RAY: International Journal of Multidisciplinary Studies, E-ISSN: 2456-3064
Volume II, No. 1, April, 2017, pp. 35-48.

Does Education Contribute to Happiness?

Piyali Das Gupta
Assistant Professor,
Department of Economics,
Sarsuna College,
Sarsuna, Kolkata,
India.
pdg2009@rediffmail.com

Structured Abstract:

Purpose: The present study attempts to establish the links between happiness and various perceptions of education. The identification of this relationship would in turn increase the productivity and the well being of the individuals and that is required for the optimization of the social welfare.

Design: The empirical work is based on primary data following random sampling technique. The World Value Survey is used to measure the happiness.

Methodology: The micro level happiness function is estimated with help of the ordered Logit econometric technique.

Findings: The results show that higher education level, capability of using education to reason and to tackle sadness and opportunity to get more education increase the probability of individuals being very happy. Apart from education level, family income significantly influences happiness levels of the individuals.

Originality: The study helps in formulating a set of suitable economic policies that may be implemented by the government in future for promotion of happiness.

JEL Classification: D60, I3, O1.

Keywords: Wellbeing; Happiness level; Education; Ordered Logit Model.

Paper Type: Original Research Paper.

Introduction

Happiness is considered as ultimate goal of life to all individuals irrespective of time and space. But the meaning of happiness and ways to achieve it change across individuals. Psychologists (Argyle,1987; Michalos ,1991; Schwarz & Strack ,1991, Myers, 1993; Diener et al. ,1999; Kahneman et al.,1999; Ryan and Deci, 2001;) have explored the study of happiness for a long time. After the path breaking contribution by Easterlin (1974), economists have interested in finding the determinants of happiness across the countries on the basis of empirical analyses (Yew-Kwang Ng, 1996; 1997; Oswald 1997; Frank, 1999;

Frey and Stutzer, 2002).The happiness research has been also enriched by sociologists (Veenhoven, 1993; 2007) and political scientists (Inglehart, 1999; Lane, 2000). Philosophers, historians and linguists have analysed differences in the concepts of happiness across time and cultures (Nussbaum, 1986/2001; Wierzbicka, 2004; McMahon, 2006). In most of these studies, happiness is considered as a psychological matter and it fundamentally refers to a mental state including life satisfaction, pleasure, or a positive emotional condition, experiences and enjoyments of life without negative feelings such as anxiety and depression (Shaw & Taplin, 2007; Bekhet et al., 2008; Sumngern & Azeredo et al., 2010). Some literature (Campbell et al., 1976; Veenhoven, 2005) interchangeably use the term happiness with the quality of life and subjective well-being (Bertrand and Mullainathan, 2001; Knight, Song and Gunatilaka, 2007; McGillivray, 2007). These ideas of happiness, therefore, includes well-being due to behaving in the social context and focus on the ability of the 'self' to pursue individual wellbeing. The meaning of happiness in this manner becomes extensive, it includes wellbeing, ability to do and potentially to achieve specific other functioning, (i.e. capabilities, freedom etc.).The present paper considers happiness as synonymous with wellbeing, measures it in eyes of the psychologists as a unit specific behaviour in different domains, and establishes the connectivity of happiness and education as relevant to the maximisation of the social welfare.

Review of Literature

In the existing literature happiness has been linked to various economic and social variables. But the impact of educational attainment on happiness has not been paid much attention. Glenn (1981) found that education has positive significant effects on psychological well-being and he measured education in terms of years of school completed. Witter et. al. (1984) reported that educational attainment was responsible for the variance in adult happiness or subjective wellbeing. Clark and Oswald (1994) showed that the highly educated unemployed reported lower levels of subjective wellbeing than the less educated. In 2001, Gerdtham and Johannesson found a positive association between education and happiness. But a few studies (Frey and Stutzer, 2002; Helliwell, 2003; Blanchflower & Oswald, 2004; Layard ,2005; Veenhoven, 2010; Salinas-Jimenez et. al., 2011; Chen, 2012 ; Cuñado & Pérez de Gracia, 2012) fail to establish any definite pattern among these two variables within developed countries . There exist mainly two explanations regarding the influence of education on happiness. First, education has been considered as a tool of being resourceful and productive

in the labour market and it, in turns, determines income, employment, unemployment risks and job satisfaction. The spillover effect of job satisfaction influences life satisfaction or happiness of individual, not only of his own but also of his family, relatives and society as a whole. Second, education has also been tied with other kinds of resources such as self-confidence, self control, mental health, physical health, connectivity of social networks and good family relations. These resources, in turn enhance happiness.

All the above mentioned studies have been conducted on the basis of happiness data from developed countries as happiness data are adequate and more readily available for those countries unlike the developing nations.. A few studies (Ravallion and Lokshin, 2001; 2002, Graham and Pettinato; 2002, Knight et al.,2007) based on happiness data taken from developing economies identified the socioeconomic variables such as relative income differences, change in status, changes in household income and health status as important determinants of happiness .

In the Indian context, only one study has been found where Lakshmanasamy (2010) established that both absolute and relative income has significant positive effects on happiness and regarding education he only mentioned that college education seems to have insignificant negative impact on life satisfaction.

Objectives

Review of prior happiness studies show that the extent to which different socio-economic factors influence the happiness level has been underexplored in the context of developing economy, especially in India. Again necessary attention is yet not paid to the individual perception on how they derive the level of happiness from acquired level of education .In this perspective, the paper tries to examine how much education contributes to individual happiness level. Such identification of the relative importance of education in determining happiness and prioritisation of those factors would enhance wellbeing of the individual and increase the productivity of the individuals. Therefore, society maximizes on the number of happier individuals would optimize the social welfare.

Research Question

The present paper addresses the question that how much education has an effect on happiness level of individuals. The hypotheses are life-ability of the person depends on education level

which is one of the prerequisites of happiness. It is assumed that happiness of individuals depends on different perceptions of education depending on various purposes it serves in individuals lives such as being able to use reading and writing to think as measured by academic degree of individual (education 1), being able to reason and to tackle sadness (education 2), having opportunity to get more education (education 3), being able to derive pleasure (education 4) and to secure good academic records (education 5) .Therefore, education is measured in terms of these five variables and these variables are assumed to have impact on happiness level.

Methodology

1. Method of Measuring Happiness

Self reported measures of happiness through surveys, are generally used by psychologists on the basis of their belief that these techniques of measuring happiness reflect at least four factors -- circumstances, aspirations, comparisons with others and a person's baseline happiness or dispositional outlook (Warr, 1990; Chen and Spector, 1991). The self reported measure of happiness includes single-item or multiple-item questions on how one view one's state of well-being. The single-item question asks individuals to report their own well being or happiness just simply asking a single question and the single-item scales[1] enjoy the benefit of brevity. Therefore, in the present paper, World Value Survey is used to measure the happiness of the respondents as it is renowned and one of the most reliable single indicator of happiness.

2. Sample

The empirical work is based on primary data of the 599 sample units that have been chosen from the adult residents of Kolkata district in West Bengal through random sampling in 2014. Our target population consists of adults who are a) Non institutionalized population of an urban area, (b) over 18 years and in the productive age group, (c) endowed with a certain level of education that gives them a standard capability. Voter lists of one distinct wards in urban area has been randomly chosen from Kolkata Metropolitan (the largest urban agglomeration in eastern India which envelopes three Municipal Corporations, thirty nine

[1] General Social Survey of the United (Diener, 1984), Euro-barometer Survey (Pavot and Diener, 1993) , World Value Survey (Inglehart, , 1981) http://faith-health.org/wordpress/wp-content/uploads/wvs.pdf

Municipalities and twenty four Panchayet Samitis). The target population is heterogeneous with respect to the variable or character under study. The population is completely known from the voter list collected from Chief Electoral Officer, West Bengal. The chance methods, such as table of random numbers, has been applied to all elements of the sampling frame .Therefore, the samples follows "probability sampling technique" assigning each element in the frame a known and nonzero chance to be chosen. Face-to-face interview in respondent's home has been conducted by the researcher with the standard item question comes from the World Value Survey, and self administered questionnaires for economic and socio-demographic factors. The standard item question comes from the World Value Survey, which asks people, "Taken all together, how happy would you say you are: very happy, quite happy, not very happy, and not at all happy?"

Answers of individuals to the set of questions used in this paper are coded on a four-point likert scales running from strongly disagree to strongly agree. The items are coded in such a way that one corresponds to strongly disagree and four corresponds to strongly agree. The lowest possible level of happiness in this method will be one and highest will be four. Therefore, here happiness is treated as an ordinal response, with categories (very low, low, moderate and high).

3. Econometric Tool

The answers to happiness surveys are ordinal rather than cardinal, they are best analysed via ordered logit or probit equations. These regressions typically yield lower R-squares than economists are used to, reflecting the extent to which emotions and other components of true well-being are driving the results. The probability that a person becomes happy depends on predictors that the perception of education to the individuals used in the study.

The happiness function is assumed to have the following form:

$$w = h(u(x, y, z, t)) + \epsilon(1) \qquad (1)$$

Where w refers the happiness level , u(…) is thought to capture the individual's true well-being or utility, h(.) is a non-differentiable function relating actual well-being to reported well-being, x is surrounded poverty, *y* is family income, z is a set of factors representing different perceptions of education , *t* is a time trend. The error term, ϵ is thought to subsume among other factors the inability of human beings to communicate accurately their happiness

level (your "two" may be my "three"). It is assumed that u (…) is a function that is only observable to the individual, and cannot be conveyed unambiguously to the interviewer.

The structure of equation (1) makes it suitable for estimation as an ordered probit or ordered logit since the sample respondent's self-ratings for their overall happiness are measured by an ordered categorical variable. The assumption underlying the model is that, although respondents to the survey report their happiness levels on the prescribed integer scale, happiness can be measured by an unobserved or latent variable that can take on any real value[2]. This latent happiness measure is assumed to be a linear function of a set of explanatory variables and a random error.

In this paper, in order to estimate happiness equation a simple ordered logit model is formed indexing individuals by the subscript i, in following form:

$$W_i^* = \mu_j + \sum_{k=1}^{K} \beta_k \ X_{ik} + \epsilon_i \qquad (2)$$

Where Wi* is individual i"s latent happiness level and the β"s are the associated linear coefficients of regressor X; $\boldsymbol{\mu}$j denotes the cut points or threshold values; K denote the number of regressors excluding the intercept; ϵ denotes the error term, the cumulative distribution of u_i is assumed to follow logistic distribution with the distribution, F (z) = e ^{z}/ (1+ e ^{z}) and assumed uncorrelated with x (i.e. x is not endogenous).The logistic distribution is symmetric,

We assume that $-\infty = \boldsymbol{\mu}_0 < \boldsymbol{\mu}_1 < \ldots < \boldsymbol{\mu}_j = +\infty$ are the cut points of the continuous scale such that the observed response W satisfies W=j if $\boldsymbol{\mu}_{j-1} < W_i^* < \boldsymbol{\mu}_j$

It implies that W falls in category j when the latent variable falls in the j th interval of values.

We do not observe the values of W_i^* for the individuals in the sample; the data on happiness consists only of the categorical ratings reported by survey respondents. Using $\widehat{W}$i to indicate the estimated latent happiness function, we can write:

$$\widehat{W}\text{i} = \widehat{\mu}\text{j} + \sum_{k=1}^{K} \hat{\beta}_k \ X_{igk} \qquad (3)$$

[2] Probit and logits are traditionally viewed as models suitable for estimating parameters of interest when the dependent variable is not fully observed.

The higher the value of W*, the more likely the individual to report a higher category of self-assessed happiness. The threshold values (***μ***"s) correspond to the cut-offs where an individual moves from reporting one category of happiness to another. In order to estimate the model, some of the threshold values need to be fixed as it is not possible to identify both the constant term of all of the cutoff points. Conventionally, either the upper bound of the first interval is set equal to zero or the constant term is excluded from the estimation. Given the assumption that the error term is follows the logistic distribution (approximation of which lead to normal distribution), the probability of observing an individual i in a particular W value of j is

$$W_{ij} = P(W=j) = \Phi(\boldsymbol{\mu}_j - \beta X) - \Phi(\boldsymbol{\mu}_{j-1} - \beta X) \quad (4)$$

The positive signs of the regression parameters β indicate higher probability of being happy as the value of the associated explanatory variables increase, while negative signs suggest the converse.

Since the slope parameter estimates are not directly interpretable in the probit regression model, we compute marginal effects as follows:

$$\frac{dP_r(W_i = j)}{dX_i} = \{\varphi'(\mu_{j+1} - \beta' X_i) - \varphi'(\mu_j - \beta' X_i)\}\beta \quad \text{----------(5)}$$

where φ ′ denotes the derivatives of φ and the μ_j represent estimated thresholds levels correspondent to different happiness levels. The marginal effects indicate how one unit changes in the factor impact the probability of being completely mentally healthy.

Regression Results

The survey found a high general happiness level in India with an average of 2.99 out of 4 points. No fewer than 26% of the interviewees reported a very high happiness level, 49% reported moderate, and 23.3% reported low and 1.6% were in a very lower end of the happiness scale as shown in Table 1. The people having a very low happiness level are thinly populated.

Table 2 shows the partial correlation of happiness with different explanatory variables such as education level, family income, surrounding poverty, capable of using education to reason and to tackle sadness, capable of using education to derive pleasure, good academic results,

and future opportunity of getting more education. The result reveals expected positive correlation of these variables with the happiness level.

Table 3 describes the result of estimating ordered logit equations in which individuals' level of happiness are regressed on a set of education variables, family income and surrounded poverty. As a general rule, mean and standard deviation are invalid parameters for descriptive statistics as the data are on ordinal scales, so the summary statistics are just omitted. We use Cramer's V statistic [3] to measure the association between nominal explanatory variables. The results of Cramer's v test show the pair-wise correlation is very negligible for all the regressors.

The positive sign of the coefficient associated with the family income shows that increase in family income enhances happiness level of an individual. This impact is statistically significant at 1 % level of significance.

The coefficient associated with all the five variables related to education (three coefficients become statistically significant) indicates that probability of being happy increases with the education. This can be seen as implying that higher level of education generates greater satisfaction among the individuals. The increase in education level of the individual improves happiness level because it makes individuals more capable of opportunities coming their ways either in terms of job or in terms of other kind of productivities and value judgments. Again, individuals who are capable of using their education to reason and to tackle sadness probably remain happy, Here, education helps them to become confident and able them to cope with the advertise coming in their lives. If the positive impact of increase in opportunity of future education on individual happiness is considered, it is found that opportunity of getting more education facilitates the individual to attain the fruits of higher education through a better job with higher wage in place of low skill manual jobs with low salary requiring hard work for longer working hours.

Since the slope parameter estimates are not directly interpretable in the logit regression model, the marginal effects are computed and are reported taking the maximum happiness score (4) as the outcome. The marginal effects indicate that the effect of increase in family

[3] using the formula: $V=\sqrt{\chi 2/n\ (k-1)}$ where $\chi 2$ is Chi-Square statistics, n is number of observation and k represents the smaller of the two numbers (the number of possible values of each variable i.e. the number of rows and columns in the data matrix)

income on happiness is almost similar to the increase in education level as well as increase in opportunity of getting more education on happiness.

Policy Implication and Conclusion

This paper is an empirical study showing the links between happiness and various perception of education on the basis of 599 randomly sampled men and women in Kolkata. The study effectively addresses the paucity of research on happiness in the context of Indian economy. Apart from gaining an economic insight into happiness, it will further help in formulating a set of suitable economic policies that may be implemented by the government in future for promotion of happiness. The strategy of expanding educational opportunities especially by building up more academic institutions in the backward regions would increase the opportunity of education in primary, secondary and degree level education. It would further help the majority of the population acquire proper education or skills needed to get jobs. Keeping in mind the link between education policy and employment policy, emphasis should be given on the existing education programmes such as Sarbashikhya Mission, multi-purpose education, technical schools, polytechnics,[4] the National Policy on Education (NPE) and Rashtriya Madhyamik Shiksha Abhiyan.[5] The proper implementation of Kanyashree Prakalpa[6] should be encouraged.

References

Argyle, M. (1987). *The psychology of happiness*. London: Methuen.

Bekhet, A. B., Zauszniewski, J. A., & Nakhla, W. E. (2008). Happiness: theoretical and empirical consideration. *Nursing Forum,* 43, 12-23.

Bertrand, M., & Mullainathan, S. (2001). Do people mean what they say? Implications for subjective survey data. *American Economic Review*, *91*(2), 67-72.

Blanchflower, D., & Oswald, A. J. (2004). Wellbeing over time in Britain and the USA. *Journal of Public Economics*, *88*, 1359-1386.

Campbell, A., Converse, P., & Rodgers, W. (1976). *The quality of American life*. New York: Russell Sage.

[4] http://www.teindia.nic.in/Files/Reports/CCR/Secondary_Education_Commission_Report.pdf.
[5] http://mhrd.gov.in/rmsa.
[6] Kanyashree Prakalpa is one of its kind initiatives taken by the Government of West Bengal to improve the life and the status of the girls by helping economically backward families with cash. The purpose of this initiative is to uplift those girls who are from poor families and thus can't pursue higher studies due to tough economic conditions.

Chen, P. Y., & Spector, P. E. (1991). Negative affectivity as the underlying cause of correlations between stressors and strains. *Journal of Applied* Psychology, *7*, 398-407.

Chen, W. (2012). How Education Enhances Happiness: Comparison of Mediating Factors in Four East Asian Countries. *Social Indicators Research, 106*(1), 117-131.

Clark, A. E., & Oswald, A. J. (1994). Unhappiness and unemployment. *Economic Journal, 104,* 648-659.

Cuñado J., & Perez de Gracia F. (2012). Does education affect happiness? Evidence for Spain. *Social Indicators Research, 108*(1), 185-196.

Davis, J. A., & Smith, T. W., (1994). *General Social Surveys, 1972 – 1994, Machine-readable data file,* Chicago: National Opinion Research Center (producer), Storrs, CT: The Roper Center for Public Opinion Research.

Diener, E. D., Eunkook M., Lucas, S. R. E., & Smith, H. L. (1999). Subjective Well- Being: Three Decades of Progress. *Psychology Bulletin*, *125*(2), 276-303.

Easterlin, R. A. (1974). *Does Economic Growth Improve the Human Lot? Some empirical evidence*, in nations and households in economic growth: Essays in honor of Moses Abramowitz. Paul A. David and Melvin W. *(pp. 89-125*). Reder, eds. NY: Academic Press.

Frank, R. H. (1999). Luxury fever: why money fails to satisfy in an era of excess. NY: Free Press.

Frey, B. S., & Stutzer, A. (2002). What can economists learn from happiness research? *Journal of Economic Literature, 40*(2), 402-435.

Gerdtham, U. G., & Johannesson, M. (2001). The relationship between happiness, health and socioeconomic factors: results based on Swedish micro data. *Journal of Socio-Economics*, *30*, 553-557.

Glenn, N. D. & Weaver, C. N. (1981). Education's effects on psychological well-being. *Public Opinion Quarterly*, *45*, 22-39.

Graham, C., & Pettinato, S. (2002). *Happiness and hardship, Opportunity and insecurity in new market economies*. Washington DC: Brookings Institution Press.

Helliwell, J. F. (2001). How's Life? Combining Individual and National Variables to Explain Subjective Well-Being, Mimeo, U. British Columbia.

Inglehart, Ronald F. (1999). Trust, well-being and democracy, in democracy and trust. Mark E. Warren, (Ed.) (*pp. 88-120*). Cambridge, UK: Cambridge University Press.

Kahneman, Daniel; Ed. Diener and Norbert Schwarz, (Eds.) (1999). *Well-Being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation.

Knight, J., Song, L., & Gunatilaka, R. (2007). Subjective well-being and its determinants in rural China. Discussion paper series, Number 334, Department of Economics, University of Oxford.

Lakshmanasamy, T. (2010). Are you satisfied with your income? The economics of happiness in India. *Journal of Quantitative Economics, 8*(2), 115-141.

Lane, R. E. (2000). *The Loss of Happiness in Market Economies.* New Haven, London: Yale University Press.

Layard, R. (2005). *Happiness: Lessons from a new science*, New York: Penguin.

McGillivray, M. (2007). Human well-being: issues, concepts and measures. In Mark McGillivray, (Ed.) *Human Well Being: Concept and Measurement*. Basingstoke, UK: Palgrave MacMillan.

McMahon, D. M. (2006). *Happiness: A history*. New York, NY: Atlantic Monthly Press.

Michalos, A. C. (1991). Global Report on Student Well-Being. Volume 1: Life Satisfaction and Happiness. NY: Springer.

Myers, David G. (1993). The Pursuit of Happiness: Who Is Happy and Why? NY: Avon.

Ng, Yew-Kwang. (1996). Happiness surveys: some comparability issues and an exploratory survey based on just perceivable increments. *Social Indicators Research*, *38*(1), 1-27.

Ng, Yew-Kwang. (1997). A case for happiness, cardinalism, and interpersonal comparability. *Economic Journal*, *107*(445), 1848-1858.

Nomaguchi, K. M., & Milkie, M. A. (2003). Costs and rewards of children: The effects of becoming a parent on adult's lives. *Journal of Marriage and Family, 65*, 356–374.

Nussbaum, M. C. (1986/2001). *The fragility of goodness: Luck and ethics in Greek tragedy and philosophy.* New York, NY: Cambridge University Press.

Oswald, Andrew J. (1997). Happiness and Economic Performance, *Economic Journal*, *107*(445), 1815-1831.

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scales. *Psychological Assessment, 5*, 164- 172.

Ravallion, M., & Lokshin, M. (2001). Identifying welfare effects from subjective questions. *Economica*, *68*, 335-357.

Ravallion, M., & Lokshin, M. (2002). Self-rated economic welfare in Russia. *European Economic Review*, *46*, 1453-1473.

Ryan, R. M., & Deci, E. L. (2001). To be happy or to be self-fulfilled: a review of research on hedonic and eudaimonic well- being, *Ann. Rev. Psych, 52*, 141-166.

Salinas-Jiménez, M. M., Artés, J. Y., & Salinas-Jiménez, J. (2011). Education as a positional good: a life satisfaction approach. *Social Indicators research*, *103*(3), 409-426.

Schwarz, N., & Strack, F. (1999). *Reports of Subjective Well-Being: Judgmental Processes and Their Methodological Implications*, in Kahneman, Diener and Schwarz, op. cit., pp. 61-84.

Shaw, I., & Taplin, S. (2007). Happiness and mental health policy: A sociological critique, *Journal of Mental Health*, *16*(3), 359-373.

Stanca, L. (2012). Suffer the little children: measuring the effects of parenthood on well-being world-wide. *Journal of Economic Behavior & Organization, 81*, 742-750.

Sumngern, C., Azeredod, Z. A. S., & Matos, S. E. (2010). Happiness among the elderly in communities: a study in senior clubs of Chonburi Province, Thailand. *Japan Journal of Nursing Science*, *7*(1), 47 -54.

Veenhoven, R. (1993). *Happiness in Nations: Subjective Appreciation of Life in 56 Nations*, Rotterdam: Erasmus University Press.

Veenhoven, R. (2005). Is life getting better? How long and happily do people live in modern society? *European Psychologist*, *10*(4), 330-343.

Veenhoven, R. (2007). *World Database of Happiness – Trends in Nations*, Rotterdam: Erasmus University, Mimeo.

Veenhoven, R. (2010). Capability and happiness: conceptual difference and reality links. *Journal of Behavioral and Experimental Economics*, *39*(3), 344-350.

Warr, P. B., (1990). The measurement of wellbeing and other aspects of mental health. *Journal of Occupational Psychology. 63,* 193-210.

Wierzbicka, A. (2004). Happiness in cross-linguistic and cross-cultural perspective. *Daedalus*, *133*, 34-43.

Witter, R. A., Okun, M., Stock, W. A., & Haring, M. J. (1984). Education and subjective well-being: a meta-analysis. *Educ Eval. Policy An.*, *6*, 165-173.

Table 1

Percentage of individuals with different happiness levels

	percentage	Happiness level			
		Very low	low	Moderate	high
variables		y=1	y=2	y=3	y=4
All	100	1.6	23.3	49	26
Men	48.8	0.34	24.6	46.8	28.4
Women	51.2	2.93	22.15	51.1	23.78
High Education	20.4	1.2	14.2	54.5	30.1
Med Education	16.7	2	23	60	15
Low Education	62.8	2.1	26	44.3	27.6
Hindu	96.5	1.7	23.1	49.6	25.6
Other religion	3.5	0.6	28	33.3	38.1
married	24.2	0.6	16	54.5	28.9
unmarried	75.8	2.2	25.5	47.2	25.1

Table 2

Partial correlation of happiness with all explanatory variables

variables	Correlation Coefficient	Level of Significance
family income	0.1571 ***	0.000
surrounding poverty	0.0034	0.934
education _academic degree	0.0892**	0.030
education_tackle sadness	0.0932 **	0.023
education_opportunity	0.1276***	0.002
education _ derive pleasure	0.0243	0.554
Education_ academic records	0.0153	0.710

Note: *** (1% significance level), ** (5% significance level)

Table 3

Regression result and Marginal effects of ordered logit model

variables	**Value of coefficients with sign**	**Marginal effects (Happiness score= 4)**
family income	0**.173***** (0.000)	**0.020*** (0.001)**
surrounding poverty	0.009 (0.891)	0.001 (0.891)
education _academic degree	**0.205** (0.044)**	**0.024** (0.05)**
education_tackle sadness	**0.137**** (**0.016**)	**0.016** (0.022)**
education_opportunity	**0.176***** (**0.005**)	**0.020*** (0.008)**
education _ derive pleasure	0.037 (0.501)	0.004 (0.503)
Education_ academic records	0.033 (0.604)	0.004 (0.605)
Log likelihood =	556.10626	-
LR chi2(7)	48.01	-
Prob > chi2	0.000	-
Pseudo R2	0.0414	-
/cut1	-3.065	-
/cut2	0.645	-
/cut3	3.707	-
/cut4	8.264	-
Observation	599	-

Note: Figures in brackets are p values