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Quality of Life of Urban Elderly in Cooch Behar District, West Bengal, India: A Socio-Demographic Analysis

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Abstract : *Old age experiences many challenges. The lack of dependence on self is one of the fundamental features in old age due to deteriorating physical and mental condition. An attempt has been made in this study to understand the Quality of Life (QoL) in different domains of elderly people from socio-demographic perspectives. To conduct the study, data have been collected from six municipal towns of the district by using stratified simple random sampling followed by interview method. To assess the QoL of the elderly people, WHOQOL-BREF version questionnaire has been used. The result shows that, there is lower level of QoL among the people having more age, illiterate and people with lower socio-economic status. It is also found that there is a significant difference of the people who are financially fully dependent, partly dependent and independent in attaining the QoL in the study area. The study suggests that, increase in social contact and support; financial security may make older people happier and help them to live with good quality of life.*

Keywords : *Quality of Life, Elderly persons, Social contact, Socio-demographic factors*

Introduction

Ageing is a process that initiates a variety of molecular and cellular damage to the human body over time, which leads to a gradual decrease in physical and mental capacity among people. Generally, old age is considered a declining period in life which is characterised by weaker physical and psychological factors because of change in the body cell with increasing age (Scarre, 2016). The old age is socially unfavourable while adjusting with people of lower age group particularly young and adults (Islam, 2014). But, there is certainly individual difference on the basis of socio-economic and educational background. Although age is considered as the marker of the older population, in many times, it becomes too hard to distinguish between 'adult' and 'old' because of difficulties in understanding the physical appearance and body structure between them (Amarya, et al. 2018).

However, the lack of dependence on self during this time alongwith other problems such as biological, social, emotional, intellectual and spiritual changes make them alive with degrading

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Quality of Life (Charles & Carstensen, 2010). As time passes, a number of health issues manifest themselves with increasing age as one of the foremost issues that almost every older people faces. Besides, loss of provision of medical aid, proper family care, and inadequate public health services to fulfil the health needs of older people are very important to live with good QoL (Petersen & Yamamoto, 2005). Not only that, older people are financially weak since in many cases their assets or properties are legally transferred to their heirs and as a result, they sometimes do not have fund available to fulfil their fundamental needs (Hafemeister, 2003). Therefore, financial insecurity is one of the noteworthy problems that is often experienced by older people (Bloom et al., 2010). Many researchers have found that, lower level of education with a lower level of income can increase such economic hardship resulting further increase in stress level that ultimately affects their QoL. This present study mainly focuses to find out the QoL of the elderly people influenced by socio-demographic factors.

Objectives

The principal objective of this study is to assess the QoL of the elderly people in the study area by analyzig socio-demographic variables.

Materials and Methods

Study Population: Data have been collected from 380 respondents (both male and female) having 60 and above age.

Study Period**:** The study has been conducted from June 2019 to February 2020.

Study tools**:** To assess the QoL of the elderly people, WHOQOL-BREF version questionnaire has been used after taking the permission to use it. The questionnaire has four domains i.e. Physical , Psychological , Social relationship and Environmental domain. WHOQOL-BREF questionnaire is a subset of 26 items and each domain raw score has been converted into transformed scale which ranges from 0-100 by using the following formula:

[Transformed score ={(actual raw score " lowest possible raw score)/possible raw score range)} × 100]

Sample design: The data have been collected through stratified simple random sampling method. Data have been collected from all municipal towns of Cooch Behar district and total 380 samples have been selected from six municipal towns by applying Cochran Alpha method.

Results

The present study mainly focuses on the association of QoL with the socio-demographic factors of elderly people in the study area. Table 1 shows that the major portion of the respondents belong to 60 to 69 years age group (59.2%), 30.3% of the respondents belong to the age group of 70 to 79 years and only 10.5% of the people belong to the age group of 80 and above years. It is noticed that, the percentage of female elderly (52.6%) is slightly more than male elderly people (47.4%). In case of religion, maximum portion of the respondents is found Hindu than Muslim. The

majority of the people of the study area has been found married (56%) while 40.8% of them are widow and only 3.2% are divorced or separated or unmarried. It is also noticed that, 34.7% of the respondents live in joint family and 65.3% of them live in nuclear family. Most of the study respondents have been found illiterate (27.6%), 21.5% of them have studied up to primary, 18.4% has studied up to upper primary, 12.7% has studied up to Secondary, 9.5% has studied up to Higher Secondary, 7.1% has studied up to Graduation and only 3.1% of the respondents has studied up to Post graduation and above. In the study area, maximum proportion of the people is

Table 1. Socio-demographic Characteristics of the Respondents

	Parameters	N	Percentage (%)
Age Group	60-69 years	225	59.2
	70-79 years	115	30.3
	80 years & above	40	10.5
Sex	Male	180	47.4
	Female	200	52.6
Religion	Hindu	329	86.6
	Muslim	51	13.4
Marital Status	Married	213	56
	Widow	155	40.8
	Divorced/Separated/Unmarried	12	3.2
Family Type	Joint	132	34.7
	Nuclear	248	65.3
Education	Illiterate	105	27.6
	Up to primary	82	21.5
	Up to upper primary	70	18.4
	Secondary	48	12.7
	Higher Secondary	36	9.5
	Graduation	27	7.1
	Post graduation & above	12	3.1
Financial Dependency	Fully dependent	182	47.9
	Independent	86	22.6
	Partly dependent	112	29.5

Source: Calculated from the surveyed data

fully financially dependent on other family members (47.9%) whereas, 22.6% of them are fully independent and 29.6% has been found partly dependent on others.

Table 2 shows mean of the transformed score of each domain of QoL. It is noticed that the score is maximum in case of environmental domain (57.28) and minimum in psychological domain (42.48) whereas the mean score of physical and social domain are 52.35 and 42.48 respectively.

Table 2. Transformed Score of QoL of the Respondents

Domains	Mean	Std. Deviation
Physical	52.35	21.87
Psychological	35.16	20.60
Social	42.48	16.68
Environmental	57.28	17.61

Source: Calculated from the surveyed data

Table 3 shows mean of the transformed score of each domain of QoL in case of male and female. It is observed that, in case of male elderly people, the score of QoL is maximum in environmental domain (64.10) and minimum in psychological domain (30.47) followed by physical and social domain i.e. 57.68 and 48.40 respectively. On the other hand, in case of female, the score of QoL is maximum in environmental domain (50.66) and minimum in social domain (37.23) and the score of physical and social domain are 50.66 and 42.25 respectively.

Table 3. Transformed Score of QoL on the Basis of Sex

Sex	Domain	Mean	Std. Deviation
Male	Physical	57.68	21.48
	Psychological	30.47	20.42
	Social	48.40	16.70
	Environmental	64.10	17.29
Female	Physical	50.66	20.80
	Psychological	42.25	17.28
	Social	37.23	15.04
	Environmental	53.94	16.43

Source: Calculated from the surveyed data

Table 4 shows the mean of transformed score of QoL in respect of religion. It is noticed that, in case of Hindu, the score is maximum in environmental domain (56.51) and minimum in psychological

domain (33.09) whereas the mean score of physical and social domain are 56.51 and 41.75 respectively. On the other hand, in case of Muslim, the score is maximum in environmental domain (55.94) and minimum in psychological domain (37.49) and the mean score of physical and social domain are 50.90 and 45.69 respectively.

Table 4. Transformed Score of QoL on the Basis of Religion

Religion	Domain	Mean	Std. Deviation
Hindu	Physical	56.51	20.87
	Psychological	33.09	21.71
	Social	41.75	16.59
	Environmental	60.49	17.53
Mushlim	Physical	50.90	19.42
	Psychological	37.49	18.67
	Social	45.69	17.97
	Environmental	55.94	19.28

Source: Calculated from the surveyed data

Table 5 shows mean of the transformed score of QoL in respect of family type. It is noticed that, in case of nuclear family, the score is maximum in environmental domain (60.28) and minimum in psychological domain (37.07) whereas the mean score of physical and social domain are 52.35 and 42.48 respectively. On the other hand, in case of joint family, in environment domain, the QoL score is maximum i.e. 54.16 followed by physical (50.21), social (45.82) and psychological (33.67) domain.

Table 5. Transformed Score of QoL on the Basis of Family Type

Family Type	Domain	Mean	Std. Deviation
Nuclear	Physical	55.38	20.80
	Psychological	37.07	21.15
	Social	40.61	14.54
	Environmental	60.28	16.59
Joint	Physical	50.21	22.18
	Psychological	33.67	20.21
	Social	45.82	17.51
	Environmental	54.16	17.80

Source: Calculated from the surveyed data

Table 6 highlights that, with an increase in age, QoL decreases significantly in all the domains (P value=.000 in physical, social, psychological and environmental domain). The highest correlation value has been found in case of physical domain (-.777) followed by social (-.742), psychological (-.705) and environmental (-.609) domain.

Table 6. Association between QoL Score and Age of the Respondents

Area	Domain	Correlation Coefficient	*P*
n=380	Physical	-.777**	.000
	Social	-.742**	.000
	Psychological	-.705**	.000
	Environmental	-.609**	.000
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Calculated from the surveyed data

Table 6 indicates that, with an increase of per capita income of the respondents, QoL of the respondents also increases significantly (P value = .000 in physical, social, psychological and environmental domain) and it is highly correlated to environmental domain (.645) followed by social (.564), psychological (.428) and physical domain (.398) in the study area.

Table 7. Association between QoL Score and Per Capita Income of the Respondents

Area	Domain	Correlation Coefficient	*P*
	Physical	.398**	.000
	Social	.564**	.000
	Psychological	.428**	.000
	Environmental	.645**	.000
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Calculated from the surveyed data

Table 8 shows Analysis of variance between different educational level and QoL of the elderly people. It observed that, in case of physical domain, there is no significant difference of mean score of the elderly people who are illiterate and who have studied up to primary level (p=.824) and upper primary level (p=.266) in attaining QoL score. But there is significant mean difference among the people who are illiterate with the people who have studied up to Secondary (p=.006), Higher secondary (p=.002) and Post graduation and above level (p=.000). In case of psychological domain, it is also found that, there is no significant difference of mean score of the elderly people who are illiterate and who have studied up to primary level (p=.546) and upper primary level (p=.128) in

Table 8. Multiple Comparisons between QoL and Educational Level

Multiple Comparisons							
Dependent Variable			Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Physical	Illiterate	Up to primary	-7.86343	3.47655	.824	-16.7414	6.2285
		Up to upper primary	-5.25648	3.87414	.266	-18.1697	2.4428
		Secondary	-15.78100*	4.37855	.006	-28.7613	-2.8007
		H.S	-17.41938*	4.41310	.002	-30.5021	-4.3367
		Graduation	-23.21100*	4.03561	.000	-35.1746	-11.2474
		Post graduation & above	-29.60354*	4.75755	.000	-43.7074	-15.4997
Psychological	Illiterate	Up to primary	-6.45986	3.57985	.546	-17.0724	4.1527
		Up to upper primary	-8.35856	3.21247	.128	-17.8820	1.1648
		Secondary	-12.34431*	4.04595	.039	-24.3386	-.3501
		H.S	-17.95401*	4.07787	.000	-30.0429	-5.8651
		Graduation	-23.60367*	3.72906	.000	-34.6585	-12.5488
		Post graduation & above	-33.24759*	4.39616	.000	-46.2801	-20.2151
Social	Illiterate	Up to primary	-6.44836	2.58186	.163	-14.1023	1.2056
		Up to upper primary	-7.27274*	2.31689	.030	-14.1412	-.4043
		Secondary	-14.24979*	2.91801	.000	-22.9003	-5.5993
		H.S	-20.78018*	2.94104	.000	-29.4989	-12.0614
		Graduation	-22.29818*	2.68947	.000	-30.2711	-14.3252
		Post graduation & above	-29.89758*	3.17059	.000	-39.2968	-20.4983
Environmental	Illiterate	Up to primary	-10.00252*	2.28871	.000	-16.7874	-3.2176
		Up to upper primary	-11.00722*	2.55045	.000	-18.5681	-3.4464
		Secondary	-19.24598*	2.88252	.000	-27.7912	-10.7007
		H.S	-23.61508*	2.90526	.000	-32.2278	-15.0024
		Graduation	-26.68188*	2.65675	.000	-34.5579	-18.8059
		Post graduation & above	-39.22034*	3.13203	.000	-48.5053	-29.9354

*. The mean difference is significant at the 0.05 level.

Source: Calculated from the surveyed data

attaining QoL score. But there is significant mean differences among the people who are illiterate with the people who have studied up to Secondary (p=.039), Higher secondary (p=.000) and Post graduation and above level (p=.000). It is also found that, in case of social domain, there is significant difference among the people who are illiterate with those people who have studied up to upper primary (p=.030), secondary (p=.000), higher secondary (p=.000) and who are post graduate or above (p=.000), except the people who have studied up to primary level (p=.163) in attaining QoL. On the other hand, in environmental domain, there is significant difference among the people who are illiterate with the people who have studied up to primary, upper primary, secondary, higher secondary, graduation and post graduation or above (p=.000).

Table 9 represents differences in mean score of QoL in different domains with financial dependency of the study area. It is noticed that, in all the domains of QoL i.e. physical, psychological, social and environmental domain, there are significant mean differences among the respondents who are financially fully dependent, partly dependent and who are fully independent on others in the study area (p=.000).

Table 9. Multiple Comparisons between QoL and Financial Dependency

Multiple Comparisons							
Dependent Variable			**Mean Difference**	**Std. Error**	**Sig.**	**95% Confidence Interval**	
						Lower Bound	**Upper Bound**
Physical	dependent	partly dependent	-12.14662*	2.71169	.000	-18.5272	-5.7660
		independent	-19.17786*	2.61226	.000	-25.3245	-13.0312
Psychological	dependent	partly dependent	-10.90345*	2.54778	.000	-16.8984	-4.9085
		independent	-18.90080*	2.45436	.000	-24.6759	-13.1257
Social	dependent	partly dependent	-9.07939*	1.92865	.000	-13.6175	-4.5413
		independent	-16.28927*	1.85793	.000	-20.6610	-11.9175
Environmental	dependent	partly dependent	-8.73359*	1.98827	.000	-13.4120	-4.0552
		independent	-19.17659*	1.91536	.000	-23.6835	-14.6697
*. The mean difference is significant at the 0.05 level.							

Source: Calculated from the surveyed data

Discussion

The study highlights the QoL score in terms of socio-demographic variables. It is observed that, in the study area, the QoL score is highest in case of environmental domain rather than physical, psychological and social domain (Table 2). But, the situation is quite different in case of male and female elderly. Table 3 shows that, in case of physical domain, males (57.68) have scored better than the females (50.66) because since females have no income, the major portion of female elderly people have to depend upon others and in many times, they could not be able to look after themselves during their illness (Scholl & Sabat, 2008). On the other hand, males are comparatively independent than the females. In case of psychological domain, females have scored better than the males. It is observed that, females are more hardy and psychologically strong than the males and not only that, females are engaged themselves in various household works that keep them less lonely or less stressed than the males (Whittaker et.al, 2005). In case of social and environmental domain, males have scored better (48.40 and 64.10 respectively) than the females (37.23 and 53.94 respectively). It is noticed that, males are more socially active than the females in the study area and males are basically spend their time with friends or neighbours and therefore, that there is a scope for them to increase the social network than that of females (Milligan et.al, 2013). Table 4 shows that, in case of physical and environmental domain, Hindu people achieve better score (56.51 and 60.49 respectively) than the people who are Muslim (50.90 and 55.94 respectively) while in case of social and psychological domain, Muslim people have scored better than the Hindu people. One of the main reasons is, Muslim people are socially more connected to their family members than the people who are Hindu in the study area and not only that, Muslim people mainly belong to joint family; so they have a scope to spend their time happily with their family members that keep them psychologically healthy also while in case of Hindu respondents, there is a tendency of them to live in nuclear family that makes them psychologically weaker. Table 5 shows people who live in nuclear family, in case of physical, environmental and psychological domain, they have scored better than the people who live in a joint family in the study area. It is found that, the people who are economically independent on others, live in a nuclear family and the people who are not economically good in position, are found to live in a joint family and in that case, people who are economically strong, have more scope to fulfil their basic needs like food and clothing, better treatment, travel or whatever they want (Sparrow & Sparrow, 2006). Therefore, they are in better position but in case of social domain, it is found that the people who live in joint family are more socially connected or socially live in better position than the people who live in a nuclear family which affects their QoL (Qadri, 2013).

Table 6 and 7 represent the association between QoL with age and per capita income of the respondents. It is observed that, due to deterioration of physical condition of the elderly people with age, there is found a negative correlation with the QoL score of physical, psychological, social and environmental domain (Tel, 2013). On the other hand, it is also found that, there is a strong positive correlation with per capita income and all the domains of QoL i.e. physical, social, psychological and environmental domain (Gobbens & Van Assen, 2014). From here, it is also

understood that, income plays an important role that affects the QoL of elderly people in the study area.

From Table 8 and 9, it is understood that, income and education play an important role in case of QoL of the older people in the study area, consequently, people who belong to different education level or income level have difference in attaining QoL in each domain and due to income inadequacy, most of the people are either fully or partially dependent on others (Bowling, 2005).

Conclusion

From above discussion, it I clear that, at old age, people have to face so many physical as well as mental or psychological problems. QoL of elderly people is closely associated with various socio-demographic factors. At that time, social isolation, loneliness social gap play vital factor that affect QoL of the older people. The study reveals that most of the older people have been suffering from financial insecurity which has significantly influenced their Quality of Life. Therefore, there is a need to make them financially strong at first to make them self-reliant. Apart from that, increase social contact, interaction, company, time spent with them may make older people happy and help them to attain good quality of life.

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Causes and Impact of Land Degradation in the Middle and Lower Catchment of the Subarnarekha Basin, West Bengal

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Abstract : *Land degradation is the deterioration or total loss of the productive capacity of the soils for present and future use. Most of the physical geographers and geomorphologists have attributed their ideas on land degradation. This phenomenon is predominant feature in the middle and lower catchment of Subarnarekha basin. The combination of both natural and anthropogenic factors results in catastrophic depletion of soil cover and affecting the general order of human life. The present paper aims at identifying and distinguishing the cumulative causes of land degradation and its impact over the study area. Field survey, collection of sediments, soils and water samples from different sub-environments of the study area are being used to analyse the extent of degradation. The causes were identified and analysed and proper suggestive measures were suggested to ameliorate the problem.*

Keywords : *Paschim Medinipur, Land pollution, Regional diversity, Soil erodibility*

Introduction

Land degradation is a significant global issue in the 21st century because of its adverse impact on agronomic productivity, the environment, and its effect on food security and the quality of life (Eswaran et al., 2008). Apart from natural factors, certain anthropogenic factors are also responsible for it. There are different land degradation types in the middle and lower catchment of Subarnarekha basin and causes menaces to its developmental activities.

There are numerous terms and definitions of land degradation. Some common terms used are soil degradation, land degradation and desertification. According to the Dictionary of Geography, Audrey N. Clark(1988)- (i) Land degradation refers to the process of lowering of surface by erosion and the removal of rocks waste; (ii) General Lowering of the surface of the land by erosion processes; (ii) In Soil Science-a change in the soil due to increased leaching. According to the United States Department of agriculture, Land degradation is a process that describes human induced phenomena

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