The 21st century will witness a gradual transition to an ageing society the world over. The process which started in low fertility western societies and in Japan is now spreading to the developing countries of Asia, Africa and Latin America. Countries like China and India will not only be at the forefront in terms of absolute number of total population, but also in terms of absolute number of the elderly (60+ years) population. In brief, the long term impact of decline in fertility and reduction in the size of family will lead to a decrease in the population of children (0-14 years), which in turn will push up the population in the working age group.

Depending on the decline in fertility and mortality rates and the increase in the expectation of life, this will lead to an increasing proportion of the elderly after a time lag. A greying of the population is inevitable and one must understand its implications. Paul Wallace, a popular writer, dramatically describes this phenomenon as 'agequake'. If we understand the implications of ageing, agequake will not descend on us unexpectedly like an earthquake with death and destruction all around. Instead, we will be prepared to face a world converging on the elderly.

The ageing of population consequent on the change in the age structure will be evident from the fact that all through the last four decades, the growth rate of the 60+ population has been consistently higher than that of the total population. During 1951-61, the decadal growth rate of the 60+ population in India was 26% compared to the growth rate of 21.6% for the total population. During the decade 1981 and 1991, the comparable figures were 31.3% and 23.9%, respectively. The same story is repeated when we consider the male and female population separately (Bose, 1997).

The magnitude of mental morbidity in the Indian situation is a serious cause of concern. In India, nearly 4 million elderly persons (aged 60 years and above) are reportedly mentally ill (Dhar, 2005), which, although lower than that in western countries, requires to be taken seriously as the necessary psychiatric services fall woefully short of our

requirements. Tiwari and Srivastava (1998) conducted a study in Lucknow to assess the prevalence of psychiatric illnesses in persons 60 years and above in a defined rural community. The total prevalence of psychiatric disorders in the geriatric group was 42.21% and neurotic depression, manic depressive psychosis (MDP) depressed and anxiety states were the most prevalent.

Mental health is crucial to the overall well-being of individuals, human societies and individual countries. Indeed, mental health can be defined as a 'state of well-being enabling individuals to realize their abilities, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities'. Unfortunately, in most parts of the world, mental health and mental disorders are not accorded anywhere near the same degree of importance as physical health. Rather, they have been largely ignored or neglected, without attaching required importance that both are equally important and interrelated.

Growing older brings forth vulnerability in respect of mental health in both developed and developing countries. The elderly are especially vulnerable to suffer from mental disorders. Of late, however, mental health is receiving gradual importance at the international level. At the national level also mental health is becoming a prioritized area in public health initiatives. In a country like India with huge socioeconomic and cultural variations, risks pertaining to mental health vary with age, sex, economic status, place of residence, educational status etc.

Review of the extant literature suggest that relationships between mental health traits (depression, anxiety, loneliness, perceived stress and cognitive function), and demographic and socio-economic variables (age, sex, marital status, education, family size, number of offspring, living arrangement, occupation, self earning and family earning) as well as social ties (social support and social network) variably exist among elderly of different communities throughout the world including India.

In India several studies have been carried out on mental morbidities in order to evaluate mental health. However, comprehensive studies incorporating important mental health traits and its socio-demographic correlates have not much been attempted on Indian communities. Particularly, studies on various aspects of mental health are virtually lacking among the urban and rural communities of the state of West Bengal. Absence of such studies in West Bengal prompted undertaking the present study. A study dealing with mental health and its socio-demographic and socio-cultural correlates among elderly of rural and urban West Bengal will help providing baseline information for identification of mental health risk factors, it is believed.

Under the above backdrop, the overall objective of the study is to evaluate mental health and quality of life profile of the elderly aged 65 – 79 years inhabiting urban and rural settings of West Bengal. The specific objectives of the present study among the elderly are to:

> Evaluate mental health profile in terms of assessment of anxiety, depression, psychosocial stress, loneliness and cognition levels in relation to area of residence;
> Examine effects of socioeconomic, demographic, social support and social network factors on psychological/mental health traits mentioned above in relation to area of residence; and
> Assess overall Quality of Life including its physical, psychological, social and environmental domains among the elderly in relation to area of residence.

In order to satisfy the objectives of the present study, the comparison was made between urban and rural groups in terms of selected mental health traits considered for evaluating mental health profile; evaluation is made on the effects of socio-demographic variables, social support and social network on selected mental health traits in urban and rural groups; and comparison is made between rural and urban groups in respect of overall quality of life.

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West Bengal is the 4th most populous State in India and the 7th most populous sub-national entity in the world, with over 91 million inhabitants as of Census of India, 2011. It is a State in the eastern part of India, stretching from the Himalayas in the north to the Bay of Bengal in the south. West Bengal is located between 85° 50' E and 89° 50' E east longitude and 21° 38' N and 27° 10' N north latitude. West Bengal comprises a total area of 88,752 square kilometers (34,267 sq miles). The State ranks 13th in India in respect of total geographical area, constituting 2.70% of India's land mass. The State's administrative structure consists of 19 districts, 66 sub divisions, 341 blocks, 126 municipalities, 333 panchayet samity, 3354 Gram Panchayets, 40782 mouzas and 37945 inhabited villages (Government of West Bengal, 2008). It has three divisions namely, Burdwan, Presidency and Jalpaiguri. According to the 2001 Census of India, the literacy rate of West Bengal is 69% (Urban – 88% and rural – 68%). Hinduism is the dominant religion of the State since 72.5% of the total population of the State follows this religious faith. The crude birth rate is 17.5% in West Bengal, compared to 22.8% in India. The crude death rate is 6.2% in West Bengal compared to 7.4% in India. The crude death rate in rural areas of West Bengal is 6.1%.

Salt Lake City, one of the planned and developed urban centers besides the city of Calcutta (Kolkata), has been chosen as the urban study locale. It is under Bidhannagar Municipality of Bidhannagar subdivision of the district of 24-Parganas (North), West Bengal. Salt Lake City lies between 22° 58″ N latitude 88° 42″ E longitude covering a total geographical area of 33.5 Km^2 with an elevation ranging between 1.5m (5 ft) to 9m (30 ft). It is quite a large township with 87 blocks. It is falling into Presidency division of West Bengal. It has its own elected administrative body called Bidhannagar Municipality consisting presently of 25 wards. It is bordered on the north by Lake Town and Keshtopur, on the west by Kankurgachhi and Beleghata, on the south by Eastern Metroploitan Bypass and on the east by Rajarhat. The Keshtopur Canal, an offshoot of the river Hooghly runs across the three sides of the Salt Lake City. The Bidhannagar Police Commissionerate is responsible for law enforcement in the area. The infrastructural facilities of Salt Lake city generally match with that of City of Calcutta, proper and are continuously increasing.

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In order to maximize the geographical distance from Bidhannagar, few villages in a remote rural setting under the Horekhali grampanchayat of Sutahata block (Haldia subdivision) of Purba Medinipur district, West Bengal has been chosen as the rural study locale. Sutahata Block is located between 22°03″N latitude and 88°06″E longitude covering a total geographical area of 79.54 Sq.km. with an elevation of 8 m (26 ft). It consists of 1 Panchayet Samity, 6 Grampanchayet, 68 Gram Samsad, 81 Mouzas and 80 inhabited villages. It is falling under Burdwan division of West Bengal (District Statistical Handbook, 2004). Horkhali is bordered by Rupnarayan river in east, by Kukrahati in north, by Guaberia in west and Joynagar in south. Horkhali is being served by the Sutahata police station. The head office of the block is situated in Sutahata. The villages do have rudimentary infrastructural facilities. Within the Horkhali grampanchayet area all the villages were initially listed and the following villages: Gourangapur, Tajpur, Atafala, Tajnagar and Sibpur were randomly selected for the study as the rural study locale.

In both the study locales, middle class Bengalis are the predominant social group.

A total of 384 elderly individuals aged between 65 and 79 years at the time of the initiation of the fieldwork, of both sexes constituted the total sample: 179 from urban (male: 95; female: 84) and 205 from rural areas (male: 103; female: 102).

Information on socio-demographic profile, social ties, mental health traits and quality of life were collected through suitably selected interviewer-administered questionnaires developed by individual researchers for suitable use among cross-culturally varied human group. Pre-testing of questionnaires was done; suitable modification and translation of study questionnaires on mental health traits and quality of life into Bengali language (i.e. mother tongue of the study participants) were attempted. Validation and test for internal consistency was done for these questionnaires. Based on specific cut-off scores, several categories of depression, anxiety, loneliness, perceived stress and cognitive impairment were defined as suggested by the developer of the questionnaires.

Descriptive statistics (mean, standard deviation and percentage distribution) were presented for continuous and categorical data, respectively. Chi-square test has been used for categorical data to compare categorical variables by habitat, age group and sex and t-test has been used for continuous data to find significance of differences between habitat, age group and sex. Logistic regression models were fitted to estimate the strength of association between dependent (categorical) and independent variables (categorical and continuous) considered in the model. Regression analysis was performed to examine effects of socio-demographic factors and those related to social ties on perceived stress and quality of life (QoL).

In respect of demographic and socioeconomic characteristics, rural-urban differences exist. In general urban study participants show higher economic status in terms monthly self and family earning as compared to rural study participants. Majority of the rural and urban elderly are ever married, as expected.

Elderly from the rural area shows higher mean values in all the social support measures irrespective of sex. Urban elderly shows higher mean scores in all social network measures in comparison to their rural counterparts.

Scatter diagram with lines of best fit reveals that females of rural area show positive relationship between depression and age whereas rural males, urban males and urban females have shown the weak negative relationship. It appears that, rural study participants have significantly higher mean values of depression score compared to their urban counterparts, irrespective of age and sex. Majority of the rural study participants show higher prevalence of depression ranging from mild to severe, in both sexes than that among the urban ones. In both the sexes, a significant rural-urban difference in prevalence of depression categories has been found. Age, marital status, number of living offspring and self earning are found to be significant socio-demographic predictors of depression. Total functional, total network properties and number of embedded networks measures of social support and social network either highly or less likely in favor of reporting mild to severe depression.

In case of anxiety score, it is found that the rural males, rural females and urban males have positive relationship of anxiety with age whereas urban females have shown negative relationship. Irrespective of sex, rural study participants have shown significantly higher mean scores as compared to urban study group. In both the residential groups, younger old has shown a significant sex difference. Remarkably a higher percentage of the rural study participants experienced severe anxiety, irrespective of sex, while urban participants show relatively lower prevalence. In both the residential settings, females show higher prevalence of severe anxiety in comparison to their male counterparts considering all ages. In both the sexes, significant rural-urban difference has been found in prevalence of anxiety categories. Participants' age and sex are found to be significantly associated with the prevalence of severe anxiety as compared to mild anxiety category. Total functional and total network properties measures of social support and number of high contact role and number of people in social network measures of social network are found to be significant socio-demographic predictors of moderate and severe anxiety.

The present study shows that, in case of rural males and urban females positive relationship between loneliness score and age exists, whereas, in case of rural females and urban males a negative relationship exists. The mean scores of loneliness measures are significantly higher among the rural group in comparison with their urban counterparts, irrespective of sex. A higher percentage of rural females are severely lonely than their male counterparts. A reverse trend is discernible among the urban study participants. Significant association is noted between loneliness category and socio-demographic variables as well as measures of social ties. Participant's sex, number of living offspring, occupation, total functional, total network properties, number of high contact role, number of people in social network and number of embedded networks are found to be significant predictors of loneliness and severe loneliness categories as compared to normals.

The findings of the present study reveal a negative relationship between perceived stress score and age, irrespective of sex and area of residence. Mean perceived stress score is significantly higher in both the age groups among urban study participants as compared to their rural counterparts. Area of residence is one of the important predictors of perceived

stress. Social support measures are also the significant predictors of perceived stress.

Negative relationship has been noted between cognitive function score and age among the rural study participants, irrespective of sex. The urban study participants have significantly higher mean scores as compared to the rural ones. Sex differences are also significant in both the residential groups, irrespective of age group, except in case of rural older old. A majority of urban study elderly are categorized as having uncertain cognitive impairment whereas a higher percentage of rural elderly are categorized as having severe cognitive impairment. In both the age groups rural elderly, female participants are found to show higher percentage in prevalence of severe cognitive impairment. Measures of social ties viz. total network properties and number of high contact role are found to be significant predictors of cognitive impairment.

In all the items and domains (individual's overall perception of quality of life, individual's overall perception of their health, physical health, psychological health, social relationships and environment), urban study participants show significantly higher mean values compared to their rural counterparts, irrespective of sex and age group. Sex differences in quality of life scores are not significant among both rural and urban study participants. Area of residence is the significant predictor for all the items and domains of quality of life score in linear regression model. Other significant predictors of any one or more items or domains of quality of life scores are: age, marital status, self earning and family earning, total functional, total network properties, total loss, number of high contact role and number of embedded networks.

The present study clearly demonstrates adverse mental health profile, among the rural study participants compared to the urban study group, irrespective of sex. It is well-established by different studies that the rural and urban difference exists in terms of elderly mental ill health. This difference in mental health could be the contributions of social, economic, and demographic differentials between rural and urban habitats in addition to biological and other environmental factors. The possibility of mental health care provision differentials also does play a significant role.

To sum up, the present study dealing with the mental health of the elderly from both rural and urban residence from West Bengal, India demonstrates that the socio-demographic factors and social ties are important correlates of elderly mental health and quality of life. Moreover, mental health disorders are growing among elderly as their number is growing day by day especially in developing countries like India, needing urgent research and policy attention.