Int J Med. Public Health. 2017; 7(3):142-146
A Multifaceted Peer Reviewed Journal in the field of Medicine and Public Health
www.ijmedph.org | www.journalonweb.com/ijmedph

Original Article

Morbidity Profile and Quality of Life (QOL) of the Beneficiaries of Asraya Project: A Study from Kerala

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ABSTRACT

Introduction: The State Poverty Eradication Mission of Government of Kerala- 'Kudumbasree' launched an innovative programme named Asraya for the destitute individuals. The health conditions and level of living seldom studied among these marginalized individuals. This study aims to assess the morbidity profile and Quality of Life (QOL) of the beneficiaries of the destitute rehabilitation project (Asraya) in Thiruvananthapuram district , Kerala. **Methods:** This cross-sectional study was conducted among 150 beneficiaries of the destitute rehabilitation project in Thiruvananthapuram district, Kerala, India. Sampling technique used was cluster sampling - Probability Proportionate to Size. A pre-tested semi-structured questionnaire was used to collect the baseline information and WHO QOL BREF was used to assess the quality of life.Data was analyzed using SPSS Version 20. **Results:** Chronic non-communicable diseases topped the list in their morbidity profile. In general, the Quality of Life of these individuals was poor with a mean score of 30 (22.6). Domain wise analysis produced a score of above 40 in two domains namely physical and environmental. Younger age, access to nutrition, free from diseases and supervision by the authorities were important predictors of QoL. **Conclusion:** This group of individuals suffered from a multitude of diseases. QoL of the destitute was poor in general, with variations with respect to domains. The quality in the physical domain was relatively better than that in psychological domain.

Key words: Health of the Destitute, Quality of life, Marginalized section, Standard of living, Asraya project, Poverty and health.

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History
- Submission Date: 05-01-2017;
- Revised Date: 08-05-2017;
- Accepted Date: 17-07-2017;

DOI : 10.5530/ijmedph.2017.3.29

Article Available online
http://www.ijmedph.org/v7/i3

INTRODUCTION

The challenge posed by poverty in the overall human development is large. The United Nations has rightly identified this fact and has stated the first Millennium Development Goal as eradication of extreme poverty and hunger.[1] Poverty has been often defined in terms of economic deprivation.[2] The poor often gets excluded from the normal stream of the society.

Destitution is a social pathology and is a condition of extreme poverty in which people lead an unsustainable livelihood.[3] They struggle to meet even the basic necessities of life like food, clothing and shelter. The destitute population forms the lowest socio economic strata in any society and they include beggars, vagrants, abandoned children and elderly, young unmarried mothers, widows and those who live under extreme conditions of economic deprivation. This group is highly vulnerable to the various risks of living and is unable to lead a normal life without external support mechanisms.[3,4] The proportion of people below the poverty line in India has been reducing since independence. It is reassuring to note that the scenario is not different in both rural and urban areas.[5,6] However, the destitute population is currently growing in size.[5] In India, the tribal population, coastal population, slum dwellers and people with very low earning comprise the marginalized section. The elderly and women are at more risk even within this group.[7]

The state of Kerala is well known for its remarkable achievement in social development. However the socio-economic deprivation still exists. Various data shows that the proportion of destitute population in Kerala is 1-2 %.[5-8] The Government of Kerala has pioneered innovative strategies to alleviate poverty of the state. The main focus of Kudumbasree is poverty alleviation through convergence of resources with the aid of Local Self Government (LSG).[9] Asraya is a unique project for the destitute population initiated by the Kudumbasree. Extremely poor and excluded individuals are identified using a 9 point scale developed by the state poverty eradication mission of Govt of Kerala. These include families belonging to socially disadvantaged groups (Scheduled caste/ tribe), with no land, no house, no sanitary latrine, no regularly employed member, no access to safe drinking water, with an illiterate adult member, with a physically or mentally challenged person and those families headed by women. Meeting 7 or more of these crite-

Cite this article : Nair SPR, Nair ATS, Varaghese S, Krishnapillai V, Thomas A, Mendez AM. Morbidity Profile and Quality of Life (QOL) of the Beneficiaries of Asraya Project: A Study from Kerala. Int J Med Public Health. 2017;7(3):142-6..

ria would qualify a family to become the beneficiary of Asraya Project. They are provided with support in various domains in order to sustain their living under this project.[10] In the year 2008, Asraya project received the Prime Ministers Best Practice Award in Public Administration.[11] The basic needs of living have been listed out as survival needs in the Asraya project. The services listed under the survival needs are food, medication, minimum financial resources in the form of pension and education. This initiative of the government of Kerala provides a unique opportunity to study the life situations of the destitute in Kerala.

The issues faced by the destitute are many which often go unnoticed and unaddressed. Despite the rehabilitative projects like Asraya, this section of the society is struggling for their existence. The health problems of this vulnerable group remain in the dark. No evidence of quantitative estimations of the level of living of these individuals is available from this part of the world. The current study aims to study the morbidity profile and Quality Of Life (QOL) of the marginalized individuals in Kerala, South India.

MATERIAL AND METHODS

The design of the study is that of a Cross sectional survey conducted in Thiruvananthapuram district, the southern-most district of Kerala during November 2011-April 2012. The study setting has a total population of more than 33 million.[12] There are a total of 78 grama panchayaths (units of local self governments) in the district and Asraya project is being carried out in 34 grama panchayaths during the study period. The destitute families identified as beneficiaries of the Asraya project in various local bodies were the study population. Those who were not willing to participate in the study were excluded.

A total of 150 destitute families were identified from 15 clusters. Sample size was estimated by the formula $(Z_\alpha)^2\ pq/l^2$ [$\alpha = 1.96$, P = 60.8%]. Sampling technique used was Cluster sampling technique- Probability Proportionate to Size (PPS). The local body where Asraya project is being implemented was chosen as a cluster. In Thiruvananthapuram district, Asraya is being implemented in 34 panchayaths. The pretesting of the questionnaire and a preliminary study was conducted in Malayankeezhu panchayath where 250 destitute families were brought under the Asraya project. The total number of destitute families included in the sampling frame is 3187. Since the number of clusters was 10, the sampling interval was 3187/10 = 319. The random number selected from the random number table was 316. To this random number the sampling interval was consecutively added to identify the 10 clusters. Table 1 shows the method of selection of 10 local bodies for the study.

Major outcome variables studied was QOL of beneficiaries. QOL was assessed using the WHO QOL BREF questionnaire. It is a tool that could be used internationally and as it was validated in various ethnic groups. The questions assessed the general quality of life as well as the quality of life in physical, psychological, social and environmental domains. The questionnaire contained a set of 26 items for which the responses were measured in Likert scale. All domains were scored separately within the range of 0-100. The scores obtained in various domains have been represented as means with standard deviations. A score of above 60 has been considered as good QOL in each domain.

The questionnaire also asked information on socio-demographic parameters like age, occupation, socioeconomic status and enrolment of the family in Asraya project. The destitute were visited and data was collected by interview technique. Various morbidities suffered by the destitute individuals were recorded from the doctors notes (if available) and as reported by themselves.

Ethical consideration

Confidentiality was maintained throughout the conduct of the study. Permission was obtained from each of the 10 selected local bodies for the conduct of the study. Written informed consent was obtained from the person who was being interviewed in each of the destitute family. The ethical committee of Government Medical College, Thiruvananthapuram gave clearance and approved the study.

Statistical analysis

The data were entered in Microsoft excel and analysed using SPSS software version 16. The categorical variables have been summarized using frequencies and proportions as percentages. Quantitative variables have been summarized as mean and standard deviation. Regression analysis was done to find out the associated factors of quality of life in various domains. All hypotheses were tested at a significance level of 95% and power of 80%.

RESULT

The mean age of the study population was 56.02 (14.47) years. More than half of them (78, 52%) belonged to the age group of 41-60 years. Elderly (above 60 years) constituted 32.7% (n=49) of the population. More than three fourth (76.7%) of the study population were comprised by females. The youngest was a 15 year old girl and the eldest was a 90 year old widow. The age distribution of males and females were comparable. The mean age of the male participants was 56.1 (16.5) years and that of females was 55.9 (13.7) years. Majority (97, 64.7%) of the study participants were unemployed. Among the employed individuals (n=53), almost all (52, 98.1%) were involved in unskilled labour. A good proportion (23, 15.3%) of the study participants was unmarried. More than half of them (85, 56.7%) were either separated from their spouses or widowed. The mean self declared family income per month was Rs 428.17 (475.6). The baseline information about the study population is given in Table 1.

It was found that the destitute population suffered from a battery of chronic medical illnesses. Among the 150 beneficiaries, 136 (90.7%) of them were found to be suffering from one or chronic ailments. The morbidity profile of these individuals is given in Table 2. More than half of the diseased individuals (81, 59.6%) were found to suffer from more than one chronic diseases. The facility adopted by 120 (88.2%) diseased individuals for their treatment is the nearest Government facility, while 16 (11.8%) go to private hospitals for availing treatment services. A good proportion of the chronically ill individuals (129, 94.8%) had to spend out of their pockets for health care services like diagnostic investigations, buying medicines and hospitalization. Maximum number of individuals (70, 51.5%) reported the out of pocket spending for buying medicines. Thirty-nine (28.7%) of the people had to spend money on investigations and 20 (14.7%) for hospitalization.

QOL assessment was done in 4 major domains physical, psychological, social and environmental. Maximum mean score was for physical domain and minimum for psychological domain. The means and medians of the domain specific as well as overall quality of life scores are shown in Table 3. In general the quality of life of these destitute individuals was poor, with a mean (SD) overall quality of life score of only 30 (22.6) out of 100.

Analysis of the factors associated with good quality of life in the physical domain revealed that those employed, without any chronic illnesses, age less than 60 years and earning monthly income of more than Rs 500 were all significantly enjoying better quality of life. Psychological domain had the least mean (SD) score of 36.67 (16.1). Better QOL in the psychological domain was seen for younger individuals, males, those who had income above Rs 500 and those families visted by Asraya project super-

Table 1: The list of the selected Local Self Governments for the conduct of the study

Panchayath	No: of destitute families	Cumulative frequency	Identified cluster	Cluster number
Karode	112			
Chenkal	78	190		
Vellarada	123	313		
Amboori	79	392	316	1
Venganoor	95	487		
Maranaloor	99	586		
Pallichal	57	643	635	2
Pothencode	84	727		
Mangalapuram	114	841		
Andoorkonam	80	921		
Kadinamkulam	176	1097	954	3
Poovachal	72	1169		
Aryanad	120	1289	1273	4
Kuttichal	48	1337		
Tholikode	49	1386		
Kattakada	150	1536		
Karakulam	93	1629	1592	5
Aruvikara	108	1737		
Peringamala	97	1834		
Karavarum	105	1939	1911	6
Nagaroor	111	2050		
Kilimanoor	61	2111		
Azhoor	126	2237	2230	7
Cherunniyoor	34	2271		
Elakamon	217	2488		
Kallikadu	77	2565	2549	8
Mudakkal	95	2660		
Pangode	119	2779		
Athiyanoor	96	2875	2868	9
Vettor	87	2962		
Kizhuvillam	73	3035		
Perungadavila	104	3139		
Ottasekharamangalam	48	3187	3187	10

Table 2: Distribution of Socio-demographic Variables among the study population

Variable	Category	Frequency (N=150)	Percentage
Age	40 years and less	23	15.4
	41-60 years	78	52.0
	61-80 years	40	26.7
	Above 80 years	9	6.0
Gender	Male	35	23.3
	Female	115	76.7
Occupation	Unemployed	97	64.7
	Unskilled	52	34.7
	Skilled	1	0.7
Marital status	Unmarried	23	15.3
	Married	42	28.0
	Separated	27	18.0
	Widow/widower	58	38.7
Socio-Economic status	BPL	108	72.0
	APL	42	28.0

Table 3: Number and percentage of study participants suffering from various chronic ailments

Disease	Frequency	Proportion
Hypertension	53	35.3
Diabetes	45	30.0
COPD	33	22.0
Arthritis	26	17.3
Psychiatric diseases	24	16.0
Heart diseases	22	14.7
Hypercholesterolemia	19	12.7
Physical handicap	18	12.0
Mentally challenged	16	10.7
Epilepsy	16	10.7
Thyroid diseases	7	4.7
Bedridden	7	4.7
Tuberculosis	6	4.0
Cancer	6	4.0
Others	11	7.3

visors. Social domain of QOL tries to capture the personal relationships and the social support enjoyed by the beneficiaries. The mean (SD) score of QOL in this domain was 38.18 (18.7). In general younger individuals (age less than 40 years), males, married individuals who are currently living with their spouses were found to have better scores. The questions in the environmental domain mainly tried to capture the condition existing in the home environment, physical environment like pollution and their financial stability. The mean (SD) score of the study participants for their QOL in this domain was 41.45 (13.2).

Binary logistic regression was done to find out the determinants of QOL in various domains. The results of regression analysis are given in Table 5. Visiting the beneficiaries of Asraya project by the supervisors was seen to play an important role in determining the QOL of the beneficiaries especially in the psychological and environmental domains. Social quality of life was seen to be better among those who lived with their spouses.

DISCUSSION

Around one third of the destitute population in the current study belonged to the age group of above 60 years. Analysis of the census data over the past decades reveals an increase in the proportion of the elderly destitute. According to 2001 census data, 31.4% of the destitute population was above the age of 60 years. It appears that extreme poverty and destitution in Kerala also is more associated to the aging population. This has wide implication in the current scenario of the state with elderly (above 60 years) constituting 13% of the total population.[13] The physical and social disadvantages faced by the elderly poor puts them in

Table 4: Overall Quality of Life and Domain specific scores of the beneficiaries

Domain	Mean	SD	Median	IQR	Min-Max
QOL	30	22.6	25	12.5-50	0-88
Physical	46.45	21.4	46.43	32.1-66	0-93
Psychological	36.67	16.1	37.5	25-45.8	0-71
Social	38.18	18.7	33.3	25-41.7	0-100
Environmental	41.45	13.2	40.6	34.4-49.2	0-88

Table 5: Determinants of poor quality of life in various domains- results of binary logistic regression

Domain	Factors	Adjusted OR (95% CI)	P value
Physical	Age above 60 years	3.49 (1.57- 7.73)	0.002
	Monthly income less than Rs 500	2.62 (1.16-5.88)	0.019
	Suffering from chronic diseases	3.56 (1.06- 11.98)	0.04
	No visit by Asraya supervisors	5.21 (1.90-14.27)	0.001
Psychological	Living away from spouse	7.96 (3.15- 20.11)	<0.001
Social	No visit by Asraya authorities	4.85 (1.76-13.35)	0.002
Environmental	Age less than 80 years	7.1 (1.61-30.05)	0.008

need of great social support as evidenced by studies.[14] In the developed countries like the United States, evidence is generated to argue that the poor elderly need double financial support.[15] Diseases and disabilities are inevitable in old-age. It is also well documented that diseases and disabilities are linked to destitution in almost all parts of the world. These facts has tremendous importance in the context of expanding elderly population in the state and its link to the emerging diseases and disabilities.[15-19] These findings are concordant with the high degrees of morbidity noted in the current investigation among this marginalized group of individuals. Similar reports are also available from studies conducted in other settings among analogous group of people.[20, 21]

More than three fourth of the study population were comprised by women and the stratified analysis showed that around 60% of them were either widows or had separated from their spouses. In contrast to this, the proportion of widowers/separated were only one sixth among men in the study. These findings throw light into the social realities existing in this disadvantaged group. Destitute population of the state is largely contributed by elderly women and most of them are not supported even by their spouse. The plight of these women has a strong link with their susceptibility to the existing social as well as political scenario.[22,23]

General QOL score was highly correlated to that of physical QOL scores and psychological QOL scores and its correlation was moderately high with the scores of social and environmental scores. The scores of physical QOL were well correlated to that of psychological domain of QOL. It indicates that the physical ill health rampant in this group of people affected their mental status and altogether reduced their quality of life critically. The social and environmental conditions of them also affected their levels of living to a large extent. The QOL scores of the destitute in current study was poor compared to various other settings where the same tool was applied. The scores were poor compared to that of the elderly population (the overall QOL score was around 50) residing in the same geographical setting.[24]

However the scores were better than people with severe medical illnesses (cancer patients and HIV patients), to whom it varied from 10 to 20 depending upon the domains.[25, 26] But the study population is enjoying a poorer QOL as compared to people suffering from other debilitating and stigmatizing diseases[25, 26] and not even comparable to the patients seeking general outpatient care from a primary level hospital.[27] People with psychiatric diseases were also reported to have better QOL compared to the destitutes.[28] A study conducted among disabled individuals also documented the lack of QOL in psychological domain in the study subjects as compared to other domains of WHO QOL BREF.[29] It is to be noted that age , monthly income, diseases, visit by the authorities of Asraya and living with spouse were important predictors of QOL in various domains. It indicate the importance of economical, nutritional, social and psychological support mechanisms. Administrators should keep these areas in their mind while framing policies for marginalized people of the society.

There are limited scientific studies on destitution in India and the life of these people is less observed, less reported and less addressed. Perhaps this is the first report from Kerala on the condition of extremely poor and socially unprivileged people, the destitute. Current study is based on primary data and we used internationally validated tool for data collection. The questionnaires were administered in a small group of study subjects before conducting the study. The study may not have captured those individuals who are not the beneficiaries of Asraya project. There were limitations in capturing the exact deprivation experienced by these individuals as the study tool used was a closed ended questionnaire (WHO QOL BREF).

CONCLUSION

This study brings into light the health related issues and quality of life of a marginalized section of the population. The destitute individuals lead highly morbid lives with an enormous burden of non communicable diseases. They have a very high prevalence of neurological disorders, mental ailments and physical handicap as compared to the general population. The Quality of Life of these destitute families is generally poor. The mean (SD) score for general QOL is as low as 30 (22.6). The mean (SD) scores for QOL in the physical, psychological, social and environmental domains were 46.4 (21.4), 36.6 (16.1), 38.1 (18.7) and 41.4 (13.2) respectively. Younger individuals were found to enjoy better QOL. Receiving a regular monthly income, living with spouses and regular visits by Asraya supervisors were the determinants of good QOL.

ACKNOWLEDGEMENT

State Poverty Eradication Mission, Govt of Kerala- Kudumbasree.

CONFLICT OF INTEREST

NIL

ABBREVIATION USED

QOL: Quality of Life.

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