



Factors Associated with Abuse and Neglect of the Elderly Peoples of Chitmahal Areas in Bangladesh

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Authors' contributions

This work was carried out in collaboration among all authors. Author MRA collected and analyzed data, wrote the draft of the manuscript. Author UKM designed this research, interview schedule and guided in statistical analysis of data. Author MMH edited the manuscript and managed literature searches. All authors read and approved the final manuscript.

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ABSTRACT

The present study applied different statistical tools to determine abused and neglected status among elderly people of the Chitmahal areas of Bangladesh. Also investigated the factors that associated with abuse and neglected status. The present study is conducted at the former Chitmahal areas which are situated at four districts namely Lalmonirhat, Nilphamari, Kurigram and Panchagar in Northern Bangladesh. Among the total 141 Chitmahal areas, 36 Chitmahal areas are randomly selected for the study area and finally 270 elder families are included for this research purpose. Information about socio-demographic, economic, health status, abuse and neglected related characteristics of the respondents and their family members was collected by using a pre-tested structured questionnaire. Elder abuse and neglect is the widespread issue in the world. This study found that most of the elder people (71.5%) of Chitmahal areas were neglected and abused in any form. Separately they were abused by psychologically (50.4%), financially (60.4), treatment related neglect (40%) and physically (1.5%). Most of them were neglected by their family members which mostly happened in the families with low monthly income and expenditure. The factors like

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age of elder people, educational level, previous and present occupation of respondents, ownership of house, monthly family income and expenditure, people's participation in social occasion are the common significant factors for different types of abuse and neglected status of the aging peoples of Chitmahal areas in Bangladesh. The overall findings found a close relationship of abused and neglected status of the elderly peoples with their socio-economic, educational background and family economic condition. This information needs to be properly utilized in developing suitable social and motivational programs for elder families in the Chitmahal areas and countrywide by NGO's and Government initiatives.

Keywords: Elder people; socio-economic status; abuse and neglected status; Chitmahal; Bangladesh.

1. INTRODUCTION

Enclaves (*Chitmahal*) are found only in the northern boundary of Bangladesh, covered by the present districts of Kurigram, Lalmonirhat, Nilphamari and Panchagarh. This area was under the jurisdiction of the semi-independent Zamindars or native chiefs of Rangpur and Dinajpur during the Mughal period. A little more historically credible clarification of the enclave's hints at a couple of treaties signed in 1713 by the Mughals and the Maharaja of Cooch Behar, which gave the control of some lands in Mughal territory to Cooch Behar chiefs. These loyal chiefs, who held these lands in Mughal domain, could not be dislodged and thus ended up being enclaved in the area. The 1713 treaty has been lost, but that is still considered the beginning of the enclave problem. After the independent of Bangladesh, the Land Boundary Agreement was signed on 16 May 1974 between Indira Gandhi and Sheikh Mujibur Rahman which provided for the exchange of enclaves and the surrender of adverse possessions. Under the agreement, India retained the Berubari Union No. 12 enclave while Bangladesh retained the Dahagram - Angorpota exclaves with India providing access to it by giving a 178-by-85-metre corridor, called the Tin Bigha Corridor. Bangladesh quickly ratified the agreement in 1974 but India failed to do so. In accordance with steps agreed to between India and Bangladesh during Prime Minister Narendra Modi's visit to Bangladesh and meet prime minister Sheikh Hasina on June 6-7, 2015, as per the Land Boundary Agreement (LBA) 1974 and Protocol of 2011, 51 erstwhile Bangladeshi enclaves in India and 111 erstwhile Indian enclaves in Bangladesh were physically transferred to the other country with effect from the midnight of 31 July 2015. Based on the joint survey exercise meticulously carried in the enclaves, it was determined that 989 persons out of total 38,521 residents from erstwhile Indian enclaves in Bangladesh have opted to retain their original nationality while all 14,863 residents

of the Bangladesh enclaves in India have opted for Indian nationality [1,2].

The elderly populations in the Asian developing countries, especially in Bangladesh reach aged 60 years or over, after a life time of poverty, deprivation, social insecurity, poor access in health care system, poor diet that affect badly on their psychology and physical health at old ages, as a result majority of the elder people depend on their family because family is a primary source of support for elders in the culture of Bangladesh. Nowadays this support is decreasing due to rapid urbanization, modernization, industrialization and globalization. After passing the Childhood, Adolescence and Youth everyman move to the elderly life. In the stage of youth, the people who support the family, society, community and state but it is a matter of sorrow that the people are not getting support from their family, society, community and state in the older age as burden. Where as in the last stage they will get proper support on the other hand they are victim of abuse, carelessness and neglect. Bangladesh is not an exception from the global phenomenon of demographic aging. In Bangladesh, half of the population spends their lives under poverty and elderly people are considered a burden for the family and society. This is both male and female elder but especially true for elder women, who suffer from multiple disadvantages resulting from bias to gender, widowhood and elderly. They suffer from some basic human problems, vie poor financial support, senile diseases and absence of proper health and medical care facilities, exclusion and negligence, deprivation and socio-economic insecurity [3]. The latest population census of Bangladesh (2011) showed that 7.4 percent of its population is elderly. This percentage of elderly population is projected to increase 8 percent in 2020, 11.9 percent in 2035 and 17 percent in 2050 [4]. The median age of Bangladeshi population is projected to increase by about 15 years over the next half century (i.e.

from 2000 to 2050). The ageing index i.e. the ratio of the people aged 60 or over to children less than 15 years of age will be about 5.7 times higher over the next half century (i.e. between 2000 and 2050) for Bangladesh due to the growing number of older persons & reduction of young population. Also the old-age dependence ratio will be almost triple in Bangladesh during the period between 2000 & 2050 [5]. The life expectancy of Bangladeshi population has increased to 68 years in 2011 from only 39.93 years during the independence. All these are related to the rapid increase of the elderly population over the years. The economics of the rural Bangladesh settings are predominantly supported by subsistence agriculture. The majority of the elderly populations do not have pension coverage and their health care services are very limited. In addition, urbanization and industrialization have led to the changes in economic structure, diminishing the social values and weakening the importance of joint family [6]. Consequently, the older generation is caught between the decline in traditional values and absence of adequate social security [7]. The rapid increase of elderly population is challenging and creating a serious impact on the health status and Quality of Life (QoL). In this perspective, to respond effectively and efficiently the growing health needs of the older population, it is important to understand about their QoL [8]. A good number of studies were previously conducted to know the causes and consequences of the aging [9] and their projected distribution [10], their needs [9] and health condition [11]. In context, the older people of our country are vulnerable and they face different types of abuse and neglect. Now abuse and neglect is the common scenario in rural Bangladesh. It is found that approximately 80.40% older people are affected by abused and neglect and only 19.60% are not affected with that situation. Abuse and neglect is the common situation in our country specially the rural area because of financial crisis, family disorganization, illness and so on [12]. There is an increasing awareness throughout the world that some older people are victims of food problem, Sanitation, financial, abuse, neglect and/or mistreatment. A growing body of literature and research on elder abuse is evidence of a gradual recognition of the problem and of the need for a response. The problems that are faced by order in Bangladesh, it cannot be changed following a single prescription. The Govt. should take some effective measurement involving NGOs which have been working especially for order. However

elderly population is an asset of the nation. They have experience, wisdom, knowledge which can be used for the national reconstruction and development. It is responsibility of everyone to take care of our national asset and utilize their experiences in the development of the country. In this context, we are interested to investigate the present situation of abuse, neglect and/or mistreatment (hereafter referred to simply as elder abuse) of the older people of enclaves in Bangladesh. The specific objectives of the study were:

- i) To explore the nature and extent of neglect, abuse status and its causes,
- ii) To identify influential factors those are responsible for the neglected and abused status of elderly population.

1.1 Conceptual Analysis of the Key Concepts

1.1.1 Elder people

Old age is the closing period of the life of an individual. With the increasing of age, older people become incapable to carry out normal functioning as he/she did before. Thus, elderly is a social process that involves individual and population aging, biological and psychological aging, individual and social change, individual and cultural differences within and between age cohorts and cross-cultural and sub-cultural differences in values, beliefs and norms [13]. It is the end of life cycle. It is of course a biological reality which (despite medical intervention) has its own dynamic largely beyond human control [14]. Elderly people in the context of Bangladesh have been defined as those who have reached 60 years of age [15]. In most gerontological literature, people above 60 years of age are considered as 'old' and taken to be the 'elderly' segment of the population of a country.

1.1.2 Elder Neglect

Neglect is defined as the failure, refusal or inability on the part of a caregiver, for reasons other than poverty, to provide necessary care so as to seriously endanger the physical health of the elder people. Negligence means deprivation of a persons of food, heat, clothing or comfort or essential medication and depriving a person of needed services to force certain kinds of actions, financial and otherwise. The deprivation may be intentional (active neglect) or happen out of lack of knowledge or resources (passive neglect).

Neglect to older person comes mostly from people they know or have some type of relationship where there is a sense of trust. They could be a family member, or a friend or a paid health worker or care giver. Difficult issues include the intentions of the neglect. It means refusal or failure by those responsible to provide food, shelter, health care or protection for a vulnerable elder. This can also refer to emotional neglect in which the emotional needs of warmth and empathic care giving are denied elderly persons [16].

1.1.3 Elder abuse

Abuse as a deliberate act of the caregiver, an intentional act, an act of commission and the caregiver means to inflict injury [17]. Elder Abuse is a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person. Elder abuse can be defined as "a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person". Any phenomenon labeled as mistreatment, be it intentional or unintentional, is characterized by its harmful consequences on the older. Abuse is regarded to be more serious than neglect, in relation to the "intent" of the caregiver. Abuse creates potentially perilous situations and feelings of worthlessness, and it isolates the older individuals from people who can help. Elder abuse can take various forms such as physical, psychological or emotional, sexual, financial abuse and so on. It can also be the result of intentional or unintentional neglect.

1.1.4 Psychological abuse

There is widespread agreement that this is a category of abuse, but confusion about terminology and definition remain. It is characterized by verbal aggression such as name-calling, harsh orders, humiliation, intimidation, threats, and provocation of fear. In this form of abuse, the real scars are often out of sight and, as well as existing in its own right, it also permeates other forms of abuse. Since the concept of psychological abuse is difficult to define there has been a concentration on verbal aggression as a major manifestation. However, it is important to realize that psychological abuse does not have to be verbally expressed and older people can be as distressed by non-communication, being ignored and made to feel

discounted. The effects of psychological abuse include depression, helplessness, loss of sleep, tearfulness, loss of appetite and fear.

1.1.5 Financial abuse

Most of the literature on financial abuse focuses on actual appropriation of an older person's property and cash. This behavior can include theft from social welfare pension, threatening the older person if money is not given, convincing the older person to share resources, intimidation to sign over property and the changing of wills. The misuse of an older person's resources and the withholding of information about assets that could be used to benefit the older person may also be included here. Financial abuse is difficult to detect and is closely related to the legal framework. Many commentators point out that financial abuse is a murky area of the law. It is perfectly possible for the wrong arrangements to exist without abuse taking place when older people may no longer be capable of taking full responsibility for managing their affairs, illustrating the complexity of definition. In terms of effects, financial abuse may lead to an inability to pay bills, lack of amenities, eviction notices for non-payment of rent and a general deterioration in standard of living.

1.1.6 Physical abuse

There is total agreement that this is a category of abuse. It receives the most attention in the literature and recognition is developing from a dependence on the presence of gross physical signs to the recognition of more subtle features such as finger marks due to harsh gripping. The kinds of behavior usually involved include assault (hitting, slapping, pushing, burning, shaking), physical coercion and physical restraint. Several writers include the misuse of medication within this category, for example over sedation or withholding drugs to bring on a crisis and precipitate admission to hospital. The effects of physical abuse include bruising, burns, fractures, lacerations, abrasions, hair loss, dislocations, scratches and imprint injuries.

2. MATERIALS AND METHODS

2.1 Study Area and Population

In Bangladesh, there are total 141 Chitmahal areas and all are situated at four districts which are Lalmonirhat, Nilphamari, Kurigram and Panchagar in the Northern part of Bangladesh.

Among the 141 Chitmahal areas, 36 Chitmahal areas are randomly selected in the year 2016-17 as the study area of this research. All the elderly people (60 years and above) living in the study area are the population of the study.

2.2 Sampling Design and Sample Size

A purposive sampling method is used in the present study. Due to unavailability of sampling frame and considering age, gender, religion, culture and difficulties to access the Chitmahal families, elder families are selected purposively in this study.

The appropriate sample size for a population-based survey is determined largely by three factors: (i) the estimated prevalence rate of an important variable of these populations, (ii) the desired level of confidence and (iii) the acceptable margin of error. The sample size can be estimated using the following formula,

$$n = \frac{Z^2 \alpha / 2 \times p(1 - p)}{m^2} = \frac{(1.645)^2 \times 0.80 \times 0.20}{(0.04)^2} = 270.60 \cong 271$$

Where, n = sample size, $Z\alpha/2 = 1.645$ (for 90% confidence). The prevalence rate of food insecurity ($p = 0.80$) which was found from a previous study [10]. The margin of error, which was set at $m = 0.04$ in this study. Finally, the rounded-up sample size was $n = 270$ for the study.

2.3 Data Collection and Management

In this study data were collected by pre-tested questionnaire comprising both structured and unstructured questions. Before collecting data, the investigator went to respective union chairman and elder peoples of Chitmahals to take permission if they are interested in this study or not. After getting permission, objectives-oriented data were collected from selected families had at least one elder people over 60 years. Elder peoples of the respective families were the respondents for this research. At the end of data collection, the filled-up questionnaires were scrutinized and checked to avoid irrelevant information. Software used for data analysis in this study, performed in the program Statistical Package for Social Science (IBM SPSS 22.0). The graphical presentation was performed in MS Excel to present data and

all write-up for this research compose in MS Word 2010.

2.4 Variables Used for This Study

2.4.1 Patterns and causes of elder abuse and neglect related 16 variables

Respondent's neglected at older stage, By whom respondents are neglected, Types of physical abuse and neglect do respondent's face, Types of psychological abuse and neglect do respondent's face, Types of financial abuse and neglect do respondent's face, Quantity of financial demands fulfilled by respondent's family members, What respondent's doing to fulfill financial crisis, Thinking about respondent's neglected by yourself, Why respondent's affected household related abuse and neglect, What types of food related abuse and neglect do respondent's face, Why are respondent's affected food related abuse and neglect, What types of costume related abuse and neglect do respondent's face, Quantity of costume demands fulfilled by respondent's family members, In which situations respondents are neglected, Do respondent's think about his/her abused and neglected, What's the extent of respondent's freedom of decision making in family.

2.4.2 Socio-demographic and economic related 23 independent variables

Age of respondent (years), Gender of respondent, Religion of respondent, Education Level (class passed) of respondent, Previous occupation of respondent, Present occupation of respondent, Marital status of respondent, Total members at the family, Total earner members in the family, Types of family, Homestead land size, Cultivated land size, Owner of your house, Family head, Main sources of income, Faced economic difficulties, Support from family/society, Monthly family income, Monthly family food expenditure, People give value in social occasion to respondents, People give importance of opinion to respondents, Opinion of respondents get priority in family, Relation with neighbors.

2.4.3 Food habits and health related 15 independent variables

Opportunity of eating three times daily, Opportunity to eating something when hungry, Given to eat if the rich food when arranged, Types of rich food eats during last month, Fulfill of food demands by family members, Types of

diseases affected at old age, Illness during the last 3 months, Name of the diseases, Taking any treatment, The reasons of not taking treatment, Provider of treatment service, Treatment place, Fulfill of treatment related demands, Source of drinking water, Type of sanitation.

2.5 Statistical Analysis

- Tabular analysis was used to preparation of simple tables of proportions describing the concentration of categorical variables and bivariate tables showing the relationship or association between two categorical variables.
- Descriptive statistics was used to computation of summary measures such as means, variances, proportions, etc.
- Chi-square (χ^2) – test was used to test the significance of the associations between two categorical variables.
- Logistic regression analysis determines the impact of multiple independent variables presented simultaneously to predict membership of one or other of the two dependent categorical variables. Binary logistic regression employs binomial probability theory in which there is only two values to predict: that probability (p) is 1 rather than 0, i.e. the event/person belongs to one group (neglected status, yes=1) rather than the other (neglected status, no=0). Logistic regression forms a best fitting equation or function using the maximum likelihood method, which maximizes the probability of classifying the observed data into the appropriate category given the regression coefficients.

3. RESULTS AND DISCUSSION

3.1 Socio-economic and Demographic Status of Elder People's Families

Table 1 shows that about 42.6% elder people were having age 60-69 years, 28.9% were having age 70-74 years and 28.5% were having age 75+ years old, where 60.4% were male. Most of the elder people of Chitmahal areas were illiterate (74.8%), 17.8% elder people had primary level education, and 7.4% the elder people had secondary level education. About 43.0% elder people's previous occupation was a farmer and day laborer, 15.9% farming, 5.9% other occupation and 35.2% were housewife. Previously, all elder people of Chitmahal areas

were involved in some an occupation. But, in present maximum of elder people were did nothing (out of work) for their aging and physical illness or inability (55.2%), 29.6% were day laborer, 15.2% were did Business and other works. It means that a majority number of respondents had no income and fully dependent on the family members. Most of the elder people of Chitmahal areas were still in formal partnership (54.8%) and 45.2% were partner less (widow or widower or single). In case of family size of respondents, maximum of older people lived in extend family (67.8%). The family bondage was strong in Chitmahal areas and most of the families were medium and large. It was a good sign because the family members were taking care of the elderly people. Most of the elder people were lived in own or husband's house (60.0%), 30.0% in a son or daughter's house and 10.0% in others house. Most of the elder person's family's income sources were farmer and day laborer (55.9%). Within the rests 8.5% family's income source was nothing but Begging.

Maximum families of older people's had economic difficulties (91.9%). Among them most faced very much difficulties (52.8%), 37.9% faced moderate difficulties, and 9.3% faced little difficulties. Only few families didn't face any economic difficulties (8.1%). About 52.2% family's monthly income was up to 5000 BDT, 33.7% family's monthly income was 5000-9000 BDT and only 13.0% family's monthly income was 10000 BDT and above. This insufficient amount of income of the elderly person's families in *Chitmahal* areas were affected their livelihood and daily needs. As a result, most of the older people's families in the Chitmahal areas can't fulfill their basic needs. About 52.6% family's monthly expenditure was up to 5000 BDT, 34.4% family's monthly expenditure were 5000-9000 BDT and only 14.1% family's monthly expenditure were 10000 BDT and above. About 35.6% elder people maintained a very good relation with their neighbors, 33.0% maintained good relation and 31.5% maintain normal relation.

3.2 Neglected and Abused Status

Results in Fig. 1 described that most of the elder people (about 71.5 percent) of *Chitmahal* areas were abused and neglected. Separately 1.5% were physically, 50.4% were psychologically, 60.4% were financially and 40.0% were treatment related neglected.

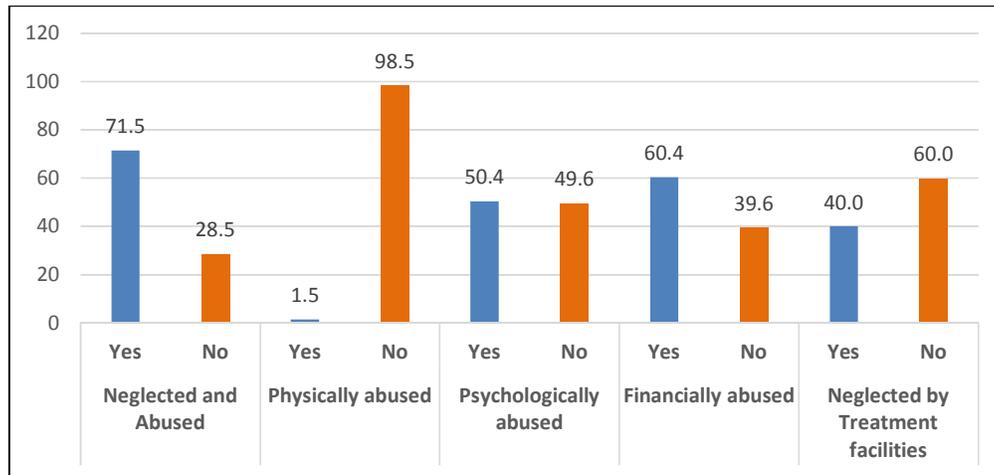


Fig. 1. Indicates percentage distribution of neglected and abused status of elder peoples' in Chitmahal areas of Northern Bangladesh

Most of them were neglected by their Family members (40.8 percent), 9.6% and 21.1% neglected by spouse and others respectively. About 45.9% elder people of Chitmahal areas were thinking that they neglected by himself/herself in any reason. Among them separation from others were 6.4%, irregular food habit was 58.0%, depression or for without any causes were 22.6% and regarding from health carelessness were 12.9% of neglecting by own selves. About 7.0% elder people were neglected when they want to change the family pattern, 32.6% elder people were neglected when their family faced financial crisis, 9.6% elder people were neglected for family violence, 14.1% elder people were neglected when there was financial crisis and violence in their family, 8.1% elder people were neglected when they want to change the family pattern and when there was financial crisis in the family and others situation. Among the neglected and abused elder people 24.4% were think that they were neglected and abused intentionally and 47.0% were think that they were neglected and abused unintentionally. In case of physical abuse, a little number (1.5%) of the elder people of *Chitmahal* areas was experienced kick and slap from their husband/wife/family members or others. Again, the type of psychological abused faced by elder people of *Chitmahal* areas were rebuke and devaluation (14.8%), hinder and loneliness from express opinion 7.4% and unexpected behavior (28.1%).

Also the type of financial abused faced by elder people of Chitmahal areas were impeding property consumption (3.3%), apathy towards

fulfill (41.4%), demands discriminate in getting old age allowance (12.6%), forcible capture of land (3.7%). Regarding food related abuse and neglect, about 39.6% elder people faced insufficient food, 11.5% elder people faced food discrimination and 3.7% aging people faced late serving of meal/ away from serving time of meal. Regarding costume related abuse and neglect, about 25.9% elder people faced insufficiency and apathy towards giving cloths, 36.7% elder people faced low quality costume, 24.0% elder people faced useless cloth and others to protect cold (Table 2).

Table 3 describes that only 23.0% elder peoples' financial demands fully fulfilled by family members, where as 60.0% elder peoples' financial demands were partially fulfilled and 17.0% were not at all fulfilled. The elder people done different jobs like works of day laborer (29.6%), agriculture (23.0%), getting allowance and other works (26.0%) for fulfill their financial crisis. Some elder people (15.6%) were begging for fulfill their financial crisis. About 11.5% elder people think that family disorganization was the reason, 35.2% elder people think that financial problem was the reason, 7.0% elder people think that about accommodation and illness problem was the reason of affected household related abuse and neglect.

About 34.8% elder people think that financial problem was the main causes and 23.0% elder people think that carelessness was the main causes of food related abuse and neglect. Only 20.0% elder people said that their costume demand fully fulfilled by family member and

Table 1. Percentage distribution of social and economic conditions of elder people's families in Chitmahals area of Northern Bangladesh

Background characteristics	Categories	No.	%
Age of respondents (years)	60 – 69	115	42.6
	70 – 74	78	28.9
	75+	77	28.5
Gender of respondent	Male	163	60.4
	Female	107	39.6
Education levels of respondents	Illiterate	202	74.8
	Primary	48	17.8
	Secondary	20	7.4
Previous occupation of respondent	Farmer and Day laborer	116	43.0
	Farming	43	15.9
	Others occupation	16	5.9
	Housewife	95	35.2
Present occupation of respondent	Day laborer	80	29.6
	Business and other works	41	15.2
	No work	149	55.2
	Married	148	54.8
Marital status	Widow/widower/Single	122	45.2
	Single family	87	32.2
Types of family	Extend family	183	67.8
	Small (1-3)	87	32.2
Family size of respondent	Medium (4-5)	100	37.0
	Large (6+)	83	30.8
	Own/Husband	162	60.0
Ownership of house	Son/Daughter	81	30.0
	Other	27	10.0
	Farmer and Day laborer	151	55.9
Family income sources	Farming	49	18.1
	Business and other	47	17.4
	Begging	23	8.5
	Yes	248	91.9
Economic difficulties	No	22	8.1
	Up to 5000	142	52.6
Monthly family income of respondent (BDT)			

Background characteristics	Categories	No.	%
Monthly family expenditure of respondent (BDT)	5000-9000	93	34.4
	10000 and above	35	13.0
	Up to 5000	141	52.2
	5000-9000	91	33.7
People gives value in social occasion	10000 and above	38	14.1
	Yes	194	71.9
Relation with neighbors	No	76	28.1
	Very good	96	35.6
	Good	89	33.0
	Normal	85	31.5

Table 2. Percentage distribution of type of abused and neglected pattern of elder peoples' in Chitmahals area of Bangladesh

Background characteristics	Categories	No	%
Persons by whom neglected overall	Spouse	26	9.6
	Family members	110	40.8
	Others	57	21.1
	Not applicable	77	28.5
Respondent think neglected by himself/ herself	Yes	124	45.9
	No	146	54.1
Imagination of neglected types by himself/ herself	Separation from others	8	6.4
	Irregular food habit	72	58.0
	Health carelessness	16	12.9
	Depression/Angry for without any causes/Others	28	22.6
Situations of abused and neglected faced	Change the family pattern	19	7.0
	Financial crisis only	88	32.6
	Family violence only	26	9.6
	Financial crisis and Family violence	38	14.1
	Change family pattern and Financial crisis and others	22	8.1
	Not applicable	77	28.5
Respondent's thinking for abuse and neglecting	Intentionally	66	24.4
	Unintentionally	127	47.0
	None	77	28.5
Types of physical abuse	Kick, Slap and push	4	1.5

Background characteristics	Categories	No	%
Types of psychological abuse and neglected faced	Not applicable	266	98.5
	Rebuke/ Devaluation	40	14.8
	Unexpected behavior	76	28.1
	Loneliness/ Hinder from express opinion and Others	20	7.4
Types of financial abuse and neglect faced	Not applicable	134	49.6
	Impeding property consumption/ Stealing money	09	3.3
	Apathy towards Fulfill	111	41.1
	Demands discriminate in getting old age allowance	34	12.6
	Forcible capture of land and others	10	3.7
Types of food related abuse and neglect faced	Not applicable	107	35.6
	Insufficient food	107	39.6
	Food Discrimination	31	11.5
	Late serving/ Away from serving time	10	3.7
Type of costume related abuses and neglect faced	Not applicable	122	45.2
	Insufficiency and Apathy towards giving cloths	70	25.9
	Low quality	99	36.7
	Useless cloth and Others	65	24.0
	Not applicable	36	13.3

partially fulfilled by 65.9% families. Only 5.6% elder people of chitmahal areas had much freedom in family decision making, but 25.2% had moderate freedom, 48.1% had little freedom and 21.1% had no freedom at all (Fig. 2).

3.3 Influential Factors Those Are Responsible For the Neglected and Abused Status

Table 4 shows the association of overall abused and neglected status with different background characteristics of the Chitmahal areas in

Northern Bangladesh. The variables like Age of respondents (years), Previous occupation of respondent, Present occupation of respondent, Family size of respondent, Types of family, Ownership of house, Family income sources, Economic difficulties, Types of economic difficulties, Monthly family income and Monthly family expenditure were significantly associated with financial abused and neglected status. In case of respondent's previous occupation, who are housewife and farmer/ day laborers were more neglected than the others category. In case of present occupation of respondent's, elder

Table 3. Percentage distribution of demand, actions, causes and intensity related to abuse and neglect of elder peoples' in Chitmahal areas of Bangladesh

Background characteristics	Categories	No	%
Quantity of financial demands fulfilled by family members	Full	62	23.0
	Partial	162	60.0
	Not at all	46	17.0
The Job done against fulfilling the financial crisis	Agriculture	62	23.0
	Day Laborer	80	29.6
	Begging	42	15.6
	Allowance & Others	61	22.6
	Not applicable	25	9.3
Reasons of affected household related abuse and neglect	Family disorganization	31	11.5
	Financial problem	95	35.2
	Illness and Accommodation problem	13	7.0
	Not applicable	125	46.3
Causes of food related abuse and neglect faced	Financial problem	94	34.8
	Carelessness	62	23.0
	Not applicable	114	42.2
Fulfillment of costume demand by family member	Full	54	20.0
	Partial	178	65.9
	Not at all	38	14.1

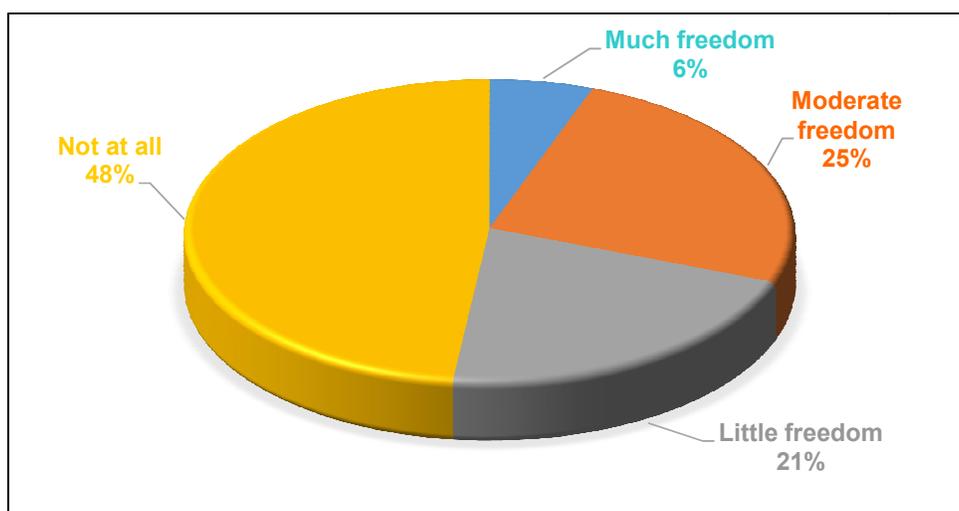


Fig. 2. Percentage of freedom

Table 4. Association between overall neglected and abused status and background characteristics of the *Chitmahalareas* of Bangladesh

Background characteristics	Categories	Neglected and Abused		Psychological Abused		Financial Abused	
		No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)
Age of respondents (years)	60 – 69	39.4	50.6	42.5	42.6	50.5	37.4
	70 – 74	27.5	32.5	34.3	23.5	21.5	33.1
	75+	33.2	16.9	23.1	33.8	28.0	29.4
	p-value	0.027*		0.051*		0.048*	
Previous occupation of respondent	Farmer and Day laborer	47.2	32.5	40.3	45.6	31.8	50.3
	Farming	11.4	27.3	18.7	13.2	22.4	11.7
	Others occupation	6.7	3.9	5.2	6.6	6.5	5.5
	Housewife	34.7	36.4	35.8	34.6	39.3	32.5
	p-value	0.007**		0.586		0.013**	
Present occupation of respondent	Day laborer	32.6	22.1	29.9	29.4	20.6	35.6
	Business and others	15.5	14.3	12.7	17.6	16.8	14.1
	No work	51.8	63.6	57.5	52.9	62.6	50.3
	p-value	0.172		0.510		0.030*	
Family size of respondent	Small (1-3)	37.3	18.2	26.1	37.5	20.6	39.3
	Medium (4-5)	36.3	40.3	42.5	32.4	38.3	36.8
	Large (6+)	26.4	41.6	31.3	30.1	41.1	23.9
	p-value	0.005**		0.098***		0.001**	
Types of family	Single family	37.3	19.5	26.9	37.5	21.5	39.3
	Extend family	62.7	80.5	73.1	62.5	78.5	60.7
	p-value	0.005**		0.050*		0.002**	
Ownership of house	Own/Husband	61.7	55.8	59.0	61.0	60.7	59.5
	Son/Daughter	25.9	40.3	31.3	28.7	36.4	25.8
	Other	12.4	3.9	9.7	10.3	2.8	14.7
	p-value	0.017*		0.980		0.003**	
Family income sources	Farmer and Day laborer	61.1	42.9	52.2	59.6	44.9	63.2
	Farming	12.4	32.5	23.9	12.5	28.0	11.7
	Business and other	14.5	24.7	18.7	16.2	26.2	11.7
	Begging	11.9	0.0	5.2	11.8	0.9	13.5
	p-value	0.000**		0.028*		0.000**	
Economic difficulties	Yes	94.3	85.7	91.0	92.6	87.9	94.5
	No	5.7	14.3	9.0	7.4	12.1	5.5

Background characteristics	Categories	Neglected and Abused		Psychological Abused		Financial Abused	
		No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)
	p-value	0.020*		0.630		0.052*	
Types of economic difficulties	Little	56.7	13.0	9.0	8.1	16.8	3.1
	Moderate	31.1	44.2	38.1	31.6	40.2	31.3
	Very much	6.5	28.6	41.8	55.1	30.8	60.1
	None	5.7	14.3	11.2	5.1	12.1	5.5
	p-value	0.000**		0.095***		0.000**	
Monthly family income (BDT)	Less than 5000	62.2	28.6	47.8	57.4	30.8	66.9
	5000-9000	30.1	45.5	35.1	33.8	45.8	27.0
	10000 and above	7.8	26.0	17.2	8.8	23.4	6.1
	p-value	0.000**		0.089***		0.000**	
Monthly family expenditure (BDT)	Less than 5000	61.7	28.6	47.0	57.4	32.7	65.0
	5000-9000	29.5	44.2	33.6	33.8	43.0	27.6
	10000 and above	8.8	27.3	19.4	8.8	24.3	7.4
	p-value	0.000**		0.034*		0.000**	

Note: Level of significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.1$

people who have no work more financially neglected than the elder people who have work. A greater percentage of elder people who live in extend family neglected more than the single family. Also, who lived in son's or daughter's house neglected more than who lived in own or husband's house. Neglected status was low for the families with low economic difficulties, i.e. neglected status increased with the increase of economic difficulties. It also observed that, financial abuse and neglect were mostly happening in the families with low monthly income and expenditure.

Table 5 represents the association of food related characteristics with neglected status of the elder peoples in Chitmahal areas of Northern Bangladesh. There was highly association found (at 1% level of significance) among neglected status with eating opportunity of three times in last 30 days, get opportunity to eat something when hungry, give rich food when arranged in family, fruits eaten during last month, meat eaten during last month, milk eaten during last month, quantity of food demands fulfilled by family members respectively.

Table 6 shows the significant studied variables for neglected status of the elder people of

Chitmahal areas. The variables like age of respondent (years), previous occupation of respondent, ownership of house, monthly family income were statistically significant with neglected status of elder people of Chitmahal areas.

Elder people with age 75 and above years were 0.205 times lower risk of being neglected than the elder people aged 60-69 years. It implies that, risk of neglect reduced with the increase of their age. Elder peoples with previous occupation as farming were 3.195 times higher risk of being neglected than the elder people with previous occupation as farmer and day labor. That means, risk of neglect is high for the occupation as farming. Elder people whose owner of house was son or daughter were 2.650 times higher risk of being neglected than the elder people who live in own or husband's house. So that, risk of neglect is lower for the older people who live in own or husband's house. Elder people with monthly family income up to 5000 BDT and 5000-9000 BDT were 2.715- and 5.760-times higher risk of being neglected than the elder people with monthly family income BDT 10000 and above. It means, risk of neglect reduced with the increase of monthly family income.

Table 5. Association of neglect status with food related characteristics of the elder peoples in Chitmahal areas of Bangladesh

Background characteristics		Neglect status		P- value
		Yes (%)	No (%)	
Had eating opportunity for all meals in last 30 days?	Always	73.6	94.8	0.000**
	Sometime	26.4	5.2	
Had opportunity to eat something when hungry?	Always	23.3	61.0	0.000**
	Sometime	58.5	28.6	
	Never	18.1	10.4	
Given rich foods when arranged in family?	Yes	71.0	94.8	0.000**
	No	29.0	5.2	
Fruits eaten during last month	Yes	19.2	40.3	0.000**
	No	80.8	59.7	
Fish eaten during last month	Yes	97.9	100.0	0.203
	No	2.1	0.0	
Meat eaten during last month	Yes	56.0	89.6	0.000**
	No	44.0	10.4	
Milk eaten during last month	Yes	33.2	57.1	0.000**
	No	66.8	42.9	
Egg eaten during last month	Yes	97.4	98.7	0.516
	No	2.6	1.3	
Quantity of food demands fulfilled by family members	Full	13.5	58.4	0.000**
	Partial	70.5	39.0	
	Not at all	16.1	2.6	

Note: Level of significance: **p < 0.01

Table 6. Results of binary logistic regression analysis of significant studied variables for neglected status among the elder people of Chitmahal areas in Bangladesh

Variables	Categories	OR (95% C.I.)
Age of respondent	60-69 (RC)	1.00
	70-74	0.786(0.380-1.623)
	75+	0.205** ^(0.084-0.503)
Previous occupation of respondent	Farmer and day labor (RC)	1.00
	Farming	3.195* ^(1.224-8.340)
	Others occupation	0.456(0.092-2.250)
	Housewife	0.700(0.285-1.719)
Present occupation of respondent	Day labor (RC)	1.00
	Business and other works	0.562(0.168-1.883)
	No works	2.051(0.842-4.995)
Ownership of house	Own/Husband (RC)	1.000
	Son/Daughter	2.650** ^(1.229-5.714)
	Other	1.517(0.365-6.312)
Monthly family income (BDT)	Up to 5000	2.715* ^(0.145-6.903)
	5000-9000	5.760** ^(2.128-15.590)
	10,000 & above (RC)	1.00

Note: Level of significance: *p < 0.05, **p < 0.01

Table 7. Results of binary logistic regression analysis of significant studied variables for psychological abuse among the elder people of Chitmahal areas in Bangladesh

Variables	Categories	OR(95% C.I.)
Marital status	Widow/widower/Single	1.567*** ^(0.939-2.613)
	Married (RC)	1.00
Monthly family expenditure (BDT)	Up to 5000	2.476* ^(1.110-5.524)
	5000-9000	2.323* ^(1.028-5.250)
	10000 and above (RC)	1.00
Peoples respect in social occasion	No	1.792*** ^(0.978-3.281)
	Yes (RC)	1.00

Note: Level of significance: *p<0.05, **p<0.01, ***p<0.1

Table 8. Results of binary logistic regression analysis of significant studied variables for financial abuse among the elder people of Chitmahal areas in Bangladesh

Variables	Categories	OR(95% C.I.)
Age of respondent	60-69 (RC)	1.00
	70-74	1.515(0.780-2.943)
	75+	2.895** ^(1.395-6.011)
Present occupation	Day labor (RC)	1.00
	Business & other works	0.604(0.241-1.513)
	No works	0.346** ^(0.175-0.684)
Monthly family income (BDT)	Up to 5000	5.008** ^(1.981-12.655)
	5000-9000	1.997(0.806-4.953)
	10000 and above (RC)	1.00

Note: Level of significance: **p<0.01

Table 7 showed the significant studied variables for psychological abuse of the elder people of Chitmahal areas. The variables like marital status, monthly family expenditure and peoples respect in social occasion were the significant variables for psychological abuse. Results indicated that, widow or widower or single elder people were 1.567 times higher risk of being

abused psychologically than the married elder people. It means risk of psychological abuse reduces if their spouse stays with them. Elder people with monthly family income up to 5000 BDT and 5000-9000 BDT were 2.476 and 2.323 times higher risk of being abused psychologically than the elder people with monthly family income BDT 10000 and above. So that, risk of

psychological abuse reduced with increase of their monthly family income. Elder people who didn't get respect from peoples in social occasion were 1.792 times higher risk of being abused than the elder people who get respect from peoples in social occasion. That means risk of abuse is lower for the elder people who get respect from peoples in social occasion.

Table 8 represented the significant studied variables for financial abuse of the elder people of Chitmahal areas. The variables like age of respondent, present occupation, and monthly family income. We observed that, elder people with age 75 and above years were 2.895 times higher risk of being abused financially than the elder people aged 60-69 years. So that, risk of financial abuse increased with the increase of their age. Elder peoples with presently no works were 0.346 times lower risk of being abused financially than the elder people with present occupation as day laborer. It means risk of financial abuse reduces, if they didn't have any work at their elder age. Elder people with monthly family income less than 5,000 BDT were 5.008 times higher risk of being abused financially than the elder people with monthly family income BDT 10,000 and above. That means risk of financial abuse reduced with the increase of monthly family income.

4. CONCLUSION

Aging is a series of process that begins with life and continues throughout the lifecycle. From the perspective of old age, abuse and neglect is currently a big social issue which is the widespread in the world especially country like Bangladesh. The study investigated abuse and neglected status among elderly population in the former Chitmahal (enclaves) areas of Northern Bangladesh. Study found that most of the elder people (about seventy-two percent) of Chitmahal areas were neglected and abused in any form. Separately they were neglected by physically, psychologically, financially, treatment related and food intake related neglect. Most of them were neglected by their family members and others. The study also brought to light that age of elder people, illiteracy, previous and present occupation of respondents, peoples respect in social occasion, utmost economic dependence of the already poverty-stricken family makes the elderly susceptible to elder neglect and abuse. The overall findings seem to suggest close relationship of abuse and neglect of the elderly with their socio-economic, educational

background and family economic conditions. There was also highly association found between elder's neglected status with food intake opportunities and food demands fulfilled by family members. This piece of information needs to be scientifically utilized in developing suitable social and motivational programs for elder families in the Chitmahal areas and countrywide by Non-Government Organizations (NGO's) and Government initiatives. We should remember that older people understand the superiority of "being" over "having". Human societies would be better if they learnt to benefit from the charismas of old age.

5. LIMITATIONS OF THE STUDY

- Respondents are older people and for that sometimes they are not remembering the subjects, depend on their guess in a special manner such as age, income, the incident that was gone past.
- Elder abuse and neglect are a hidden issue in our country. For that respondent do not want to provide proper information.
- It is a new area of research in Bangladesh and there were no available studies on the same issues of aged setting. Therefore, it is difficult to discuss the findings in the context of Bangladesh.

ETHICAL APPROVAL AND CONSENT

Ethical consideration has been maintained in collecting data from the respondents. Respondents were assured that confidentially regarding collected data should be maintained and the relevant data only needed for the study purpose. Proper informed consent was taken prior to interview. Participants were informed about the aim, objectives & the procedures involved in the study. The principle of respect for persons was strictly followed.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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