Extended Abstract

A major emerging demographic issue of the 21st century is the ageing of population as an inevitable consequence of the demographic transition experienced by most countries. Across the world, declining fertility and increased longevity have jointly resulted in higher number and proportions of older persons. India, like other developing countries, had a young age structure with median age remaining at about 20 years from 1961 to 1981, and increasing marginally to 24 in 2011. The shift to an older age structure has important implications for the country as well as for elders and their families as the need for socio-economic support increases for older population.

Happiness is defined as the degree to which a person enjoys his or her life-as-a-whole. Accordingly 'Gross National Happiness' is defined as the degree to which citizens in a country enjoy the life they live. The concept of 'Gross National Happiness' (GNH) was introduced in the political discourse in the 1960s by the late king of Bhutan, Jigme Dorji Wangchuck. In 1971 the idea was articulated by King Jigme Singye Wangchuck is his famous statement that "Gross National Happiness is more important than Gross National Product". It is argued that Happy Life Years (HLY) is the best available indicator of Gross National Happiness. Happiness is a very general and broad concept, representing a general life state, often not directly related to specific material conditions and social structures, such as family relations or insertion on the job market.

The SAGE is a multi-country study in six countries. SAGE is a longitudinal health survey, supported by World Health Organization (WHO). The main objective of SAGE was to obtain reliable, valid and comparable data on levels of health across a range of key domains for adult populations. SAGE wave 1 India was implemented in the states of Assam, Karnataka, Rajasthan, Uttar Pradesh, Maharashtra and West Bengal. The same primary sampling units and the sample households covered in the WHS were the baseline sample for SAGE India wave1, which was conducted in 2007

The study first constructs measures of HLY by considering large nationally representative survey data on general happiness (SAGE, 2007) and population life table estimates of mortality and employing the period prevalence-rate life table method—Sullivan method. It then examines changes in HLY by age and sex. "Happy Life Years" was calculated for older respondents in 10 year age group among four class interval for males and females separately. For calculating H.L.Y, Sullivan method was used which uses the observed age specific prevalence of happiness states in a population at a given point in time to calculate the years of life lived in the happiness states at each age by a period life table cohort. Proportion of life lived in happiness among males and females were also calculated among the elderly.

A multinomial logistic was done by considering the categorical variable "Happiness" were unhappy was taken as base category and the others were described with reference to it in relative risk ratio. Confidence interval was calculated for each variable and its categories and

significance level was also shown in the table constructed through multinomial logistic to find out the causal factors. The multinomial logistic table was constructed using STATA 12 software.

It was evident from the analysis that with increasing age life expectancy decreases similarly happy life years also decreases. It was found that happy life years is long among females in comparison to males while the proportion of life lived happily is more among males. Happiness is highly associated with education, income level, activity of daily living and quality of life. With increasing education and income happiness was found to be increasing significantly among elderly. Older respondents who were satisfied with their daily activity were found to be happy, quality of life of happy persons were found to be high. Similarly older respondents who were satisfied with their life were also found to be happy.

Table 1: Happy Life Years among Elderly in India.

Age	Male			Female		
	L. E.	H.L.Y	%Happiness	L.E	H.L.Y	%Happiness
50	24.20	11.98	49.50	27.30	13.27	48.61
60	16.85	8.26	49.01	18.96	9.12	48.11
70	10.94	5.21	47.61	12.31	5.73	46.55
80	6.95	2.92	42.01	7.63	3.09	40.51

Graph 1: Proportion of Happiness among Males and Female
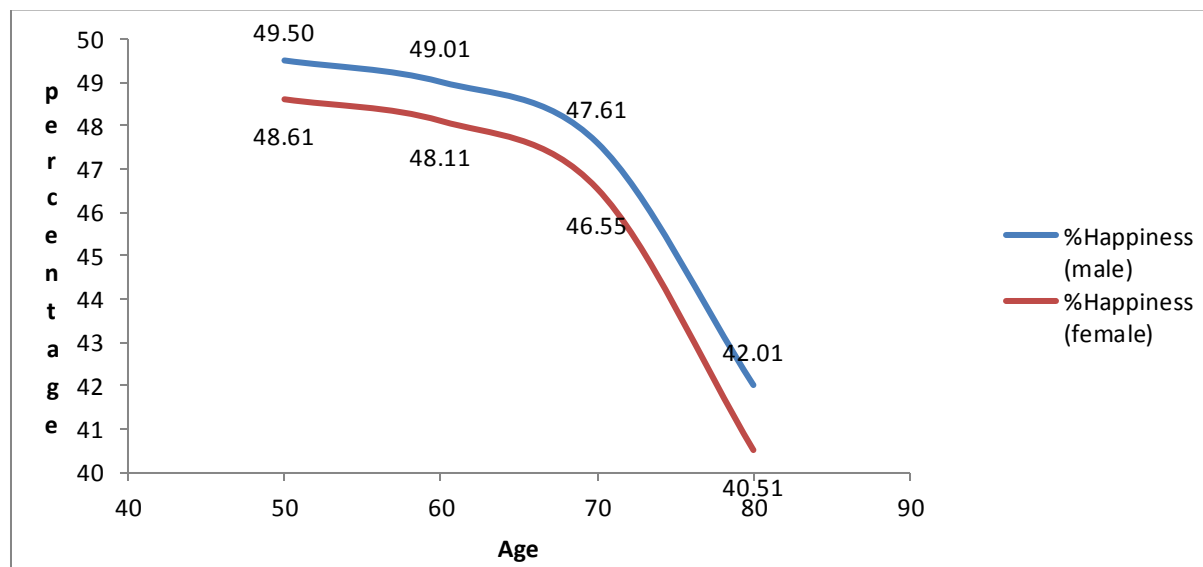
Table 3: Multinomial logistic for Happiness

Variables	Relative risk ratio	P>Z	95% conf. Interval	
unhappy(UnH) base				
neither H/UnH				
Residence (urban)	0.943895	0.822	0.571167	1.559855
Education				
Primary	**1.519787**	0.03	1.028121	2.246577
secondary	**2.115803**	0.00	1.230077	3.639302
graduate	1.131461	0.87	0.236418	5.415006
Income				
Poor	**1.440795**	0.04	1.003992	2.067636
Middle	**2.906385**	0.00	1.825963	4.626092
Rich	1.765692	0.16	0.79377	3.927674
Richer	**2.262615**	0.05	0.98764	5.183495
Sex				
Male	**1.43271**	0.04	1.014678	2.022966
Activity of daily				
neither S nor Dissatisfied(D)	**1.663588**	0.00	1.137136	2.433766
satisfied(s)	**2.747092**	0.00	1.768708	4.26668
Living condition				
neither S nor D	0.877002	0.65	0.491009	1.566434
satisfied	0.981729	0.95	0.551654	1.747097
Satisfied with life				
neither S nor D	**2.515367**	0.00	1.609458	3.931181
satisfied	**3.85376**	0.00	2.318869	6.404616
Quality of life				
moderate	**5.046474**	0.00	3.643312	6.990043
Good	**4.277644**	0.00	2.532582	7.225133
Happy(H)				
Residence (Urban)	0.950862	0.85	0.556367	1.625078
Education				
Primary	**1.464504**	0.08	0.955466	2.24474
secondary	**2.356054**	0.00	1.320897	4.202439
graduate	2.628872	0.21	0.577971	11.95729
Income				
Poor	**1.495772**	0.04	1.00142	2.234164
Middle	**4.002334**	0.00	2.433122	6.583588
Rich	**2.970813**	0.00	1.356113	6.50811
Richer	**4.659153**	0.00	1.973484	10.99969
Sex				
Male	**2.208056**	0.00	1.491829	3.268143
Activity of daily				
neither S nor D	1.498269	0.08	0.951314	2.359693
satisfied(s)	**4.629126**	0.00	2.894244	7.403938
Living condition				
neither S nor D	1.189298	0.65	0.559314	2.528867
satisfied	1.656798	0.17	0.797321	3.442753
Satisfied with life				
neither S nor D	**2.370831**	0.00	1.34723	4.172147
satisfied	**8.969843**	0.00	4.961047	16.21796
Quality of life				
moderate	**9.781435**	0.00	6.464526	14.80023
Good	**36.78196**	0.00	20.75663	65.17978