Aging

	N=4940	%
In your opinion, at what age does a person become 'old'?		
(Male)		
50	175	3.5
55	229	4.6
60	1,771	35.8
65	778	15.7
70	850	17.2
75	210	4.2
80 and over	225	4.5
In your opinion, at what age does a person become 'old'?		
(Female)		
50	340	6.8
55	367	7.4
60	1,799	36.4
65	673	13.6
70	631	12.7
75	144	2.9
80 and over	196	3.9
In your opinion, what is the ideal retirement age?		
50	171	3.4
55	944	9.1
60	1,493	30.2
65	361	7.3
70	167	3.3

Do you think people these days treat older people with less respect than they used to?			
	No	2,706	54.7
	Yes	2,234	45.2
When you were young did you prepare for retired life?			
	No	3,714	75.1
	Yes	1,226	24.8

1.4.1.1 Attitudes and Beliefs Towards Support Systems for the Elderly

Answers to the survey questions regarding attitudes and beliefs towards support systems for the elderly are listed below in **Table 3**. The majority of respondents (91%) believe that the best place for elderly people to live is with their children. A small number of respondents (5%) believe that elderly people should live alone in their old age. The majority of respondents (91%) also believe that children should be responsible for caring for their parents in their old age, with a small number (6%) responding that parents should be independent in their old age. When asked if they were satisfied with the help from their children, approximately 37% of elder respondents stated that they were satisfied to a large extent with the help from their children. The majority (52%) stated they were satisfied to some extent with the help from their children, and the minority (4%) stated that they were not at all satisfied. Almost all, 96% (n=4,723) of respondents had heard of old age homes, but only 4% (n=178) stated that they would like to join an old age home.

The percentage of respondents that reported wanting to join an old age home and the percentage of respondents that believed that old people should live alone in their old age was higher for those who were “not at all” satisfied with the help from their children. Approximately 18.6% of respondents that were “not at all” satisfied with the help from their children wanted to join an old age home, while only 3.1% of

respondents that were satisfied to a “large extent” with the help from their children wanted to join an old age home. Additionally, 9.3% of respondents that were “not at all” satisfied with the help from their children believed that old people should live alone in their old age, while only 5.0% of respondents who reported being satisfied to a “large extent” with the help from their children believed that elder people should live alone in their old age. Interestingly, 87.6% of respondents that were “not at all” satisfied with the help from their children still believed that children should care for parents in their old age. This figure was lower than those who were satisfied to a “large extent” with the help from their children (92.5%), but still quite high. (Data not shown).

Table 3: Attitudes and Beliefs Towards Support Systems for the Elderly

In your opinion, which is the best place for old people to live?			
	Children	4,471	90.5
	Alone	260	5.2
	Other	209	4.2
Who should be responsible for taking care of parents in their old age?			
	Children	4,505	91.1
	Should be Independent	286	5.7
	Other	149	3.0
How far are you satisfied with the help from your children?			
	Large Extent	1,824	36.9
	Some Extent	2,575	52.2
	Not at all	194	3.9
Do you know of old age homes?			
	No	216	4.3
	Yes	4,723	95.6
Would you like to join an old age home?			
	No	4,755	96.2
	Yes	178	3.6

1.4.1.2 Psychological Distress: Elder Mental Health

Thirty-nine percent of all elder respondents scored positive (3 or higher) on the GHQ12, indicating less than presence of psychological distress in more than one-third of the sample population. More women, (44%) than men (34%) had positive GHQ12 scores, indicating that women report psychological distress more frequently than men ($p <$

0.01). As age increased, so did the number of people with reported psychological distress. Nearly 56% of study participants who were 80+ years of age scored positive of the GHQ-12. Forty-two of those aged 70-79, followed by 36% of those aged 65-69, and 31% of those aged 60-64 had positive GHQ-12 scores.

Elders living in rural and urban areas had similar levels of psychological distress, with approximately 40% of respondents from both sectors scoring positive on the GHQ-12. At 52.6%, Muslim elders had the most reported psychological distress, with both Hindu and Christian elders reporting less (39.3% and 30.6% respectively). In regards to socioeconomic status, those with the highest reported socioeconomic status had the smallest percentage (29.9) of respondents report psychological distress. Elders who reported being short of money for basic necessities had the largest percentage (60.9) score positive on the GHQ-12, indicating those with a lower socioeconomic status have higher levels of psychological distress.

Table 4: GHQ 12 Survey Results

	Positive GHQ		Negative GHQ	
	(+)		(--)	
	N	%	N	%
Total	1,955	39.6	2,985	60.4
Results by				
Gender				
Women	1,174	44.0	1,494	56.0
Male	781	34.4	1,491	65.6
Results by				
Age Category				
60-64	411	30.8	923	69.2
65-69	480	36.3	843	63.7
70-79	687	42.7	922	57.3
80+	377	55.9	297	44.0
Sector				
Rural	1,439	39.5	2,204	60.5
Urban	516	39.7	781	60.2
Religion				
Hindu	1,149	39.3	1,776	69.7
Christian	354	30.6	802	69.4

Status	Muslim	452	52.6	407	47.4
	Socioeconomic				
	<i>Do you feel a shortage of money for the following:</i>				
	None	762	29.9	1,785	10.1
	Basic	459	60.9	295	39.1
	Necessities				
	Medical Care	734	44.8	905	55.2

1.4.1.3 Associations between Attitudes and Beliefs Towards Aging and Psychological Distress

Next, we examined the association between attitudes and beliefs towards aging, and psychological distress in the elderly (**Table 5.**) After adjusting for gender, age, and socio-economic status, the results indicated that the younger the age respondents believed a person became “old”, the greater the odds were for them having psychological distress. Those who reported that males become ‘old’ at age 52 or younger had almost seven times greater odds (OR=6.96; 95% CI 4.64-10.44) of having psychological distress than those who reported males becomes ‘old’ at 78 years of age or older. The results were similar for determining the age when females becomes ‘old’, with the odds for those who reported females become ‘old’ at age 52 or less being more than six times greater (OR=6.20; 95% CI 4.32-8.90) for having psychological distress compared to those who reported females becomes ‘old’ at 78 years of age or older.

Attitudes towards retirement age were also associated with increased odds of psychological distress in the elderly. Respondents that reported the ideal retirement age to be 52 years of age or younger had over two times greater odds (OR=2.43; 95% CI 1.57-3.77) of having psychological distress than those who had reported the ideal retirement age to be 68 years of age or older. In regards to retirement, the odds of psychological distress were greater (OR=1.39; 95% CI 1.20-1.61) for those

that had not prepared for retirement compared to those that had prepared for retired life when they were young. There was no significant association found between beliefs towards current respect for the elderly and psychological distress in the elderly (OR=1.13; 95% CI 1.00-1.27).

Table 5: Associations between Attitudes and Beliefs towards Aging and Psychological Distress Amongst Elders (GHQ >2)

	ODDS RATIO UNADJUSTED	CI 95%	ODDS RATIO ADJUSTED+	CI 95%
In your opinion, at what age does a person become 'old'? (Male respondents)				
78 or greater	1	1	1	1
73-77	.78	(.51-1.21)	.88	(.56-1.38)
68-72	1.90	(1.41-2.56)	2.00	(1.47-2.72)
63-67	2.00	(1.50-2.70)	2.18	(1.60-2.98)
58-62	2.53	(1.91-3.34)	2.79	(2.09-3.72)
53-57	4.90	(3.38-7.08)	5.71	(3.89-8.40)
52 or less	4.66	(3.16-6.87)	6.96	(4.64-10.44)
In your opinion, at what age does a person become 'old'? (Female respondents)				
78 or greater	1	1	1	1
73-77	.80	(.48-1.36)	.88	(.51-1.50)
68-72	1.99	(1.42-2.77)	2.01	(1.42-2.84)
63-67	2.37	(1.70-3.29)	2.60	(1.85-3.65)
58-62	2.65	(1.95-3.59)	2.81	(2.05-3.85)
53-57	4.04	(2.84-5.76)	4.66	(3.22-6.74)
52 or less	4.22	(2.99-5.96)	6.20	(4.32-8.90)
In your opinion, what is the ideal retirement age?				
68 or greater	1	1	1	1
63-67	.84	(.58-1.20)	.93	(.64-1.37)
58-62	.84	(.62-1.14)	1.02	(.74-1.41)
53-57	.70	(.50-.96)	.86	(.61-1.21)
52 or less	1.83	(1.21-2.76)	2.43	(1.57-3.77)
Do you think people these days treat older people with less respect than they used to?				
Yes	1	1	1	1
No	1.08	(.96-1.21)	1.13	(1.00-1.27)
When you were young did you prepare for retired life?				
Yes	1	1	1	1
No	1.73	(1.51-1.99)	1.39	(1.20-1.61)

+ Model adjusted for age, gender, and socioeconomic status

1.4.1.5 Associations between Attitudes and Beliefs Towards Support Systems for the Elderly and Psychological Distress

Our final analysis examined the association between attitudes and beliefs towards support systems for the elderly and psychological distress amongst elders (**Table 6**). After adjusting for gender, age, and socio-economic status, the extent of satisfaction with the help from children was most significantly associated with psychological distress. Those responding that they were 'Not at all' satisfied with the help from their children had 5.62 times greater (OR=5.62, 95% CI 3.99-7.91) odds of having psychological distress than those who reported being satisfied to a "Large extent" with the help from their children.

Further examination of attitudes towards support systems revealed that respondents who reported they wanted to join an old age home had substantially greater odds (OR=4.46, 95% CI 3.14-6.32) of having psychological distress compared to respondents who had stated they did not want to join an old age home. Additionally, respondents that believed neither themselves nor their children should be responsible for taking care of parents in their old age had greater odds (OR=2.63, 95% CI 1.78-3.89) of psychological distress than those who believed that children should be responsible for taking care of parents in their old age. Lastly, those who believed that old people should live with someone other than themselves or their children had greater odds (OR=1.81, 95% CI 1.33-2.46) of psychological distress than those who believed older adults should live with children in their old age.

Table 6: Associations Between Attitudes and Beliefs Towards Support Systems for the Elderly and Psychological Distress Amongst Elders (GHQ > 2)

	ODDS RATIO UNADJUSTED	CI 95%	ODDS RATIO ADJUSTED+	CI 95%
Do you know of old age homes?				
No	1	1	1	1
Yes	.20	(.14-.27)	.29	(.20-.40)
Would you like to join an old age home?				
No	1	1	1	1
Yes	4.47	(3.18-6.28)	4.46	(3.14-6.32)
In your opinion, which is the best place for old people to live?				
Children	1	1	1	1
Alone	1.66	(1.29-2.14)	1.55	(1.19-2.01)
Other	2.59	(1.94-3.47)	1.81	(1.33-2.46)
Who should be responsible for taking care of parents in their old age?				
Children	1	1	1	1
Should be Independent	1.64	(1.29-2.10)	1.60	(1.24-2.06)
Other	3.90	(2.70-5.65)	2.63	(1.78-3.89)
How far are you satisfied with the help from your children?				
Large Extent	1	1	1	1
Some Extent	2.31	(2.03-2.64)	2.10	(1.83-2.40)
Not at all	7.29	(5.22-10.19)	5.62	(3.99-7.91)

+Model adjusted for age, gender, and socioeconomic status

1.5 Discussion

The study described in this paper analyzed cross-sectional data from the Kerala Aging Survey to assess the attitudes and beliefs of 4,940 elders (60+ years) towards aging and support systems for the elderly. The associations between attitudes and beliefs of Indian elders and the presence of psychological distress were also examined. Psychological distress was present for over one third of elders in Kerala. Rates of psychological distress were higher for women, the poor, and those with advanced age. Elder women appear to be especially vulnerable to psychological distress in old age. Certain attitudes towards aging and support systems for the elderly were associated with the presence of psychological distress amongst elder. Being unsatisfied with help

from children was found to be most highly associated with the presence of psychological distress amongst Indian elders.

Thirty-nine percent of all elders surveyed reported the presence of psychological distress. These findings are similar to those of Jariwala, Bansal, Patel, & Tamakuwala (2010) who reported a depression rate of 39.04% amongst elders in Surat city, India. Additional studies of elder mental health have reported varying rates of depression and psychiatric morbidity amongst elders in India. Chowdhury & Rasania (2008) reported 52% of elders surveyed in Delhi, India screened positive for psychiatric morbidity, with 23.6% of elders actually screening positive for depression. Similarly, Barua & Kar (2010), reported the prevalence of depression for elders in Udupi, Kundapura to be 21.7%.

More women, than men reported psychological distress in our study, our findings are similar to Jariwala et al. (2010) and Chowdhury et al. (2008) who also reported that rates of psychiatric morbidity and depression were higher for elder females than for elder males in their respective studies. Additionally, our study found elder women face multiple factors, such as advanced age and retirement status, that make them vulnerable to depression and mental health disorders in old age. It was found that the odds of psychological distress being present increased with advanced age. Women in India have a longer life expectancy (67 years) than men (64 years), which would make women more vulnerable to the presence of psychological distress with advancements in age (World Bank, 2011). Further increasing the vulnerability of elder females, our survey findings revealed that not preparing for retirement is associated with the presence of psychological distress amongst Indian elders, and the majority of elder women in Kerala had not prepared for retirement.

Certain attitudes towards aging were also found to be associated with the presence of psychological distress amongst the elderly. The younger the age respondents believed a person became “old”, the greater the odds were for them having psychological distress. Respondents that reported the ideal retirement age to be 52 years of age or younger had over two times greater odds (OR=2.43; 95% CI 1.57-3.77) of having psychological distress than those who had reported the ideal retirement age to be 68 years of age or older. The most common “ideal” retirement age reported in our study was 60 years old. Sixty is currently the retirement age for government workers in India (Visaria, 2001). The retirement age for government workers in India was increased from 58 to 60 years of age in 1998, and current reforms are proposing further increases in varying retirement ages throughout India (Viasria, 2001; Gillingham & Kanda, 2001). Our findings suggest that elders who believe that they should retire at a later age, which is congruent with the current trends and recommendations in India, will have greater odds for optimal mental health in old age.

In regards to support systems for the elderly, elders believe that children are responsible for supporting parents in their old age. Nearly all of the respondents interviewed believed that the best place for elders to live was with their children. Additionally, elders believed that children should be responsible for caring for adults in their old age. These results are in congruence with the current literature that reports Indian elders prefer to live with their children and it is common belief that children are responsible for supporting parents in their old age (Patel et al., 2001; Lena et al., 2009; Ramanathan, 1994).

Elder satisfaction with the support received from children was found to be highly associated with the presence of psychological distress in the elderly. Our study

found that, elders who reported they were not satisfied with the help from their children had higher odds of psychological distress being present in their life. These findings are similar to those of Chi & Chou (2001), who studied the association between social support and depressive symptoms amongst Chinese elders, and also found that satisfaction with social support was the most important predictor of depression in the elder population. These findings indicate lack of satisfaction with support can have a negative impact on mental health in the elderly. However, it must be stated, that it is not clear the direction of the relationship between social support and depression. It cannot be discerned from these studies if lack of satisfaction leads to depression, or if elders are depressed, and therefore unsatisfied almost by definition.

Additionally, results from the survey revealed that even if elders in our study were not satisfied with the help from their children, they still believed that the best place for parents to live in their old age was with their children. This finding is similar to research by Lena et al. (2009), who's study results also determined that even if elders were unhappy in life and did not have a good relationship with their children, they still preferred to live with their children rather than an old age home. These results indicate, that even though psychological distress may be present in their life, elders prefer to live with their children rather than live alone or in an old age home.

A small portion of elders in our survey did report wanting to join an old age home. These respondents had much higher odds of psychological distress being present. In addition, a higher percentage of the elders who reported wanting to join an old age also reported not being satisfied with the help from their children. This suggests that though it may be a small percentage of the population, there are elders in India who report wanting to join old age homes. These elders who do report wanting to join old

age homes most likely have psychological distress present in their lives, and may also be unsatisfied with the help they are receiving from children. Living with children, may not be ideal for this subset of the population, and these elders may benefit from living in an old age home, or somewhere other than with their children.

This research is limited in the sense that it is based off of cross-sectional data, and causal relationships between attitudes and beliefs of elders with psychiatric distress in the elderly cannot be determined. The GHQ12 is a screening tool for non-specific psychiatric morbidity in the community setting, and therefore, does not provide a specific diagnosis of depression for respondents who score positive on the questionnaire. Data on education level of respondents and annual household income were not available for analysis.

1.5.1 Implications

To better enhance mental health of the elderly and to promote healthy aging, programs and interventions for Indian elders should focus on strengthening elders' relationships with their children and support systems. Due to its association with mental health in the elderly, further research examining elders' satisfaction with support, specifically, support from received from children should be conducted. Our findings suggest lack satisfaction with support from children can have a negative impact on mental health in Indian elders, but it is not clear from our study what factors elders use to determine how "satisfaction" with support from children is defined. In addition, elder women should be identified as a vulnerable population, with higher odds of psychiatric distress in old age. Efforts should be made to promote preparing for retirement in India, with programs developed specifically for Indian women.

2. Aging and Long-term Care for the Elderly in Southern Sri Lanka

2.1 Introduction

Sri Lanka, an island country of 20 million people located just off the southern tip of India, is one of the fastest aging countries in all of Asia (Jayasekara, 2007). With 8.2% of its population 65 years of age or older, the proportion of elderly people in Sri Lanka is much higher than any other country in the South Asian region of the world (United Nations, 2010). In comparison to Sri Lanka, the number of elderly people aged 65 or older living in the neighboring country of India is only 4.9% (United Nations, 2010). Additionally, only 5.2% of the population for the neighboring island nation of the Maldives is 65 years of age or older (United Nations, 2010). Sri Lanka's elderly population has been increasing over the past twenty-five years, and this population subgroup is projected to increase even further over the next quarter century (Abeykoon, 2002). This demographic transition is foreseen to have a major impact on both healthcare and healthcare expenditure throughout the country (Fernando, 2000). Changes in the population structure, resulting in an increase in the number of people 65 and older, will necessitate the development of a plan to provide healthcare and housing services to the elderly.

Though providing healthcare services to the elderly requires a multi-faceted approach, when proposing a plan to provide such services to Sri Lanka's elderly population, the utilization and need for long-term care facilities throughout the country

must be addressed. Although institutionalization into long-term care facilities, such as nursing homes, is generally regarded as a last resort for the elderly and their families, the World Bank has identified a likely increase in demand for these facilities in Sri Lanka's near future (World Bank, 2008). Multiple factors, including an increase in the number of people considered to be the oldest old (80+ years of age), a decrease in the number of working age adults, and increases in disability amongst the elderly, may necessitate the increased need for institutionalization of elderly Sri Lankans into long-term care facilities

Central to Sri Lanka's demographic aging transition, is an increase in the population of people considered to be the "oldest old". Adults aged more than 80 years of age currently constitute one-tenth of Sri Lanka's elderly population, but this percentage will soon increase, and by the year 2040, the oldest old will constitute one-third of Sri Lanka's elderly population (World Bank, 2008). Additionally, by the year 2050, adults 80 years of age or over will account for more than 5% of the nation's overall population (World Bank, 2008). This increase is significant, because people in this age group are the most likely to be frail, and dependent upon others for care (World Bank, 2008). As the number of older adults dependent on others for care is steadily becoming larger, the number of working age adults available to care for them is becoming smaller.

Between the years 2010-2025, the elderly dependency ratio is predicted to increase from 12% to 20% and concurrently, the child support ratio is predicted to decrease (United Nations, 2010; Vodopivec & Arunatilake, 2008). With changes in population structure resulting in an increased number of elderly adults dependent on

others for care and a decreased number of working age adults available to care for them, many traditional Sri Lankan families may soon require more formal support to care for their elderly relatives. According to the World Bank (2008), changes in population structure may require families who care for elderly relatives to rely more on formal services ranging from community-based or in-home care to full institutionalization of elderly relatives into care in long-term facilities. Not only will there be a decreased number of working-age adults available to care for elderly Sri Lankans, many family members may also find themselves caring for relatives that require a higher acuity of care.

As the population of Sri Lanka ages, the prevalence of chronic non-communicable diseases (NCDs) and the rates of disability among the elderly are rising (World Bank, 2011; World Bank, 2008). It is estimated that 85% of ill health, disability, and early death can currently be attributed to NCDs. Chronic NCDs have overtaken communicable diseases as the major health problem, and are now the leading cause of mortality, morbidity, and disability in Sri Lanka (WHO, 2010). This epidemiologic change will likely produce an increased demand for long-term supportive services and nursing care (Jayasekera, 2007). Additionally, the disability rates among the elderly in Sri Lanka are not decreasing as they are in most developed countries. In fact, census data suggests that most forms of extreme disability in the Sri Lanka elderly increased during 1981-2001, with disability in the arms and legs, hearing, and speaking substantially increasing in all elderly age groups (World Bank, 2008). With increased rates of disability and chronic

disease, many elderly may require more skilled services in long-term care facilities.

In Sri Lanka, long-term care facilities for the elderly are called elder homes. A survey done by the Sri Lanka government in 1994 reports that there were approximately 65 elder homes in the country at that time (Department of Social Services, 1994). More recent figures report that non-governmental organizations manage an estimated 300 elders' homes throughout the country (World Bank, 2008). The vast majority of elder homes in Sri Lanka are publicly funded and are free to residents, though a few fee-levying private homes do exist as well (Abeykoon, 2002). A sound understanding of elder homes and the services they provide in Sri Lanka is an essential first step to developing a successful plan of how to best care for elderly patients with long-term health care needs in the future. Currently, there is a lack of information on the elder homes that have already been established throughout the country. Little data is available on the patient population, overall functioning ability, and funding resources for these facilities. This study aims to address this gap in the literature by providing a descriptive report of long-term care facilities in the southern Galle district of Sri Lanka. In addition, this study aims to explore and better understand the role of elder homes in the context of Sri Lankan societal norms and culture.

2.2 Methods

A qualitative descriptive study of Sri Lankan elder homes was carried out in the southern district of Galle, Sri Lanka. A convenience sampling method was used to identify six elder homes located in the area. During a 2-month period, visits were made

to the sample of six elder homes. The purpose of the visits was to interview the elder home managers and to obtain general information on the functioning and history of the elder homes, as well as general information on the residents living at the facilities. All of the elder homes visited were free to the residents who lived there. No private-pay facilities were visited. The elder homes were identified and initially contacted by faculty members of the University of Ruhuna medical school, located in Galle, Sri Lanka. Permission to conduct the visits was approved by all six elder home managers. No names, addresses, or identifying information of the elder homes, elder home managers, or elder home residents was recorded. Approval to analyze and record the findings of the discussions was received from Duke University Medical Center IRB Durham, NC, USA.

Interviews with the elder home managers were conducted using a semi-structured discussion guide questionnaire. Average number of residents living at the facilities, the number of trained medical staff, and resident access to medical care was all investigated. Additionally, discussions focused on perceived levels of family support, common physical or cognitive disabilities suffered by residents, and common medical conditions prevalent among residents. The interviews were all conducted in Sinhala. A faculty member from the University of Ruhuna was present at each interview and facilitated the process by serving as the Sinhalese interpreter. Interview data were recorded into written notes. Results from the interview questionnaires were summed and interpreted using descriptive content analysis. Interpretation of the findings were also complemented by available literature and observations made by the interviewer.

2.3.1. Resident Characteristics

The number of residents living at each of the elder homes varied greatly between the facilities. The number of elderly residents per home ranged from 11-125, with a mean number of 35 residents per facility. Most of the residents were male Sinhalese Buddhists over the age of 60, and they came from both urban and rural areas around the island. The elder homes located in urban areas tended to have residents that originally had lived in urban areas while elder homes located in rural areas tended to have residents that originally lived in rural areas. The religion and ethnicity of elder residents were also assessed. In most of the elder homes, 100% of residents were elderly Sinhalese Buddhists. This includes one home that was specifically built to care for elderly Buddhist monks. Two homes also cared for a small number of Tamil residents. While Buddhism is the main religion for both Sri Lanka and the majority of the elder home residents, one facility did house residents who collectively practiced all four major religions in the country (Hinduism, Islam, Christianity, and Buddhism).

The majority of residents in most facilities were male, but the proportion of women varied across the facilities. Half of the homes (three of six) accommodated male residents only, while the other half accommodated for both male and female residents. None of the elder homes were designed solely for females, though one of the six homes did have a higher female to male resident ratio (45 male to 80 female). The age of residents ranged from 50 to 90 years, though these numbers are just crude estimates, as managers did not know the exact ages of the residents, or many residents themselves did not know their exact ages.

2.3.1.1 Medical, Physical, and Cognitive Impairment

Of the medical conditions reported, all were chronic diseases; no acute or infectious diseases were mentioned. Hypertension was the most common medical condition, followed by diabetes, to have been diagnosed in the elder home patient population. Stroke, heart failure, cataracts, hearing impairment, and arthritis were also noted as common medical conditions among the elderly residents. In general, most residents were able to ambulate independently. In fact, ability to walk and function independently was criteria for admission into many of the elder homes. Despite this criteria, once admitted to the elder home, residents would be cared for at the facility until they were deceased, regardless of declines in functional ability.

Of the patients with noted physical disabilities, diabetes and stroke were the main causes reported for the residents' physical limitations. Many of the residents were also reported to have hearing loss, though many times residents declined using hearing aids as loss of hearing is culturally viewed as part of the natural aging process. When asked about cognitive impairment, the elderly home managers did not report any specific cognitive disorders being diagnosed among the residents. One manager mentioned that some of the residents had "memory loss" or were "senile", but no specific diagnoses were reported.

2.3.1.2 Family Involvement

The concept of the "elder orphan" emerged when interviewing elder home managers. The majority of the residents were considered to be "elder orphans", having no family members or having been abandoned by their family. Across all of the homes visited, each manager reported that family members never, or very rarely, visited any of the residents who lived there. One elder home manager estimated that at the very

most 10% of the residents living at the facility were ever visited by family members. Many of the elderly residents had no immediate family, or had never been married. In addition, it was reported, “many residents were mistreated by their family”. One manager also stated that family members often gave “false phone numbers and address so that they could not be contacted” once they left the facility. Lack of familial support, not severe medical or physical disability, appeared to be the driving force that led most of the elderly to become residents at the elder homes.

2.3.1.3 Medical Staff

Only one of the six elder homes employed any trained medical staff. This particular home employed two registered nurses that lived and worked at the residence. Together, these two nurses cared for 65 elderly residents. While the number of staff varied between the elder homes, five of the six homes employed managers who lived in the facilities full-time with the residents. The manager of the sixth elder home lived next door to the facility. Due to the absence of medical staff, the elder home managers and the residents themselves assumed the patient care responsibilities that otherwise would have been held by staff with medical training. For example, managers were responsible for distributing prescribed medications to the elderly residents. In the elder home where the manager lived next door, one of the elderly residents “with good cognitive function” was responsible for making sure the other residents received their prescribed medications.

2.3.1.4 Access to Medical Care

Though the majority of residents did not see a physician on a regular basis, physicians did visit two of the elder homes fortnightly to provide free medical care to the residents. These physicians provided their services pro bono. Of the physicians

who regularly visited the homes, one was a doctor trained in allopathic medicine, while the other was an Ayurvedic physician who practiced traditional medicine. While physicians did not regularly visit the residents of the four remaining elder homes, two of these homes stated that there was a local doctor who would come and manage minor illnesses of the residents if needed. All managers stated that they would bring residents to the local government hospital in case of acute illness.

2.3.1.5 Funding Resources

All the elder homes visited relied on donations from the community and Non-governmental organizations (NGOs) to both maintain their facilities and to provide care to the elderly residents. The residents themselves did not pay any money to live at these facilities. Two of the elder homes visited also received a minimal amount of monetary support from the Sri Lankan government. These two facilities received 300 rupees (approximately US\$2.73) per resident per month from the government.

2.3.1.6 Community Involvement

Community members were instrumental in the establishment and ongoing functioning of elder homes in Sri Lanka. After identifying a lack of services provided to the elderly in their areas, local community members on their own initiative had established two of the six elder homes visited. For each of these two elder homes, local community members had developed the plan, obtained the funding, and identified the site for the residences to be opened. Both of the elder homes are currently over fifty years old, and to this day, continue to be run solely by the support of local community members and organizations.

Members of the community also donated daily meals to all of the elder homes visited. Lunch, almost always consisting of traditional rice and curry, is the main meal

of the day in the elder homes and throughout Sri Lanka. Each day a member of the community would either prepare the large daily meal and deliver it to the elder home or bring food and prepare the meal in the facility's kitchen. Donation of meals from the community was found across all six elder homes visited. According to the elder homes managers, in Sri Lankan culture, this act of giving stems from the Buddhist concept of "Alms donation" or "Alms-giving". In Buddhism, voluntary donation from lay people to aid Buddhist monks or to aid the poor without expecting anything in return is a way to show respect and humility. Each elder home relied on this act of "Alms donation" to feed their residents and many times this donated meal was the only major meal eaten by residents each day. In addition to meals, community members often donated money, clothing, and household items to the elder homes.

2.4 Discussion

The results of this study highlight that both familial and community support are significant factors in the long-term care of elderly Sri Lankans. Though many elder home residents had been diagnosed with a chronic NCD or disability, lack of familial support was consistently identified as the driving force necessitating the elderly to reside at the long-term care facilities. With little or no financial assistance from the government, the facilities themselves all relied heavily on donations from the community to function on a daily basis. Community members often donated money, clothing, medical care, and household items, but the ongoing reliance on community giving could most readily be seen in the "alms donations" that provided residents with their daily meals. Additionally, the results of the study indicate, that lack of trained medical staff and routine access to medical care was limited in all of the elder homes visited. The absence of trained staff and regular physician visits limits the elder homes'

abilities to adequately manage and care for elderly residents with chronic medical conditions. All of these components will be influential in the future of long-term care for the elderly in Sri Lanka.

This study is limited in the sense that only six elder homes were visited in one Southern district of Sri Lanka. The exact number of elder homes in this area is unknown, but there are at least 300 elder home facilities throughout the entire country (World Bank, 2008). In addition, private pay institutions were not surveyed; all of the elder homes visited were free to the residents. Therefore, the generalizability of our observations is limited. Additionally, because no elder residents were actually interviewed, findings are based solely on the elder home managers' perceptions of patient history and medical conditions.

Lack of familial support being the driving force precipitating residence into elder homes could perpetuate the increased need for institutionalized long-term care of the elderly in Sri Lanka. Unlike many developed countries, where elderly residents typically come to reside in long-term care facilities due to complex medical conditions or severe physical or cognitive disabilities, these were not the driving forces that brought residents to live in the elder homes visited in Sri Lanka. Though managers reported most elder residents had been diagnosed with at least one medical condition, what led the elderly to reside in the local elder homes was the lack of immediate family or familial support. The majority of residents had no family, had been abandoned by their family, or had been mistreated by their family, leaving them alone without any monetary support. These findings do not reflect the traditional cultural norms in Sri Lanka.

Traditionally, Sri Lankan cultural norms place the responsibility of long-term care for the elderly on the family. Approximately 77% of all the elderly in Sri Lanka live

with their children, and only 6% live alone (World Bank, 2008). The vast majority of elderly (95%) in Sri Lanka believe that children are primarily responsible for taking care of parents in their old age (World Bank, 2008). Despite this, the strength of traditional family support networks may diminish in the near future. The sustainment of traditional familial care and support for the elderly will be a challenge for Sri Lanka's society. Though current trends do not yet show declining rates of co-residence between the elderly and their children in Sri Lanka, higher income Asian countries, such as Japan and Korea have shown sharp declines in their co-residency rates (World Bank, 2008). Though it is hard to predict, as income and education rise in Sri Lanka, co-residency rates with children may decrease (World Bank, 2008).

Moreover, familial support systems may further diminish as the number of offspring per household decline due to continued decreases in fertility rates (Siddhisena, 2005). Total fertility rates have declined by nearly 50% in Sri Lanka since 1960, the sharpest decline in all of south Asia (DeSilva, 1994). The total fertility rates have decreased from about 5 children per woman to near the replacement level of 2.1, currently the total fertility rate in Sri Lanka is estimated to be 2.17 (Abeykoon, 2000; CIA, 2012). With study results indicating lack of familial support already being a present day issue among the elder home residents in Sri Lanka as fertility rates decline, and as previously noted, the number of working age adults in the country are decreasing, many more families may look to long-term care facilities to help shoulder the burden of caring for their elderly relatives.

To prevent further demand for institutional care, the Sri Lankan government could invest in community and home-based services to help reduce the burden of care on children, and enable the elderly to continue living in the community. How to best

provide cost-effective and affordable care in the community has yet to be determined, and there is a large need for pilot programs to be implemented and evaluated (World Bank, 2008). Additionally, providing incentives to families to promote co-residence should be considered. Such policies that provide tax incentives for co-residence have been effective in rewarding family support in countries such as Singapore and Malaysia (World Bank, 2008).

During the course of this study, the role of community involvement in the establishment and ongoing functioning of elder homes in Sri Lanka became clear. The influence of Buddhism, which is practiced by 69% of the Sri Lankan culture (CIA, 2011), is the driving force behind the large amount of community support and donations provided to the elderly and the elder home facilities. The concepts of “dana”, which is the practice of generosity or giving and “alms”, which is the act of freely giving money or food to relieve the poor are two Buddhist concepts that influence community members to support and donate to elders in need.

Without the ongoing support of the community, the need for government support for long-term care services for the elderly in Sri Lanka would be much greater. Community members and organizations have been instrumental in establishing elder care homes and continue to be essential in the ability of the facilities to function on a day-to-day basis. Further research or establishment of long-term care facilities in Sri Lanka should address community involvement and the role it does or would play in the functioning of the facility.

Whether it is chronic medical conditions or lack of familial support that necessitates the elderly to reside in an elder care home, currently the elder care system in Sri Lanka is not equipped to care for a rapidly aging society. Managers repeatedly

reported chronic medical conditions among their elderly residents, but the absence of trained medical staff in these facilities leaves residents without adequate or consistent treatment of these conditions. Additionally, most residents are not seen by a physician on a regular basis to manage their chronic health conditions.

With the prevalence of chronic NCDs and disability among the elderly only predicted to increase, it can be assumed that the medical needs of elderly residents will only become more complex and require more extensive medical care. To adequately care for an aging population, an increase in the number of trained medical staff and better access to routine medical care will be needed. The minimal amount of funding available from the Sri Lankan government severely limits the expansion of medical services to elderly residents, and it will be necessary to identify alternative sources to expand and improve upon Sri Lanka's elder care system.

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