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MORBIDITY PATTERN AND THE HEALTH CARE SEEKING BEHAVIOUR AMONG THE ELDERLY WOMEN IN NALANDA DISTRICT OF BIHAR

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ABSTRACT

In India, seventy-one percent of the elderly population lives in rural areas whereas good medical facilities are mainly concentrated in the urban areas. The state of Bihar records the highest population growth in the country, the lowest per capita income, nearly half of the population are living below the poverty line in the state, an unfavorable elderly sex ratio unlike other states and low life expectancy at the age of sixty in the state are some of the facts which gives an undersatnding of the real picture of the availability of health facilities for elderly women in the state. All these parameters indicate the vulnerability and challenges of rural-aged women in the state. The study is based on the primary survey of the rural elderly women in the Nalanda district of Bihar. It analyses their health status in terms of morbidity patterns and healthcare-seeking behaviour. Ageing is associated with an increase in the prevalence of disease and an extra burden on the family's finance. Binary logistics regression analysis shows how health status and health-seeking behavior as dependent variable is linked with various socio-economic independent variables. This paper recommends formulating policies on accessible and affordable healthcare services mainly for elderly women who are mostly asset-less and are highly dependent on their families. To understand the triple jeopardy of being old, poor and female in Bihar, this work becomes essential in the context of understanding their health.

Keywords: Chronic Diseases, Elderly Women, Health-seeking Behaviour, Morbidity Pattern, Public Health Centres.

INTRODUCTION

India lives in her villages and three-fourths of the aged population are residing in the countryside. Bihar holds the second-highest rural population in the country with 88 percent of its population being rural (Census, 2011). Rural areas provide a lack of resources and services when compared to urban areas. The rural poor and women are identified as the most vulnerable among the elderly (Sarkar, 2016). Elderly women are highly dependent on the males in their families in terms of financial need. Hence, they are poorer than their counterparts. Women, mainly in advancing ages are less displayed in medical trials and research (Davidson et al., 2011). This less reporting of women in clinical trials has stuck the progress of gender-based treatment and policy guidelines.

The National Policy on Senior Citizens report shows that the majority of low-income families in rural areas can barely meet their daily subsistence and thus have no savings for their old age. About 3 percent of the aged males and 8 percent of aged females are living alone at the age when they need to be cared for most. Living arrangement impacts their care-receiving condition. Hence, elderly women who stay alone are considered ' at risk' by the World Health Organization. Consequently, there is no surety about their needs getting fulfilled. Elderly people who don't live with their families are more likely to suffer from chronic diseases and acute ailments (Agrawal and Keshari, 2014).

With globalizing economies rapidly changing technology and increasing migration, more nuclear families in India and the gradual decline of the joint family norm are witnessed. Due to this change in the very basic fabric of the community, the caregiving attitude of the society has also changed and they no longer protect the elderly as they used to do in the past. This makes the elderly women largely displaced in the community. They are more vulnerable to isolation. Deteriorating health leads to disability and psychological distress, elderly abuse and lower life satisfaction. Moreover, the concentration of elderly living alone is evident in rural areas rather than it just being an urban phenomenon.

Rural people have a higher incidence of illness as compared to urban people. They have a higher incidence of low health-seeking attitudes, especially among elderly women. The shortage of trained medical staff and unaffordable medical expenditure creates an attitude of fear regarding seeking health services. The issue of disparities in terms of treatment-seeking behaviour among elderly women, disease prevalence and disability, expenditure on health care, mistreatment of elderly by their family members and overall life satisfaction among elderly women are the areas that need more attention as they can help in understanding the perspective of elderly living in a rural setup (Banjare, 2016). Inadequate health facilities in the rural areas force even poor people to visit private medical practitioners. Expensive costs of treatment force elderly women from low economic strata to delay treatment, thereby provoking health problems. More proportion of the elderly in the total population would give rise to a severe need for respect, care and support, mainly when joint family care is declining. With negligible pension and social security schemes changing household structures, understanding the rural elderly women, especially in terms of living arrangements, financial dependence, their overall satisfaction from life and its effect on health and hindrances in health-seeking behaviour becomes inevitable to look into (Agrawal and Arokiasamy, 2010).

Rural health care is one of the biggest challenges because 70 percent of the population lives in rural areas with low-level health facilities. Facts like the rising ageing population, higher concentration of aged persons engaged in the informal sector and the need to work beyond the age of sixties provide the need to understand the affordability, accessibility and quality of the available health services in rural areas of the state. The number of both public and private hospitals is disproportionately low in rural areas, even if available, for complicated health treatment, an individual has to migrate to the city for sound

medical advice. Consequently, rural elderly women used to suffer from multiple diseases in terms of severity. They are also less likely to go for treatment since they often do not have transportation facilities and a person to accompany them to the health facilities. Their less exposure creates hindrances while meeting doctors, affecting their health-seeking behaviour.

The elderly sex ratio is abysmally low in Bihar, with 877 females per 1000 males compared to 1033 females per 1000 males for all India (census, 2011). State-wise life expectancy in India reveals that females have more life expectancy at the age of sixty than their counterparts except in a few states like Bihar, Haryana, Punjab and Uttar Pradesh. In Bihar, the unfavorable elderly sex ratio and low life expectancy at the age of sixty indicate many challenges for women. Bihar records the highest population growth in the country and along with this surge, the demand for various facilities comprising essential health services is on the rise. This condition turns out to be worse in Bihar because the state records the lowest per capita income and nearly half of the population in the state are living below the poverty line (Kumar and Raj, 2013).

The rural poor and women are identified as the most vulnerable among the elderly (Sarkar, 2016). Gender discrimination impacts elderly women. There are multiple instances of discrimination faced by rural elderly women regarding their healthcare needs beyond other necessities. To understand the triple jeopardy of being old, poor and female in Bihar, this work becomes essential in the context of their health status and health-seeking behaviour. Bihar faces several health challenges. Women's health has developed into a significant issue given their improved longevity and limited access to health care compared to men. Women, mainly in advancing ages are less displayed in medical trials and research (Davidson et al., 2011). This led to gender discrimination in treatment and policymaking because of dark figures. Women's improved length of life has noteworthy implications for women living alone, potentially with fewer resources and support.

Facts like the unfavourable elderly sex ratio and low life expectancy at the age of 60 in Bihar give another dimension to understanding elderly women's health and the impact of weak socio-economic background factors on their health-seeking behaviour. This work will consider health status because health is impacted by several factors that mirror socio-economic development regarding wealth possession of the family, standard of living, housing, sanitation, water supply, education, employment, health consciousness, and personal hygiene.

The present study examines the following objectives in the study area 1) to assess the health status of elderly women in terms of their morbidity pattern in the Nalanda district, Bihar, 2) to understand the impact of the social and economic status of rural elderly women on their health status and health-seeking behavior, and 3) to ascertain the role of availability, accessibility and affordability in utilising health care services by elderly women.

METHODOLOGY

The indicators used in the study to sample the representative study district in Bihar state are the rural sex ratio, rural elderly working women participation rate, the rural proportion of widows, the proportion of rural elderly females in the district's total population and the elderly female-headed households (Table-1). Based on the index score, Nalanda district which is performing average score and close to the state figure, is chosen (Table-2) as a study area. The district of Nalanda was constituted on 9th November 1972. Nalanda district has a population of almost three million. It recorded a growth rate of 21.2 percent in 2001-11. Almost 85 percent of the population of Nalanda is residing in rural areas (Census, 2011). Bihar Sharif is the leading town and also the head-quarter of the district. This district is surrounded by Patna district (the capital of Bihar) on its north and west (District Census Health Book, 2011). Two CD blocks that are Katrisarai and Bind Block and six villages in the Nalanda District of Bihar state with a better sex ratio have been taken. Villages with the highest population are the criteria for selecting villages with the assumption that a large number of elderly women will be from the total population.

Secondary sources of the study area do not provide data on many aspects of the elderly population in the study area. Therefore, a primary survey was conducted for further investigation. This work is mainly based on the primary data collected via asking questions to elderly women and recording the other members' responses. Elderly women of 60 and above age groups have been selected. A structured questionnaire schedule has been used to collect the data to get quantitative information. The questionnaires design the queries based on the demographic and background profile of the elderly population which included demographic information on age groups, marital status and household size. Socio-economic variables included work status, financial dependence, literacy and level of education, caste, religion and elderly women. Other information is collected by the health infrastructure. These include the accessibility of health centres from home, transportation facilities, time taken to reach health centre, availability of health centres in the villages and availability of drugs and medicines at the health centre units.

A total of 450 samples have been chosen to take 75 from each village based on information from the voter‘s list from Gram Panchayat. From the list, target respondents have been selected by systematic random sampling method. Non-probability snowball sampling method is also used in the field because of the mismatch of elderly women in the voters’ list and their actual presence. The survey is completed by reaching the next elderly woman with the help of one elderly household. Systematic random sampling is the random sampling method that select samples based on a system of intervals in a population. The interview questions are focused on elderly women only including their family background, economic condition, health status and the problems faced by them after attaining the age of 60. The interview is carried out in Hindi as well as in the local language as per the convenience of the respondents. The reason for the study is described to the respondents and proper care was taken to maintain their response confidentially. In case of any difficulty in communicating with the women elderly, the help of other family members is taken.

Table-1 Districts of Bihar showing Various Indicators, Census -2011

District	Rural Elderly Sex Ratio	WPR of Elderly Rural	Percentage of Rural Elderly Widow	Percentage of Rural Female of 60+	60+ Female Headed Household
Pasmi Champaran	832.12	24.52	47.03	2.79	13.73
Purbi Champaran	812.73	15.80	45.53	2.85	13.81
Sheohar	857.39	13.63	44.83	3.79	18.08
Sitamarhi	869.84	14.42	48.27	3.22	17.24
Madhubani	920.18	18.49	47.26	3.49	16.99
Supaul	885.25	29.13	41.81	2.97	14.06
Araria	826.81	27.91	47.04	2.54	16.68
Kisanganj	919.32	12.79	80.07	2.39	28.05
Purnia	832.52	25.66	25.89	2.35	19.50
Katihar	898.49	25.92	47.06	2.50	23.10
Madhepura	834.75	34.02	73.32	2.75	13.37
Saharsa	899.23	25.64	42.50	2.88	14.46
Darbhanga	934.24	16.95	18.25	3.23	19.94
Muzzafarpur	875.40	15.22	37.60	3.54	15.97
Gopalganj	914.84	17.27	71.91	3.74	17.30
Siwan	930.31	16.29	29.95	4.13	18.35
Saran	913.24	13.13	35.33	3.88	18.82
Vaisali	883.31	12.48	39.68	3.61	15.52
Samastipur	894.33	16.29	45.77	3.39	16.49
Begusarai	891.09	17.20	44.26	2.71	17.96
Kagaria	865.70	22.01	43.37	2.82	14.90
Bagalpur	862.07	25.28	42.64	2.67	14.92
Banka	906.06	24.00	44.83	3.56	13.58
Munger	898.52	16.19	44.03	2.58	15.52
Lakhisarai	858.79	20.96	44.25	2.90	15.66
Sheikpura	876.91	23.87	39.38	3.03	13.89
Nalanda	898.75	29.79	38.13	3.31	13.06
Patna	875.44	18.58	37.64	2.07	15.25
Bhojpur	821.92	13.53	39.36	2.08	15.50
Buxar	844.17	11.55	37.19	3.61	16.53
Kaimur	875.79	20.00	35.54	3.59	13.54
Rohtas	842.98	14.45	38.53	1.98	13.02
Jahanabad	863.12	29.50	37.12	3.25	12.66
Aurangabad	840.98	20.94	36.00	2.77	11.92
Gaya	869.24	27.39	37.67	3.04	13.88
Nawada	868.82	24.97	39.50	3.02	13.80
Jamui	870.39	28.25	42.28	3.31	12.26
Arwal	862.02	18.19	39.02	3.51	13.60
Bihar	877	19.78	42.54	3.08	16.13
AVERAGE	874.40	20.58	42.89	3.05	15.87

Table-2 Composite Index of Districts of Bihar, Census -2011

District	Rural Elderly Sex Ratio	WPR of Elderly Rural	Percentage of Rural Elderly Widow	Percentage of Rural Female of 60+	60+ Female Headed Household	COMPOSITE INDEX
	Z Score	Z Score	Z Score	Z Score	Z Score	
Pasmi Champaran	-1.39	0.68	-0.50	-0.70	1.09	-0.82
Purbi Champaran	-2.02	-0.81	-0.39	-0.67	0.74	-3.15
Sheohar	-0.56	-1.19	1.41	0.72	0.58	0.96
Sitamarhi	-0.15	-1.05	0.33	0.45	1.38	0.96
Madhubani	1.50	-0.36	0.85	0.36	1.15	3.50
Supaul	0.35	1.47	-0.15	-0.59	-0.13	0.95
Araria	-1.56	1.26	-0.97	0.26	0.32	-0.70
Kisanganj	1.47	-1.33	-1.27	3.97	3.07	5.91
Purnia	-1.37	0.87	-1.34	1.18	0.82	0.16
Katihar	0.79	0.92	-1.05	2.36	1.82	4.82
Madhepura	-1.30	2.30	-0.57	-0.81	0.12	-0.27
Saharsa	0.81	0.87	-0.33	-0.46	0.42	1.32
Darbhanga	1.96	-0.62	0.35	1.33	0.65	3.66
Muzzafarpur	0.03	-0.91	0.95	0.03	0.47	0.57
Gopalganj	1.32	-0.56	1.32	0.46	-0.05	2.50
Siwan	1.83	-0.73	2.07	0.81	-0.48	3.50
Saran	1.27	-1.27	1.60	0.96	-0.76	1.79
Vaisali	0.29	-1.38	1.07	-0.11	-0.63	-0.77
Samastipur	0.65	-0.73	0.65	0.20	0.80	1.57
Begusarai	0.55	-0.57	-0.66	0.68	0.44	0.44
Kagaria	-0.29	0.25	-0.44	-0.32	0.23	-0.56
Bagalpur	-0.41	0.81	-0.73	-0.31	0.06	-0.58
Banka	1.04	0.59	0.98	-0.75	0.57	2.43
Munger	0.79	-0.75	-0.90	-0.11	0.39	-0.58
Lakhisarai	-0.51	0.07	-0.28	-0.07	0.44	-0.36
Sheikpura	0.08	0.56	-0.03	-0.64	-0.71	-0.74
Nalanda	**0.80**	**1.58**	**0.49**	**-0.92**	**-1.00**	**0.95**
Patna	0.03	-0.34	-1.88	-0.20	-1.11	-3.50
Bhojpur	-1.72	-1.20	-1.87	-0.12	-0.71	-5.62
Buxar	-0.99	-1.54	1.08	0.22	-1.22	-2.46
Kaimur	0.04	-0.10	1.03	-0.76	-1.61	-1.39
Rohtas	-1.03	-1.05	-2.05	-0.93	-0.90	-5.96
Jahanabad	-0.37	1.53	0.39	-1.04	-1.24	-0.74
Aurangabad	-1.10	0.06	-0.54	-1.29	-1.50	-4.36
Gaya	-0.17	1.17	-0.02	-0.65	-1.10	-0.78
Nawada	-0.18	0.75	-0.06	-0.68	-0.68	-0.84
Jamui	-0.13	1.31	0.50	-1.17	-0.02	0.49
Arwal	-0.41	-0.41	0.88	-0.74	-1.71	-2.38
Bihar	**0.62**	**0.13**	**0.17**	**0.11**	**0.34**	**0.74**

Table-3: Sample Household Distribution (Census-2011)

CD Block	Male Pop	Female Pop	Village Name	Total Pop	SampleHH
Bind	31714	30270	Bind rural	10478(V1)	225
			Lodipur	6699(V2)	
			Jamsari	3956(V3)	
Katrisarai	21528	20293	Katauna	9067(V4)	225
			Maira- Barith	7962(V5)	
			Katri	6583(V6)	

Data has been analysed with the help of suitable statistical techniques. The software used for the study includes SPSS 20 and Microsoft Excel. First, the data were recorded in the Excel spreadsheet and the analysis was done by SPSS version 20. A P-value of <0.05 is considered statistically significant. Composite index and Binary logistic regression statistical techniques are used. The composite index is made after calculating various indicators showing elderly women's situation in terms of sex ratio, household headed by them and their work participation rate, etc.

Results and Discussion

Morbidity Pattern (Chronic diseases) among Elderly Women

Age has been primarily seen as a major controlling factor in the prevalence of the disease among the elderly. Most studies show a high prevalence rate of chronic illness among the aged population in India. Table-4 shows the percent distribution of rural elderly women with chronic diseases in different age groups. It is observed from the table that almost half of the elderly women suffer from one of the other chronic diseases and disabilities. The most common chronic non-communicable diseases being osteoarthritis (41 percent), hypertension (17 percent), cataracts (16 percent), anaemia (10.6 percent), piles (10.2 percent), diabetes (7.1 percent), bronchial asthma (1.5 percent), gastric (10 percent), skin problems (6.6 percent), filarial (5.1 percent), urinary disorder mainly includes urinary incontinence which includes uncontrolled urination while sneezing, laughing, vomiting, coughing, etc. tuberculosis (0.8 percent), paralysis (2.4 percent). Most elderly persons are affected by one or more morbidities. Age group-wise distribution of chronic diseases presents that the 60-69 year age group in the study area are mainly suffering from joint pain/arthritis (29 percent), high/low blood pressure (18.3 percent) and cataract (6.8 percent). Compared to other age groups, this age group is suffering more from high/low blood pressure, followed by gastric (9.1 percent), anaemia (12 percent), piles (9.4 percent), goitre and thyroid (3.4 percent).

Residence-wise analysis shows that ailments are more common in rural areas than in urban.(Giridhar et al.,2017). A study by Chandwani et al. (2008) in urban areas of Gujarat noted that more than one ailment is common among the elderly. A study by Navaneetham (2009) on Kerala revealed that females outnumber males in the context of suffering due to morbidity. Sharma et al. (2013) in their study found that osteoarthritis was more in females (70.1 percent) than in males (41.6 percent). Purty et al. (2006) in rural areas of Pondicherry studied that the most commonly complained ailment among the elderly is joint pains/joint stiffness (43.4 percent) and cataract (32 percent). Other morbidities prevalent were hypertension in 25.9 populations and diabetes in 8.3 percent of the elderly. Hakmaosa et al. (2014) in rural areas of Assam found the majority of diabetes among rural elderly to be around 7 percent, similar to our rural finding. Mishra and Srivastava (2004) reported cataracts in 25.8 percent of the elderly in their study. Hypertension was found as the most common chronic complaint (41.4 percent) among the aged in their study (Mundada et al., 2013). Even though hypertension can happen at any age, the risk increases with

advancing age. Besides these chronic ailments, many other irregularities in health like being underweight are also reported by elderly women. The reason may be the household custom of eating in the last after feeding all male members and children in the family degrades the health of elderly women. Lack of good food and safe drinking water, a gender-based division of domestic tasks, negatively impacts women's health as they age (Hiremath, 2012). So, females were two times more prone to these diseases than males.

Table-4 Pattern of Chronic Diseases of Elderly Women in the Study Area

Chronic Diseases	60-69		70-79		80+		Total	
	N	%	N	%	N	%	N	%
Arthritis/Joint Pain	89	29	67	62	29	**80.5**	185	41
Abnormal B P	56	18.3	15	13.8	6	16.6	77	17
Anaemia	37	12	11	10.1	0	0	48	10.6
Gastric	28	9.1	19	17.5	8	22.2	55	10
Goitre/Thyroid	16	3.4	7	6.4	0	0	23	5.1
Cataract	21	6.8	39	36	17	**47.2**	72	16
Haemorrhoids	29	9.4	16	14.8	1	2.7	46	10.2
Diabetes	25	8.2	7	6.4	0	0	32	7.1
Filarial	9	3	6	5.5	2	5.5	17	3.7
Bronchial Asthma	3	0.6	4	3.7	0	0	7	1.5
Skin diseases	13	4.2	14	12.9	3	8.3	30	6.6
Tuberculosis	3	0.9	1	0.9	0	0	4	0.8
Paralysis	8	2.6	2	1.8	1	2.7	11	2.4
Heart Disease	2	0.6	3	2.7	1	2.7	6	1.3
Urinary disorder	7	2.2	5	4.6	2	5.5	14	3.1
Cancer	2	0	0	0	0	0	2	0.4

*Percent is calculated by considering each age group as the denominator/base

Impact of Health seeking behaviour on Chronic Illness among Elderly Women

Health-seeking behaviour is governed by the decision-making process which is based on individual and household behaviour and community acceptance. In addition to

these, health facility availability, accessibility and affordability also come into the picture. Besides these factors, awareness level, demographic, socio-economic and cultural factors impact the seeking behaviour. Table 5 shows the results of several socio-economic and demographic variables on chronic illness. Compared to the women of age group 60-69, women of 70-79 and 80+ ages are less likely to be affected by chronic diseases. Although, the analysis reveals that the age- group does not seem to impact the prevalence of chronic illnesses among the aged women as they are not statistically significant.

Table-5: Impact of background characteristics on the prevalence of Chronic Illness

Independent Variable		B	S.E.	Sig.	Exp(B)
Age Groups	60-69®			.417	
	70-79	-.548	.431	.203	0.578
	80 and above+	-.554	.455	.223	0.575
Marital Status	Currently Married®				
	Widow	.197	.307	.522	1.217
Education	Literate				
	Illiterate	-.214	.395	.589	.807
Occupation	Paid Work				
	Unpaid Work	-506	.401	.207	.603
Living Arrangement	Living Alone			.431	
	Spouse, Children and Grandchildren	-461	.605	.446	.631
	Others	-.283	.244	.246	.753
Self-Rated Health	Good				
	Not Good	.584	.389	.133	1.793
Satisfaction Level	Dissatisfied®				
	Satisfied	-.121	.238	.612	.886
Accessibility to hospital	Inaccessible ®			.110	
	Moderately Accessible	-.582	.341	.088	.559*
	Completely Accessible	-.553	.282	.050	.575**
Transport Affordability	Can't afford®				
	Can afford	.563	.397	.157	1.756
Doctor's fees Affordability	Can't afford®				
	Can afford	.331	.303	.274	1.392
Social Participation	Never ®			.523	
	Whenever Required	.360	.463	.437	1.434
	Sometimes	-.214	.268	.423	.807
Decision making in Healthcare	Take final decision ®			.002	
	Decide equally withspouse and son	1.973	.591	.001	7.190***
	Can't decide on her own	2.323	.699	.001	10.202***
Financial dependency	Fully Dependent ®			.001	
	Partially Dependent	-1.953	.536	.000	.142***
	Fully Independent	-1.729	.579	.003	.177***
Constant		-1.001	.445	.025	.368

*p<0.10; **p< 0.05; ***p< 0.001; R=Reference

Source- Calculated from primary field survey, 2019

Women in rural areas are mostly homemakers and therefore are reliant upon their husbands' economic status. By being women, elderly women occupy a more unfavourable position than men. More pathetic financial concerns are for those elderly women who grow into widows. The widow is more likely to have chronic ailments than currently married aged women. The life of a widow in rural areas is extremely challenging and the problem worsens even more due to the age factor. Although, the analysis reveals that multiple factors like age group, education, occupation, living arrangement, self-rated health, affordability of transport and doctors‘ fees and social participation do not seem to impact the prevalence of chronic illnesses among aged women as they are not statistically significant. Elderly women who are engaged in unpaid forms of work like giving time in the kitchen or sanitation work or taking care of grandchildren, the likelihood of suffering from chronic illness is more among the aged women in this category than the women engaged in paid work. Elderly women who are dissatisfied with their lives are more likely to have chronic diseases than elderly women who are satisfied with their lives.

Accessibility of health centres is statistically significant and it does have an impact on the prevalence of chronic diseases among elderly women. The odds of occurrences of chronic illness among elderly women are less if the health centre is moderately accessible to them ($p<0.10$) and the likelihood is being affected by chronic illness becomes statistically significant at $p<0.05$ when the health centre is completely accessible to them. It is found that the likeliness is being affected by chronic diseases is more for those elderly who can’t access health facilities compared to those women who can moderately or completely access health facilities whenever required. Those elderlies who can afford the transport facilities when required for their treatment are less likely to suffer from any other chronic ailments than those aged women who can’t afford the cost of transport for their treatment of certain ailments.

Although, the ability to bear transport costs does not have a significant impact (statistically) on the prevalence of chronic disease among the elderly. Those elderly who can’t afford doctor’s fees are 1.3 times more likely to have a chronic illness than those aged women who can afford doctor’s fees and can seek doctor‘s consultations when needed. Those elderly who can participate in social affairs anytime or whenever required is less likely to have chronic diseases than those elderly who have never participated in social activities. Social connectedness is found to positively impact the physical and mental health of aged persons (Tuohy and Cooney, 2019).

The likelihood of suffering from any chronic disease lessens when elderly women enjoy the autonomy to decide about their healthcare and participate equally in decision-making in healthcare-related matters. The impact of decision-making power in health matters has played a significant impact in the likelihood of prevalence of chronic illness among elderly women ($p< 0.001$), Elderly women who can’t participate with their family in matters related to health care are 10 times more likely to suffer from chronic diseases than those who enjoy the autonomy to decide on their matters relating to their health care.

Table 6 tries to analyse the impact of socio-economic factors as the independent variable on the treatment-seeking behaviour during chronic illness as the dependent variable. Certain factors like age groups, treatment-seeking during acute ailment, social participation, the decision-making power on matters of health care, and accessibility to the health centre are statistically significant in terms of their impact on health-seeking behavior during chronic disease. However, no significant association is absorbed between marital status, education, occupation, self-rated health, living arrangement, satisfaction from life, and treatment-seeking behaviour of elderly women during chronic illnesses.

Table-6:Impact on Background Characteristics on Treatment Seeking Behaviour

Independent Variable		B	S.E.	Sig.	Exp(B)
Age Group	60-69® 70-79 80 and above	 1.529 1.000	 .560 .538	.021 .006 .063	 4.615*** 2.720*
Marital Status	Currently Married® Widow	 -.165	 .272	 .544	 .848
Education	Literate® Illiterate	 .220	 .372	 .555	 1.246
Occupation	Paid Work® Unpaid work	 .281	 .356	 .431	 1.324
Self-Rated health	Good health® Not Good health	 -.423	 .313	 .177	 .655
Living Arrangement	Living Alone Spouse,Childrenand Grandchildren Others	 -.026 .049	 .448 .198	.964 .954 .803	 .975 1.051
SatisfactionLevel	Satisfied fromlife® Dissatisfied from life	 -.295	 0.210	 .159	 .745
Treat taken inAcute illness	Yes® No	 .420	 0.194	 .030	 1.522**
Accessibility of hospital	Inaccessible® Moderately Accessible Completely accessible	 -.114 .572	 .301 .251	.006 .704 .023	 .892 1.771**
Transport Affordability	Can't afford® Can afford	 -.162	 .193	 .401	 1.176
Doctor's fees Affordability	Can't afford® Can afford	 .087	 .201	 .665	 1.091
Social Participation	Never ® Whenever Required Sometimes	 1.377 -1.039	 0.441 0.596	.001 .002 .082	 3.963*** .354**
Decision Making in Health care	Take final decision ® Decide equally with spouse andchildren Can't decide themselves	 -3.627 -1.848	 0.959 1.029	.000 .000 .073	 .027*** .158**
Constant		-1.782	0.797	0.025	0.168

*p<0.10; **p< 0.05; ***p< 0.001; R=Reference

In the survey, it is found that rural women of higher social categories are hardly allowed to go for their necessities without the permission of male members of the family. The process of sharing health issues with male members and the fear to cross their comfort zone for the approval of multiple family members results in low-seeking behaviour in the study area. The analysis found a significant association between social participation and the treatment-seeking behaviour of the aged women ($p<0.001$). The living arrangement is not found to have a significant impact on the health status of women. It is observed from the analysis that elderly women who stay with their spouse, children and grandchildren are less likely to take treatment during chronic diseases than those women who either reside with their other members or who stay alone.

Living alone is found to be associated with various health risks, health hazards, low ability to perform activities of daily living (ADL) and instrumental activities of daily living, morbidity, and high risk of diseases. A study by Dean et al (1992) found that the likelihood of getting depressed easily and the complaint of poor mental health increases with loneliness. The living arrangement affects eating patterns, sleep patterns, social life and many aspects of life. Mood swings and several day-to-day physical and mental health are found to be controlled by the living arrangement (Agrawal and Kesari, 2014). Staying with family members increases the likelihood of taking treatment for chronic illnesses almost two times compared to those women who stay alone. Therefore, living with family members has a considerable impact on treatment-seeking behaviour. Staying alone at an old age and tackling every situation of life alone degrades health and increases the chances of being a victim of chronic diseases.

Table-5 shows the results of several socio-economic and demographic variables on chronic illness. Compared to the women of age group 60-69, women of 70-79 and 80+ ages are less likely to be affected by chronic diseases. Although, the analysis reveals that the age- group does not seem to impact the prevalence of chronic illnesses among the aged women as they are not statistically significant. Moreover, in the marital status category, the widow is more likely to have chronic ailments than currently married aged women. The life of a widow in rural areas is extremely challenging and the problem worsens even more due to the age factor. Although, the analysis reveals that multiple factors like age group, education, occupation, living arrangement, self-rated health, affordability of transport, doctors' fees and social participation are not statistically significant. Nevertheless, in reality they do seem to impact the prevalence of chronic illnesses among the aged women.

A study by Agrawal (2012) indicates that the likelihood of suffering from chronic illness is more in those elderly who stay alone than those elderly who stays with their family. Elderly women who are dissatisfied with their lives are more likely to have chronic diseases than elderly women who are satisfied with their lives.

Accessibility of health centres is statistically significant and it does have an impact on the prevalence of chronic diseases among elderly women. The odds of occurrences of chronic illness among elderly women are less if the health centre is moderately accessible

to them (p<0.10) and the likelihood is being affected by chronic illness becomes statistically significant at p<0.05 when the health centre is completely accessible to them. It is found that the likeliness of being affected by chronic diseases is more for those elderly who can't access health facilities compared to those women who can moderately or completely access health facilities whenever required. Those elderlies who can afford the transport facilities when required for their treatment are less likely to suffer from any of the chronic ailments than those aged women who can't affordthe cost of transport for their treatment of certain ailments. Although, the ability to bear transport costs does not have a significant impact (statistically) on the prevalence of chronic disease among the elderly.

Table-7: Reasons for not receiving any treatment for Chronic Illness

Far from home/no medical facilities available	12.5
Transportation barrier	8.9
Can't go alone/nobody to accompany	17.8
No female doctors	16.1
Long wait for doctors/no doctors	16.9
Can't Afford	21.4
Ailment not considered serious	6.2
No treatment (chronic+) Total	100

Source- Calculated from Primary field Survey, 2019

Those elderly who can't afford doctor's fees are 1.3 times more likely to have a chronic illness than those aged women who can afford doctor's fees and can seek doctor's consultations when needed. Those elderly who can participate in social affairs anytime or 'whenever required' is less likely to have chronic diseases than those elderly who have 'never participated in social activities. Social connectedness is found to positively impact the aged persons' physical and mental health (Tuohy and Cooney, 2019). The likelihood of suffering from any chronic disease lessens when elderly women enjoy the autonomy to decide about their healthcare and participate equally in decision-making in healthcare-related matters. The impact of decision-making in health matters has played a significant effect on the prevalence of chronic diseases among elderly women (p< 0.001). Furthermore, it is observed that those women who have rated their health as bad/not good are more likely to be attacked by chronic disease than those women who have rated their health as good.

Accessibility, Availability and Affordability of Health Centres in the Study Area

Accessibility involves a manifold concept that requires geographical, financial and cultural inclusiveness and many more societal features. Accessibility is understood as the opportunity to reach and obtain healthcare services in times of need (Levesque et al., 2013). Access to healthcare facilities in the study areas is considerably underdeveloped. About half of the samples traveled more than 6-7 km to reach the health centres. The inaccessibility of hospitals and availability of required services has huge ramifications on the elderly's health and their health-seeking behaviour as the family members find visiting

hospitals out of the village a tiring task. They believe that for the farmer community to run after doctors for an old family member is not possible for any family in their community. The reply is based on their perception of accessibility. Table 8 provides an overview of the extent of the accessibility of various health-related services.

Table-8 Accessibility of Health Centers for Rural Elderly Women

Blocks	Health Centers	Health Professional	Always available	Mostly available	Somewhat available	Rarely available
		Doctor	-	-	-	yes
		ANMs	yes	-	-	-
Katrisarai	PHSC	Male Health Worker	-	-	yes	-
		Pharmacist	-	yes	-	-
	PHC	Doctors	-	-	yes	-
		Nurses	yes	-	-	-
		Patho. professionals	-	yes	-	-
		Pharmacist	-	-	yes	-
Bind	PHSC	Doctor	-	-	-	yes
		ANMs	yes	-	-	-
		Male Health Worker	-	-	yes	-
		Pharmacist	-	-	yes	-
	PHC	Doctors	-	-	yes	-
		Nurses	yes	-	-	-
		Patho. professionals	-	-	yes	-
		Pharmacist	-	yes	-	-
Nalanda District Hospital		Doctors	yes		-	-
		Nurses	yes	-	-	-
		Patho. professionals	yes		-	-
		Pharmacist	yes	-	-	-

The connection of health centres with proper transport facilities increases the accessibility for rural residents. Ease of access is one of the prime reasons for availing any health services. Cost of services and quality of care are a few reasons which encourage patients to help themselves with benefits if accessible. The popular explanation for choosing the public health facility is free of cost or least cost services. The prime reason for preferring private practitioners is their availability and quality of care (Chauhan et al.,2015). Lack of education and no financial resources at their disposal give way to greater economic dependency and it is making them deprived on the socio-economic front. Due to old age and less exposure to doctors throughout life, many times, the elderly are unaware of health facilities available in health centres even if health facility is accessible.

Two types of expenditure are analysed for understanding the affordability of health services by the elderly women in the study area. The first one includes the direct expenditure related to health. They have spent more medical expenditure for treatment on

the way of the fee paid to doctors, medicines costs, diagnostic/ test charges, bed charges and other expenses such as private medical uses and expenses on blood arrangement, oxygen cylinders, etc. The other includes indirect or non-medical expenditures like the transportation fare of the patient. Other non-medical expenditures incurred by the household for food, transportation for others, expenditure on the escort, lodging charges, hospitalisation charges and additional charges such as telephone charges made from PCO and spending on toiletries like soap, towels, toothpaste, etc. for the patients and attendants are included. The procurement prices of medicines in public pharmacies are free of cost or are cheaper than those in private pharmacies. Still, often the essential drugs are unavailable. One of the critical explanations for not seeking any treatment is the inability of the aged women to manage the amount required for treatment. Hence, their health care is dependent on the family's decision.

In Table 10 the various types of expenditure on health are given, including consultation fees, medicine costs, reports or scans (if done in private clinics that are not free) of any kind and transportation costs. Respondents who can't afford the expenditure of various bills mentioned above/fees are high among the aged women in the study area. In the survey, 64 percent of the elderly women admitted that they couldn't afford a private doctor fee which is around 200 to 400 rupees in the study area. Since most basic medicines are unavailable in government facilities women find it difficult to pay for their medication from private pharmacists. Most of them have replied that the high prices of allopathic medicines lead to discontinuing their dosage intake and shifting to homeopathy treatment. 69 percent of aged women admitted that they couldn't afford tests from private pathology. Almost half of the aged women considered transport cost a barrier to their poor seeking behaviour.

Table 9: Availability of Health Centers in the Study Area.

C D Block Bind	**Sub Centre**	**PHC**
Bind Village	No	Yes
Lodipur Village	No	No
Jamsari Village	No	No
C D Block Katrisarai		
Katuana	Yes	No
Maira-Barith	Yes	No
Katri	No	No

Source- Calculated from primary field survey, 2019

Socio-economic factors of treatment

Table-7 reveals the reasons for not seeking any treatment during chronic illness. Elderly women are the worst victims of poverty, poor nutrition and extreme male hegemony. One of the reasons for not receiving any treatment is that elderly women and their families do not consider the morbidity severe enough to be consulted by a doctor. If it remains unchecked for a long time, chronic disease may lead to severe organ failure and may result in loss of

life. Due to the lack of health facilities in villages, elderly women cannot visit doctors outside their villages due to the cost involved in their treatment. Even in government hospitals with minimum registration fees, they fell prey to the unavailability of medicines in the health facilities. They can't afford to buy medicines or afford transport costs because of their poor economic situation. The lack of good doctors at government hospitals capable of curing them without multiple visits is also one reason for not availing governmenthospitals.

Table 10: Affordability of (Private) Health Check-ups by Rural Elderly Women

Expenditure on Health	Can't Afford Expenditure on Health	
	Frequency	In %
Doctor's consultation fees(private hospitals)	288	64
Medicines bill	333	73.7
Tests/ Report's bill (private hospitals)	311	69
Transportation costs	203	45.3
Total Samples	450	100

Source: Calculated from primary field survey, 2019

17 percent of the women admitted that their family members ignored the pain and didn't show interest to accompany them to hospitals even though the aged women wanted to get treatment. The PHC's lack of infrastructure facilities failed to diagnose of major ailments in the PHC. Though respondents and other village residents are not satisfied with the available facilities in the PHC, some residents agree that routine vaccination of children is done appropriately in PHC and prenatal and postnatal care. Moreover, PHC does not have the facility to look after the problems of the aged section of the population. The common complaints among many others are the absence of medical professionals without any information or public notice. Sometimes doctors are absent from the hospitals without prior notice of their leave, adding to the patient's problems. Patients are uncertain about the availability of doctors and wait for long hours in the hospital. Thus it creates a problem for elderly women who visit hospitals as OPD patients.

CONCLUSION

The elderly population is the most vulnerable segment of the population prone to various diseases due to lower immunity with an advancing age. Among all elderlies, arthritis, abnormal BP, anemia and hemorrhoids are the most common chronic diseases. The study reveals that the most commonly reported chronic disease in the sampled area is arthritis or joint pain. It is found that 29 percent of the elderly in the age group of 60-69, 62 percent of the elderly in the age group of 70-79 and 81 percent of the elderly of 80 years. The second commonly reported chronic illness in the age group of 60-69 is abnormal BP but is not the same for the other age groups. Gastric and hemorrhoids are reported to be the second and the third most commonly found chronic disease in the age group 70-79.

The survey found that the cost of treatment affects the health of elderly women more broadly. Elderly women suffering from any disease make them more vulnerable as the treatment-seeking behaviour of the affected women primarily depends upon their family

members. Health status is to be great extent impacted by certain socio-economic factors. Though certain variable does have a significant impact on the health-seeking behaviour of elderly women in the study area, the result is not statistically significant. One primary variable that impacts the treatment-seeking behaviour of elderly women is the availability, accessibility, and affordability to utilise the facilities in the study area.

The real life of the women in the villages of Bihar is miserable and the life of the old women is exceptionally pathetic. The quantitative method is not always efficient enough to reveal an accurate picture of the qualitative life of the study population. The actual figure of the study population captures the empirical instances and the real facts that are not necessarily similar to the data facts because of the limitations of the sample size and many other factors. The disease becomes graver and the health of the elderly woman gets into danger when she is left untreated because of her poor financial condition and low importance in the family. One reason analysed with the health-seeking behaviour of elderly women is that much of the decision of seeking continuous treatment depends on the household expenditure and earning level. On the other side, if all the family members are earning and there is no burden of marriage or education of children, then in that case there are high chances that elderly women can get treatment because the demands to meet family responsibilities are low.

During the study that the inaccessibility of health centres along with the unavailability and irregularity of doctors, no ambulance service and medicine-giving staff, unavailability of costly medicines, and poor arrangement of various basic testing instruments in PHC and sub- centres demoralises health-seeking behaviour of elderly women. Besides this, immobility because of transport barriers, misconception and poverty leads to poor utilisation of healthcare services in the villages. The effects of ageing, low economic status and inadequate access to health care contributed to the elderly poor health status. The use of over-the-counter drugs is indicative of inadequate health facilities for the elderly.

The study points out the need to formulate policies that will target the health needs of the elderly. The under-utilization of health services in the public sector has been almost a universal phenomenon in all the surveyed villages. The availability of doctors in primary health centres becomes a determining factor for the villagers in the context of their decision-making about the selection of place of treatment (public or private health facilities) and nature of treatment which again depends on their financial prosperity. In sum, the state needs to admit its responsibility towards the elderly and work towards proper implementation of already made policies. The government and society should work towards improving the unmet needs for healthcare facilities and work towards providing a secure environment to elderlies.

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