



This paper is a draft submission to

# **Inequality**—Measurement, trends, impacts, and policies

5–6 September 2014 Helsinki, Finland

This is a draft version of a conference paper submitted for presentation at UNU-WIDER's conference, held in Helsinki on 5–6 September 2014. This is not a formal publication of UNU-WIDER and may reflect work-in-progress.

THIS DRAFT IS NOT TO BE CITED, QUOTED OR ATTRIBUTED WITHOUT PERMISSION FROM AUTHOR(S).

Hayford M.Ayerakwa<sup>1</sup> & Robert D.Osei<sup>2</sup> & Isaac Osei-Akoto<sup>3</sup>

August 2013

Corresponding Author: ayerakwa@gmail.com

JEL Classification: D04, I38,

Key Words: Happiness, Poor Households, Rural Ghana

<sup>&</sup>lt;sup>1</sup> Department of Agricultural Economics and Agribusiness, University of Ghana, Legon <sup>2</sup> Institute of Statistical, Social and Economic Research, (ISSER), University of Ghana, Legon

<sup>&</sup>lt;sup>3</sup> Institute of Statistical, Social and Economic Research, (ISSER), University of Ghana, Legon

# 1. Background

The concept of happiness has become a subject of interest to many social science researchers. Every person in life desires some level of inner fulfillment and this could come as a result of many factors including socio economic factors. These factors have been the subject of contention among economists and psychologists for some time now about what truly influences happiness in life!

Many scholars have argued that, the search for happiness is the ultimate goal of human action. In other words, man exists in order to be happy in life. For instance, in his first book, *Ethics*, Aristotle identified happiness as the chief and final good and inquired more about the nature of human happiness. There is therefore a general agreement among thoughtful people that happiness is the final end of human activity. This consensus has resulted in a considerable research and writing on life about happiness which is one measure of the quality of life of an individual and of societies.

It is a well-documented fact that one single factor may not be able to influence happiness in its entirety. As a result, many scholars have examined the individual relationships between various demographic, sociological, psychological and behavioural characteristics and self-assessments of happiness. Different authors have established that income, education, marriage, social participation and positive feelings all have a direct correlation with happiness (D.C Shin and D.M Johnson (1978)

The concept of happiness is sometimes used interchangeably with the term subjective wellbeing. The concept of subjective well-being or happiness comprises the scientific analysis of how people evaluate their lives—both at the moment and for longer periods such as for the past year. These evaluations include people's emotional reactions to events, their moods, and judgments they form about their life satisfaction, fulfillment, and satisfaction with domains such as marriage and work (Diener et al., 2003).

In recent years, there has been a substantial increase in empirical research into self-assessment of happiness. There are a number of theoretical traditions that have contributed to our understanding of happiness or subjective well-being. Early subjective well-being researchers focused on identifying the external conditions that lead to satisfying lives. For example, in his influential article entitled "Correlates of Avowed Happiness," Wilson (1967) catalogued the various demographic factors that were related to subjective well-being measures. Yet after decades of research, psychologists came to realize that external factors often have only a modest impact on wellbeing reports (Diener et al. 1999). According to Diener et al, demographic factors such as health, income, educational background, and marital status account for only a small amount of the variance in well-being measures. They rather argue that happiness or subjective well-being is fairly stable over time, that it rebounds after major life events, and that it is often strongly correlated with stable personality traits. Thus, many researchers have turned their

attention towards understanding the relations between personality and happiness (Diener et al. 2003).

An early review of the literature nearly four decades ago profiled the happy person as 'young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person with high self-esteem, job morale and modest aspirations, of either sex and of a wide range of intelligence' (Wilson 1967, p.294, quoted by Diener et al. 1999). A more recent review of many subsequent studies in the US and Europe concluded that people who are married, white, better educated, employed, but not middle-aged and have higher incomes are happier (Oswald, 1997).

The field of happiness or subjective well-being has witnessed the formation of two relatively distinct, yet overlapping, perspectives and paradigms for empirical inquiry into well-being that revolve around two distinct philosophies. The first of these can be broadly labelled hedonism (Kahneman et al 1999) and reflects the view that wellbeing consists of pleasure or happiness. The second view is known as the hedonic view and state that well-being consists of more than just happiness. It lies instead in the actualization of human potentials. This view has been called eudaimonism (Waterman 1993), conveying the belief that well-being consists of fulfilling or realizing one's daemon or true nature. The two traditions—hedonism and eudaimonism—are founded on distinct views of human nature and of what constitutes a good society. Accordingly, they ask different questions concerning how developmental and social processes relate to well-being, and they implicitly or explicitly prescribe different approaches to the enterprise of living (Ryan and Deci, 2001).

The Hedonism view taught that the goal of life is to experience the maximum amount of pleasure, and that happiness is the totality of one's hedonic moments. They argue that happiness lies in the successful pursuit of our human appetites, and believed that the pursuit of sensation and pleasure is the ultimate goal of life. Indeed, the predominant view among hedonic psychologists is that well-being consists of subjective happiness and concerns the experience of pleasure versus displeasure broadly construed to include all judgments about the good/bad elements of life (Richard M. Ryan and Edward L. Deci, 2001).

The eudaimonism view on the other hand argue that true happiness is found in the expression of virtue—that is, in doing what is worth doing. They argue that optimal well-being requires distinguishing between those needs (desires) that are only subjectively felt and whose satisfaction leads to momentary pleasure, and those needs that are rooted in human nature and whose realization is conducive to human growth and produces well-being mood (Ryan and Deci, 2001). Eudaimonic theories maintain that not all desires—not all outcomes that a person might value—would yield well-being when achieved. Even though they are pleasure producing, some outcomes are not good for people and would not promote wellness. Thus, from the eudaimonic

perspective, subjective happiness cannot be equated with well-being mood (Ryan and Deci, 2001).

A large part of philosophy has been concerned with defining what a good and happy life is. Similar efforts have been made by psychologists and economists, who have dealt with what particular ingredients and circumstances make people happy or unhappy. But there has certainly not been any consensus as to what happiness is or what influence happiness in life. What are the factors that make people happier or unhappier than others? This is a crucial question because it helps us to understand how and to what extent the situation can be improved. Even when the factors have been identified, does this general concensus apply to both the rich and the poor? This paper thus seeks to explore the influencing factors that make people considered to be extremely poor happy in life.

## 2. Literature Review

Income has been seen as one of the factors that influences happiness in life. A relationship between income and happiness has been well documented in the literature. The question however has been whether or not persons with higher income at a given point in time are happier than those with low income; whether an increase in income over time raises happiness level and whether persons in rich countries are happier than their counterparts in poor countries. Frey and Stutzer (2002) argue that persons with higher income have more opportunities to achieve what they desire: in particular, they can buy more material goods and services and also have a higher status in society. Higher income therefore can potentially yield higher utility in life.

On average, results from different parts of the world suggest that happiness is found to be higher among the rich than the poor but raising everyone's income does not guarantee happiness. (Blanchflower and Oswald 2000; Easterlin1995; 2001; Di Tella et al., 2001; Frey and Stutzer 2000)

Another factor that influences happiness in life is health. Health is considered an important factor in the determination of happiness in the literature, especially among the aged. Willits and Crider (1988) concluded after studying 1,650 individuals aged 50-55 that health satisfaction was the strongest predictor of overall satisfaction. Sickness is often associated with displeasure or pain, so the presence of illness might directly affect happiness negatively.

The direction of causation underlying this correlation remains somewhat controversial. For instance some people with poor health have reported high happiness relative to others who have good health.

It has also been established in literature that, individuals who are unemployed show significantly lower measures of happiness (Clark, 2003). Helliwell and Putnam (2004) conclude that unemployment is a strong negative predictor of happiness, substantially stronger than can be

accounted for by the implied loss of income. Unemployment is thus likely to represent much more than a loss of income, perhaps reflecting the loss of workplace social capital as well as increases in family stress and individual loss of self-esteem (Helliwell andPutnam, 2004).

Many other studies from different countries have affirmed the conclusion that experiencing unemployment make people very unhappy (Bjorklund and Eriksson 1998; Blanchflower and Oswald 2000; Korpi 1997; Ravallion and Lokshin 2001; Darity and Goldsmith 1996). In their study for Britain, Clark and Oswald (1994) summarize their result as "joblessness depressed well-being more than any other single characteristic, including important negative ones such as divorce and separation."

Data from national and international studies on the determinants of life satisfaction, happiness and self-assessed health status reveal that, education remains what might be referred to as an instrumental variable, being associated with higher levels of subjective well-being by simple correlations, but the effects tend to drop out (especially in equations in which health status is included) for higher levels of education in more fully specified models. Education improves health and thus indirectly improves subjective well-being, but net of that effect (and of the other factors); education appears to have no direct impact on subjective well-being (Helliwell and Putnam, 2004).

Belonging to a faith based association can potentially bring some level of happiness to people. Most members in such groups are assured of some happiness beyond the present day life and this sometimes urges people to forget about their current pain and rather focus on the ultimate. Some of these faith groups also uphold good societal morals of life that in turn help members to live a peaceful and healthy life.

For example, belonging to churches is a source of happiness for several reasons. The main one is the close social support reported by many church members, some of whom say that their church friends are closer than their other friends (Argyle, 1996). Moberg and Taves (1965) found that the strongest effect of church on happiness was for individuals who were old, single, retired, or otherwise socially isolated. In addition feeling close to God, and having certainty of beliefs are independent predictors of happiness (Ellison, 1993).

More frequent interactions with other people in both church and community settings tend to increase the extent to which those individuals think that others can be trusted and thereby enhancing their subjective well-being (Helliwell and Putnam, 2004). Church attendance creates a form of relatedness while belief in God provides alternative types of support for an individual's well-being. This has been corroborated by the increasing appreciation within psychology of the fundamental importance of warm, trusting, and supportive interpersonal relationships for wellbeing (Ryan and Deci, 2001).

Social relationships are also found to probably be the greatest single cause of happiness and are important for health too among certain group of people (Argyle, 1997).

Similar findings are found in the works of Douvan and Kulka (1981) where they establish that the married are considerably happier than those in all the single categories with the divorced being the least happy, even less happy than the widowed). This is probably because spouses are a major source of all kinds of satisfaction, instrumental, emotional support, and companionship (Argyle and Furnham, 1983). The married, including the happily and the unhappily married, are overall much happier than those who are not. The main cost of marriage however is when it ends with bereavement and divorce. (Stroebe and Stroebe, 1987).

Diener & Lucas (2000) pointed out that pleasant affection tends to decline with age, but life satisfaction and negative affection do not change with age. Others have found that subjective well-being typically increases, despite evidence that with age comes many challenges and losses (Carstensen 1998; Mroczek & Kolarz 1998).

Helliwell and Putnam (2004) further conclude from a global study that overall life satisfaction is slightly higher among males than females (6.84 compared with 6.73, on the 10-point scale but with variations across countries. According to the study, unlike many other factors in their analysis, gender appears to have no strong and straightforward effect on happiness. The general finding from these gender-specific equations is that the responses of males and females to different events and circumstances are strikingly similar; much more so, for example, than occurs when we model gender differences in the determinants of suicide (Helliwell and Putnam, 2004).

# 3. Data and Methodology

Data for this work was sourced from the second wave of the impact evaluation survey of the Livelihood Empowerment against Poverty (LEAP) collected by the Institute of Statistical, Social and Economic Research (ISSER) in selected districts across the country in 2012. The sample consists of households in the bottom 20 per cent of the extreme poor population according to the Ghana Living Standard Surveys Five (GLSS 5).

Although we acknowledge that there might be instances that an individual may be happy and unhappy in other instances in life, each person was asked to evaluate their level of happiness and conclude whether in their own opinion, they were happy or otherwise. For the purposes of our analysis, we assign the value of one if the individual admits that they are happy in life and zero otherwise. We then introduce the covariates that could potentially influence the happiness level of an individual.

The linear probability model (LPM) is thus employed in our analysis of the factors that could influence happiness among such marginalized group of people in society. The linear probability

model is used because the response probability is linear in parameter  $\beta_{j.}$  In the LPM,  $\beta_{j}$  measures the change in the probability of success when  $x_{j}$  changes, holding other factors constant.

The analytical model used in this paper representing the relationship between a household's happiness and their respective characteristics is shown as:

$$Prob(Y = 1) = ln \left(\frac{P1}{(1 - P1)}\right) = Xi\beta$$

Where  $P_1$  is the probability of being happy,  $X_i$  is a vector of explanatory variables and  $\hat{\beta}$  is the parameter estimates.

## 4. Results

#### **Descriptive Statistics**

The descriptions of selected variables of interest are presented in Table 1. On average, 75 percent of respondents admitted they were generally happy in life; 56 percent indicated they raised different livestock including poultry, goat and sheep. A good proportion also indicated that they own or cultivated a piece of land for crop production in the past season (63%) while more than a third of the respondents had savings either at home or with an institution outside of their homes (45%).

The type of housing an individual lives in may be a function of several factors including income levels. Housing for poor people is often a major challenge as they are often found in dilapidated structures with little or no repairs at all. It is a common practice to see poor people in rural areas living in mud houses with parts of the same structure collapsed. We generally observe that about 78 percent of the poor live in rooms that share a compound with other households. This is a common phenomenon in rural Ghana where the poor is allocated a room in the family house and shares other facilities in the house with different households. In the event that the dwelling is a family house, it is possible to have the entire membership of the house belonging to the same household.

#### Table 1Description of variables

	<b>Proportion/Average</b>
Description	number
Proportion of households who are happy in life	75.4
Proportion of households sharing dwellings	25.7
Average number of rooms available to households	3.0
Proportion of households who worked outside of self	
employed	10.1

Proportion of households raising livestock	56.1
Proportion owing money or goods to other people	25.7
Average number of debts per household	1.0
Proportion of households who paid debts in the past 12 months	5.8
Proportion of household members who are owed money or	
goods	10.4
Average number of monies owed household members	2.0
Proportion of households receiving institutional transfers	38.6
Average number of institutional transfers	1.0
Proportion of households having savings at home or elsewhere	44.9
Average number of savings households have	1.0
Proportion of households operating a plot of land	63.4
Proportion of households with children under seven (7) years	31.4
Type of Dwelling	%
Separate House (Bungallow)	6.4
Semi-Detached House	4.8
Flat (Apartment)	1.6
Rooms (Compound)	77.8
(Rooms) Several Huts/Buildings (Same Compound)	8.5
(Rooms) Several Huts/Buildings (Different compound)	0.9
Other	0.1

One may expect a priori that as individuals age you become less active and the tendency of battling with different aging related illnesses increases. If an individual finds fulfillment as they age, there is a high likelihood that, they would be happy in life and the reverse is also true. The age distribution of household heads by gender is presented in Fgure 1 and later shows how this potentially impacts on their happiness. On average, the average household head is found to be 60 years old. The females were observed to be slightly older (61 years) than their male counterparts (59 years). Majority of the women who are found to be heading their households are either widowed or divorced or separated from their partners.



The marital statuses of heads of households are also examined (Figure 2). For most of the people who head their respective households, the majority were found to be married (41%). It is however important to note that, the combined marital statuses for household heads who are widowed, divorced or separated constitute about 50% of the entire statuses, a situation which possibly could be likened to single parent households. The addition of heads that have never been married to the single parent/guardian category increases the proportion of household heads in our sample with no partners to about 54 per cent.



Marital Status of household heads

It is well established in the literature that social and religious affiliations influence the level of happiness among different groups of people. This is on the basis that, these groups provide a sense of social belongingness as well as provide individuals some amount of spiritual fulfillment based on their faith and encouragement received from the group. We present the distribution of religious affiliations in Figure 3.

We find that more than two thirds of our sample (72.9%) indicates they belong to the Christian faith. That is Catholics, Protestants, Spiritual, Charismatic and other Christian bodies. This is followed closely by the Islamic faith (16.6%); the traditional and other religions (10.6%).





## Description of analytical variables

Happy		Expected
	Variable Description	sıgn
Numb_rooms	Number of rooms available to household dwelling(one room=1)	-
Share_hh	Household shares dwelling with other households=1	-
Employee	A member of the household was employed=1	+
Livestock	Household owns livestock=1	+
Debt	Household has a debt to service=1	-
Paid_loan	Household was able to pay all or part of their debt in the last 12 months=1	+
Credit_hh	a member in the household is owed money or goods=1	+
Savings	Household has savings at home or with an institution=1	+
Operated_plot	Household operated a plot in the past 12 months=1	+
Non_farm	Household operated a non-farm business=1	+
Child_under7	Household has children under seven years=1	+
Headsex	Sex of household head (Female=1)	+
Received		
remittance	Household received remittances (Remittance=1)	
Inst_transfer	Household received institutional transfer in the past 12 months =1	+
Headage	Age of household head	
Headagesq	The square age of household head (age squared)	
Christian	Household head is a Christian (Christian=1)	+
Muslim	Household head is a Muslim (Muslim=1)	+
Marital_status	Marital status of household head(Married=1)	+
Spouse_inhh	Spouse of household head lives in the household=1	+

We employ the logistic distribution analysis in our attempt to examine the factors that influence happiness among the poor. We measure the output variable as a dummy with a respondent taking a value of one when she/he indicates she/he is happy and the value of zero otherwise. The model is found to be significant at the 1percent level and thus indicates that the explanatory variables jointly explain the factors that explain happiness among the poor. The analysis shows that, the number of rooms available to households for use had the likelihood of influencing the happiness level of the poor by about six percent. In other words, households are happier with any additional room available to them. This may be due to the less congestion and some degree of privacy that is enjoyed with the new space.

We also find that households who had some monies or goods to pay to people outside their households are likely to be unhappy by about nine percent. Debt is certainly not pleasant especially when one does not have the means to repay the loan. The thought of the embarrassment that could come to the house in the event that, they are called to service the loan contributes to making them unhappy in life. The situation is further compounded if people refuse to sell or advance credit to these households because they are considered not be credit worthy.

The story changes if the household expects some monies or goods to be paid to them from their creditors. The expectation of having some inflows has the tendency of increasing the happiness level by about eight percent.

Access to agricultural farm lands remains an important livelihood indicator in rural Ghana. We sought to examine the proportion of households who have control of farm plots either as managers or people using the plots to cultivate crops. It also meant the household was responsible for the production decisions on the plot. The results suggest that, households are likely to be happy if they operated an agricultural plot. Operating an agricultural plot would ex ante guarantee certain minimum supply of essential food crops into the household which potentially keeps the family from going hungry and thus making them happier relative to those who do not have access to agricultural land.

For those who operated some form of a non-farm enterprise were found to be happy relative to those without one. The non-farm activity ranged from petty trading to some form of processing of raw materials into finished products that is sold to the public. A key characteristic of these enterprises is the minimal capital requirement that is needed to commence operations. The results from our analysis show a positive influence on the likelihood of making people happy by about seven percent. Operating a non-farm enterprise guaranteed some degree of flow of income into the household and that to a large extent gives them some purchasing power from the profits they make. This gives some form of social prestige and thus increases the tendency of the household to be happy.

Interesting to our findings is the result that shows a negative influence of institutional transfer to happiness. The explanations are varied: In the Ghanaian culture, the less endowed are given some support from community members who are well to do. The poverty profiling and selection onto the government intervention is done at the community level. In like manner disbursement of funds is done at specific time intervals in the community by the department of social welfare. Knowledge of a person being enrolled onto a social safety net pushes potential community members to retreat with their help. Unfortunately though, the flow of funds to beneficiary households from the social welfare department has not been forthcoming. As a result, the plight of these beneficiaries is worsened and that potential reduces their social involvement and prestige and consequently affects their level of happiness in life.

Tactors minuchening happiness and	ong the rurar poor in Onana		
Нарру	Coeff. ( dy/dx)	Std. Err.	P>z
Numb_rooms	0.055**	0.025	0.026
Share_hh	-0.007	0.026	0.786
Employee	0.031	0.033	0.349
Llivestock	0.024	0.024	0.324
Debt	-0.087***	0.028	0.002
Paid_loan	-0.002	0.049	0.973
Credit_hh	0.082**	0.034	0.015
Savings	0.021	0.024	0.365
Operated_plot	0.059**	0.028	0.032
Non_farm	0.074***	0.025	0.003
Child_under7	0.016	0.026	0.537
Headsex	-0.010	0.032	0.748
Received remittance	0.033	0.026	0.214
Inst_transfer	-0.059**	0.024	0.015
Headage	-0.001	0.003	0.853
Headagesq	0.000	0.000	0.928
christian	0.017	0.031	0.577
Muslim	0.062*	0.035	0.074
Marital_status	-0.028	0.035	0.418
Spouse_inhh	0.054	0.041	0.188

Factors influencing happiness among the rural poor in Ghana

Obs=1503; LR chi2 (20)=60.25; Prob>chi2=0.000; Pseudo R2 =0.0359; Log likelihood=-808.685 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### References

- 1. D.C Shin and D.M Johnson (1978). Avowed Happiness as an overall assessment of the quality of life. *Social Indicators Research* 5(1978): 475-492.
- 2. Wilson W. (1967). Correlates of avowed happiness. Psychol. Bull. 67:294-306
- 3. Diener et al. (1999). Personality and subjective well-being. See Kahneman et al.1999, pp. 213–29
- 4. Oswald, Andrew J. (1997). "Happiness and Economic Performance," *Economics Journal*.107:445, pp. 1815-31.
- 5. Kahneman et al (1999). Well-Being: The Foundations of Hedonic Psychology. *New York: Sage Foundation*
- Richard M. Ryan and Edward L. Deci (2001). On happiness and human potentials: A Review of Research on Hedonic and Eudaimonic well-being. *Annual Review Psychology*. 52:141-66
- 7. Diener et al (1998). Subjective well-being and age: an international analysis. *Annual. Review Gerontology. Geriatr.* 17:304–24
- 8. Frey and Stutzer (2002). What Can Economists Learn from Happiness Research? Journal of Economic Literature, Vol. 40, No. 2, pp. 402-435
- 9. Blanchflower, David G. and Andrew J. Oswald (2000). "Well-Being over Time in Britain and the USA," *National Bureau of Economic Research works. Paper* 7487.
- 10. Easterlin, R. A. 1995 Will raising the incomes of all increase the happiness of all? Journal of Economics Behaviour. Org. 27, 35–48
- 11. Di Tella, Rafael; Robert J. MacCulloch and An-drew J. Oswald. 1999. "How Do Macroeconomic Fluctuations Affect Happiness?" mimeo, Harvard Business School.
- 12. Willits, F.K. and Crider, D.M. (1988) Health rating and life satisfaction in the later middle years. *Journal* of *Gerontology*, 43, 172-176
- 13. Okun et al (1984). Health and subjective well-being: a meta- analysis. *International Journal* of *Aging and Human Development*, 19,419-427.
- Berkman, L. & Glass, T. (2000). Social integration, social networks, social support, and health. *In Social epidemiology* (ed.L. Berkman & I. Kawachi), pp. 137–173. *Oxford University Press*.
- 15. Clark, A. E. (2003). Unemployment as a social norm: psychological evidence from panel data. J. Labour Econ. 21, 323–351
- 16. Kawachi, I. & Kennedy, B. (1997). Health and social cohesion: why care about income inequality? Br. Med. J. 314, 1037–1041.
- 17. Kawachi, I. & Berkman, L. (2000).Social cohesion, social capital, and health. In Social epidemiology (ed. L. F. Berkman & I. Kawachi), pp. 174–190. Oxford University Press.
- House, J. S., Robbins, C. & Metzner, H. L. (1982). The association of social relationships and activities with mortality: prospective evidence from the Tecumseh community health study. Am. J. Epidemiol. 116, 123–140

- Farmer, J. E. & Stucky-Ropp, R. 1996 Family transactions and traumatic brain injury. In Recovery after traumatic brain injury (ed. B. P. Uzzell & H. H. Stonnington), pp. 275– 288.Mahwah, NJ: Lawrence Erlbaum
- Roberts, R. E., Kaplan, G. A., Shema, S. J. & Strawbridge, W. J. 1997 Prevalence and correlates of depression in an aging cohort: *the Alameda County study*. J. Gerontology. Bull. Psychol.Sci. Social Sci. 52, 252–258
- 21. Ryff, C. D. & Singer, B. H. (eds.) Emotion, social relationships, and health. Oxford University Press
- Kessler, R. C. & Essex, M. 1997 Marital status and depression: the importance of coping resources. Social Forces 61, 484–507.
- 23. Market Policies and Subjective Well-Being among Swedish Youth," Lab. Econ. 4:2, pp. 125-47.
- 24. Ravallion, Martin and Michael Lokshin. 2001. "Identifying Welfare Effects from Subjective Questions," Economical 68:271, pp. 335-57.
- 25. Comstock, G.W. and Partridge, K.B. (1972). Church attendance and health. *Journal of Chronic Diseases*, 25,665-672
- 26. Jarvis, G.K. and Northcolt, H.C. (1978) Religion and differences to morbidity and mortality. *Social Science and Medicine*, 25, 813-24.
- 27. Argyle, M. (1996). The Social Psychology of Leisure. London: Penguin
- Moberg, D.O. and Taves, M.J. (1965) Church participation and adjustment in old age. In: A.M. Rose and W.A Peterson (Eds.) *Older People and their Social World*. Philadelphia: F.A. Davies.
- 29. Ellison, C.G. (1993) Religious involvement in Black Americans. Social Forces, 74, 1027-1055.
- 30. Headey, B.W., Holmstrom, E.L. and Wearing, A.J. (1985) Models of well-being and illbeing. *Social Indicators Research*, 17,211-234
- 31. Argyle, M. and Lu, L. (1990). The happiness of extraverts. *Personality and Individual Differences*, 11 1011-1017.
- 32. Diener, E., Sandvik, E., Seidlitz, L. and Diener, M. (1993). The relationship between income and subjective well-being: relative or absolute? *Social Indicators Research*, 28, 195-223.
- 33. Veroff, J., Douvan, E. and Kulka, R.A. (1981). *The Inner American*. New York: Basic Books
- 34. Stroebe, W. and Stroebe, M.S. (1987) *Bereavement and Health*. Cambridge: Cambridge University Press.
- 35. Larson, R.W. (1990). The solitary side of life: an examination of the time people spends alone from childhood to old age. *Developmental Review*, 10, 155-83
- 36. Argyle, M. and Furnham, A. (1983) Sources of satisfaction and conflict in long-term relationships. *Journal* of *Marriage and the Family*, 45,481-493.

- 37. Argyle, M. and Henderson, M. (1985). *The* Anatomy of *Relationships*. Harmondsworth: Penguin
- 38. Carter, H. and Glick, P.C. (1970) *Marriage and Divorce: a Social and Economic Study*. Cambridge Mass: Cambridge University Press.
- 39. Costa PT, McCrae RR. (1980). Influence of extraversion and neuroticism on subjective well-being: happy and unhappy people. *J. Personal. Soc. Psychol.* 54:296-308
- 40. DeNeve KM, Cooper H. 1998. The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychol. Bull.* 124:197–229
- 41. Diener E, Lucas RE. 1999. Personality and subjective well-being. See Kahneman et al.1999, pp. 213–29
- 42. Tellegen A. 1985. Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In *Anxiety and the Anxiety Disorders*, ed. AH Tuma, JD Maser, pp. 681–706. Hillsdale, NJ: Erlbaum
- 43. Brunstein JC. 1993. Personal goals and subjective well-being: a longitudinal study. J. Pers.Soc. Psychol. 65:1061–70
- 44. Emmons RA. 1986. Personal strivings: an approach to personality and subjective wellbeing. *Pers. Soc. Psychol.* 51:1058–68
- 45. McGregor I, Little BR. 1998. Personal projects, happiness, and meaning: on doing well and being yourself. *J. Pers. Soc. Psychol*.74:494–512
- 46. Carver CS, Scheier MF. 1999. Themes and issues in the self-regulation of behaviour. In Perspectives on Behavioural Self-Regulation: Advances in Social Cognition, ed. RS Wyer Jr, XII: 1–105. Mahwah, NJ: Erlbaum
- 47. Waterman AS. 1993. Two conceptions of happiness: contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *J.Pers. Soc. Psychol.* 64:678–91
- 48. Campbell, A. (1981). The Sense of Well-Being in America. New York McGraw-Hill