

## What Are People Saying When They Report They Are Happy Or Life Satisfied

Americo Baptista<sup>1\*</sup>, Cristina Camilo<sup>1</sup>, Marta Becalli<sup>1</sup>, Isabel Santos<sup>1</sup>, Jose de Almeida Brites<sup>1</sup>, Joana Brites Rosa<sup>1</sup> and Enrique G. Fernández-Abascal<sup>2</sup>

<sup>1</sup> Department of Clinical and Health Psychology, University Lusofona de Humanidades e Tecnologias, Lisbon (Portugal).

<sup>2</sup> University Nacional de Educación a Distancia (Spain).

**Título:** A qué se refiere la gente cuando informa que son felices o que están satisfechos con la vida.

**Resumen:** El estudio de la felicidad estuvo dominado con el modelo de bienestar subjetivo. Con la llegada de la psicología positiva entran en juego los modelos de felicidad hedónicos y eudaimónico, pero los principales estudios siguen utilizando medidas de un solo elemento de satisfacción con la vida o de felicidad. En este trabajo estudiamos la asociación entre la satisfacción con la vida y la felicidad, medida cada una de ellas con un solo ítem mediante una representación gráfica de una escalera y de un termómetro, y los tres modelos de felicidad: el bienestar subjetivo, la felicidad eudaimónica y la felicidad hedonista. Los resultados mostraron que el bienestar subjetivo fue el principal predictor de la satisfacción con la vida y el modelo hedónico también predijo en menor grado esa misma variable. Para el caso de la felicidad los predictores fueron los mismos, pero en orden inverso, el predictor principal fue el modelo hedónico y en un menor grado por el bienestar subjetivo. Contrariamente a nuestra hipótesis, la perspectiva de felicidad eudaimónica no es un predictor en ninguno de los modelos. Estos resultados subrayan la importancia de la interacción entre una perspectiva cognitiva o una hedónica en el estudio de la felicidad.

**Palabras clave:** felicidad, satisfacción con la vida, bienestar subjetivo.

**Abstract:** The study of happiness was dominated with the model of subjective well-being. With the advent of positive psychology the eudaimonic and hedonic models entered the field, but major surveys continue to use single-item measures of life satisfaction or happiness. We study the associations between life satisfaction and happiness, measured single-items with a graphic representation of a ladder and a thermometer, and three models of happiness: the subjective well-being, the eudaimonic and hedonic. The results showed that subjective well-being was the main predictor of life satisfaction and hedonic model also predicted a small amount of this variable. For happiness the predictors were the same but in reversed order, the main predictor was the hedonic model and a small variance was explained by subjective well-being. Contrary to our hypothesis the eudaimonic perspective of happiness was not a predictor in none of the models. These results underline the importance of the interaction between a cognitive or appraisal perspective and the hedonic perspectives for the study of happiness.

**Key words:** happiness, life satisfaction, subjective well-being.

### Introduction

Interest in the measurement of happiness and life satisfaction has prospered with the recent advent of positive psychology (Seligman, & Csikszentmihalyi, 2000), even though some measures were used well before the beginning this new area of research. Cantril (1965) introduced a measurement of life satisfaction with an eleven point single item, graphically represented as a ladder, anchored at the lower end with the phrase "Worst possible life for you" and at the top with the phrase "Best possible life for you". Participants were asked, "Where on the ladder do you stand at the present time?" This measure has been largely used, namely in the Gallup surveys (Deaton, 2008), in the Health Behaviour in School-aged Children (HBSC) study, in HBSC member countries across Europe and North America (Levin & Currie, 2014) and in the World Happiness Report (Helliwell, Layard, & Sachs, 2012; 2013; 2015). Bradburn (1969) introduced a different measurement approach regarding life satisfaction called the Affect Balance Scale for the measurement of positive and negative affect. Another perspective was adopted by Andrews and Withey (1976) who created the Delighted-Terrible Scale, which asked the respondents "How do you feel about your life as a whole?". A seven-point response scale was provided, ranging from "terrible" to "delighted".

Well ahead of his time, Fordyce (1977) introduced a measurement of happiness with a single eleven-point item, which also included the average percent of the time participant felt happy, unhappy, and in a neutral mood. The next development was made by Diener, Emmons, Larsen, and Griffin (1985) who developed a five item scale for the measurement of life satisfaction. These authors considered life satisfaction as the overall cognitive judgmental process of diverse areas of their life. A global measure of happiness, the 29 item Oxford Happiness Inventory, was formulated as a broad measure of personal happiness (Argyle, Martin, & Crossland, 1989). Posteriorly revised, the number of items was reduced, and it was renamed as the Oxford Happiness Questionnaire (Hills, & Argyle, 2002). Other measures have been developed, like the Ryff Scales of Psychological Well-Being (Ryff, 1989), which was also reviewed, reduced (Abbott, Ploubidis, Huppert, Kuh, & Croudace, 2010) and converted in an interview format (Fava, & Tomba, 2009), or the Subjective Happiness Scale (Lyubomirsky, & Lepper, 1999).

Even though in the past psychology was mainly concerned with the measurement and conditions that elicit and modify negative emotions and psychopathology, this perspective changed when positive psychology entered the field. Happiness, for ancient philosophers, was considered the highest good and the essential motivation for all human actions. Although in the past it was rarely studied, it became a respected and major subject for various research programs (Aknin, Dunn, & Norton, 2012; Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Gilovich, Kumar, & Jamol, 2015; Kashdan, Biswas-Diener, & King, 2008; Keyes, & Annas, 2009; Lyubomirsky, Sheldon, & Schkade, 2005; Pe-

**\* Dirección para correspondencia [Correspondence address]:**

Americo Baptista. Department of Clinical and Health Psychology, University Lusofona de Humanidades e Tecnologias, Av. Campo Grande 376, Lisbon, 1749 - 024 Lisboa (Portugal).

E-mail: [americo.baptista@sapo.pt](mailto:americo.baptista@sapo.pt)

terson, Park, & Seligman, 2005; Ryan, Huta, & Deci, 2008; Seligman, & Csikszentmihalyi, 2000; Veenhoven, 2010; Vittersø, & Søholt 2011). A similar trend was also observed in other disciplines, like neuroscience (Berridge, & Kringelbach, 2011) or economy (Frey, & Stutzer, 2002).

Three main perspectives dominated the study of happiness. The first one is represented by the work Diener (1984; 1994; 1995; 2000; 2012; 2013), which it was present even before the appearance of positive psychology and persisted afterwards. It is a cognitive-emotional perspective, designed subjective well-being and considered as being composed by number of different separable components: global appraisal or judgment about one's life and fulfillment, satisfaction with work, family, capacity for experiencing positive affect, pleasant emotions and moods, and low levels of negative affect or experiencing few unpleasant emotions and moods. The cognitive component is measured by the Satisfaction With Life Scale (Diener et al., 1985) and the emotional components by a list of positive and negative emotions that cover the broad array of emotional life (Diener, Smith, & Fujita, 1995; Kuppens, Realo, & Diener, 2008). Research showed that the cognitive component could be discriminated from the positive and negative affectivity, but also from the related constructs of self-esteem, and optimism (Lucas, Diener, & Suh, 1996). The second perspective is the hedonic, related to the emotional content of happiness or how individuals feel about their lives. It was first defined by Kahneman (1999) as the study of what makes experiences and life pleasant or unpleasant. Happiness is about maximizing the rewards, optimizing the events associated with pleasure and minimizing the events associated with displeasure or pain. According to this perspective policies that improve the frequency of good experiences and reduce the incidence of the bad ones should be actively pursued. This hedonic approach typically emphasized the importance of engaging in the pursuit of positive emotional experiences, such as pleasure and comfort, and is experienced by an increasing frequency of pleasurable moments or feelings of moment-to-moment pleasure and to get the pleasures one wants (Fredrickson, 2001; 2013; Kahneman, 2000). The third perspective about happiness is the eudaimonic. It emphasizes the concepts of personal growth and meaning in life and also includes concepts as purpose, autonomy, competence, self-realization, self-acceptance, authenticity, values congruence, and social connectedness. Happiness comes from the feelings that one's life is satisfying, worthwhile, and meaningful, that the individual is moving toward self-realization in terms of the development of one's unique individual potentials and furthering one's purpose in living (Huta & Ryan, 2010; Ryan & Deci, 2001; Waterman, 2008). These three perspectives represent related and overlapped conceptions of the same phenomenon, but they also could be reliably distinguishable aspects of happiness. Whereas subjective well-being is mainly the global cognitive judgment and affective experience about of one's life and fulfillment, the hedonic perspective empha-

sizes pleasure, and the eudaimonic perspective emphasizes meaning and virtue.

Happiness research had major societal implications and suggested a shift from a materialistic view of society to a perspective of a society based on values (Fleurbay, 2009). A commission created in the beginning of 2008, on an initiative of the French government, recommended adding subjective well-being measures to existing indicators of societal progress such as gross domestic product. Many countries and international organizations began to collect self-reported well-being or happiness data in order to measure societal progress and guide policymaking (Diener, Kesebir, & Lucas, 2008; Krueger, 2009; O'Donnell, Deaton, Durand, Alpern, & Layard, 2014; Stiglitz, Sen, & Fitoussi, 2009). This change of focus to subjective measures for public policy purposes could have potentially vast societal implications so that well-being ought to be the ultimate goal upon which economic, health, and social policies are to be built (Diener, & Seligman, 2004). These developments in happiness conceptualizations were accompanied with several new developments in measurement of the phenomena (Krueger, & Stone, 2014). Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi, & Biswas-Diener (2010) introduced two new short scales, the Scale of Positive and Negative Experience which measures, according to the hedonic perspective, the full range of emotions and feelings, and the Flourishing Scale which, according to an eudaimonic perspective, measures the positive relationships, feelings of competence, and the meaning and purpose in life, also validated for other languages (Silva, & Caetano, 2013). Huta and Ryan (2010) also develop a different self-report scale to measure both the hedonic and the eudaimonic conceptions of happiness, the Hedonic and Eudaimonic Motives for Activities scale, also validated for other languages (Asano, Igarashi, & Tsukamoto, 2014).

Despite these developments in the conceptualization of life satisfaction and happiness, these psychological constructs continued to be measured by different research groups with the use of single item global scales (Abdel-Khalek, 2006; Baird, Lucas, & Donnellan, 2010; Benjamin, Heffetz, Kimball, & Rees-Jones 2012; Boyce, & Wood, 2011; Deaton, 2008; Di Tella, Haisken-De New, & MacCulloch, 2010; Dolan, & Metcalfe, 2012; Kahneman, & Krueger 2006; Helliwell, & Huang, 2013; Layard, 2010; Mitchell, Frank, Harris, Dodds, & Danforth, 2013; Oswald, & Wu, 2010; 2011; Stone, Schwartz, Broderick, & Deaton, 2010; Wojcik, & Ditto, 2014). Even though life satisfaction and happiness are sometimes used as synonyms, they have different meanings. Whereas life satisfaction refers to the person thoughts, to a cognitive judgment or evaluation of life circumstances, happiness, on the other hand, seems to refer to the hedonic tone or the quality of emotional life experience. The report of life satisfaction seem to be overall evaluation of the life of the subject, the report of happiness can be thought of as relating to affect or to experiential matters (Diener, Ng, Harter, & Arora, 2010; Kahneman, & Deaton, 2010). Since the reports of life satisfaction and happiness

seem to be qualitative different experiences, they should have different antecedent life circumstances. The aim of this research was to study the possible different relationships between the two global reports of the most widely used, life satisfaction or happiness, and the three models of happiness, the subjective well-being or cognitive, the hedonic and the eudemonic. It was specifically predicted that life satisfaction will be predicted by subjective well-being and flourishing models, whereas happiness will be predicted by the hedonic model.

## Method

### Participants

One sample of 409 participants, 138 males and 271 females, was used in this study. Males had a mean age of 25.38 ( $SD = 6.90$ ) years and 14.57 ( $SD = 2.56$ ) years of school. Females had a mean age of 25.41 ( $SD = 8.47$ ) and 14.68 ( $SD = 2.28$ ) years of school. No statistically significant differences between the sexes were found for age,  $t(407) = -0.04$ ,  $p = .965$ , or for years of school,  $t(407) = -0.41$ ,  $p = .679$ .

### Measures

All measures were administered in following order: first the two one item global measures of life satisfaction and happiness, followed by the measures of subjective well-being, hedonic happiness and eudemonic happiness,

**Life satisfaction.** Was assessed with Cantril's Self-Anchoring Striving Scale (1965). Participants were presented an 11-step ladder, where the bottom step was marked with 0, *the worst life possible*, and the last step with a 10, *the best possible life*. Participants were asked "If you imagine your own life last month, where do you stand on the ladder, from the worst possible to best possible life you can imagine? On what step of the ladder is your life?" This measure is frequently used in surveys as the Socio Economic German Panel or the Gallup's World Poll (Deaton 2008; Diener, & Tay, 2015; Headey, Muffels, & Wagner, 2010; Morrison, Tay, & Diener, 2011).

**Happiness.** It was assessed with the Happiness Thermometer, an 11-point scale for the assessment of happiness during the last month, graphically represented by a thermometer that ranged from 0, *extremely unhappy*, represented by a sad schematic face, to 5, *neutral*, represented by a neutral schematic face, to 10, *extremely happy*, represented by a happy schematic face. A similar measure showed good test-retest reliability, .86 over a 2-week interval, .67 over a 4-month interval, significant convergent validity coefficients with measures of personality characteristics associated with happiness and also showed the capacity to distinguish happy from unhappy persons (Fordyce, 1977; 1988).

**Subjective well-being.** It was measured via the Satisfaction With Life Scale (SWLS, Diener et al., 1985), which assesses the global subjective judgment of life satisfaction dur-

ing last month. Participants indicated, for example, how satisfied they were with their lives and how close their life was to their ideal life. The SWLS consists of five items, e. g., "In most ways my life is close to my ideal", which the participants scored using a 7-point scale, ranging from 1, *strongly disagree*, to 7, *strongly agree*. A coefficient alpha of .85 and a test-retest stability coefficient over one month interval of .84 was reported for the scale (Pavot, & Diener, 1993; 2008; Pavot, Diener, Colvin, & Sandvik, 1991). The scale was validated for the Portuguese population in a sample of adolescents (Neto, 1993).

**Eudaimonic happiness.** It was measured via the Flourishing Scale (FS, Diener et al., 2010), which consisted of eight items, related to aspects of positive human functioning, as positive relationships, feelings of competence, and having meaning and purpose in life. Participants were asked to rate each item referring to the last month, e. g., "I lead a purposeful and meaningful life", on a 7-point scale ranging from 1, *Strongly disagree*, to 7, *Strongly agree*. A coefficient alpha of 0.87 was reported. The scale was validated to the Portuguese population by Silva and Caetano (2013).

**Hedonic happiness.** It was measured with the Scale of Positive and Negative Experience (SPANE, Diener et al., 2010), composed by twelve items, six items relate to positive experiences, e. g., *Good*, and six concerning negative experiences, e. g., *Bad*. Each item was scored on a 5-point scale, referring to the last month, ranging from 1, *very rarely or never*, to 5, *very often or always*. The positive and negative scales are computed separately, resulting on one score for positive feelings and other score for negative feelings. The two scores could also be combined by subtracting the negative score from the positive score forming the affect balance. In this study only the affect balance was computed. The coefficients alpha reports for positive feelings were .87, for negative feelings were 0.81, and 0.89 for the affect balance. The SPANE was validated to the Portuguese population by Silva and Caetano (2013).

### Statistical Analysis

We used SPSS (version 20) for all data analyses. The  $t$  tests were made to find differences between the sexes. Correlations were reported as Pearson product moment correlations (two-tailed) for all continuous variables.

To explore the predictive value of the life satisfaction and happiness dimensions as the independent variables, stepwise regression analysis were performed, with the subjective well-being, eudaimonic and hedonic happiness as the dependent variables.

Moreover, for the path analysis was used the LISREL program (version 9.2).

## Results

A comparison between sexes showed no differences for life satisfaction,  $M = 6.43$ ,  $SD = 1.59$  for males, and  $M = 6.54$ ,

*SD* = 1.79 for females,  $t(407) = -.76, p = .10$ , happiness,  $M = 6.37, SD = 1.82$  for males, and  $M = 6.53, SD = 2.05$  for females,  $t(407) = -.63, p = .18$  subjective well-being,  $M = 23.06, SD = 5.19$  for males, and  $M = 23.66, SD = 5.35$  for females,  $t(407) = -1.08, p = .70$ , eudaimonic happiness,  $M = 39.97, SD = 4.36$  for males, and  $M = 39.30, SD = 4.98$  for females,  $t(407) = -.66, p = .19$  and hedonic happiness,  $M = 8.95, SD = 6.41$  for males, and  $M = 8.09, SD = 6.43$  for females,  $t(407) = 1.28, p = .76$ .

All variables were highly intercorrelated, as shown in Table 1. The correlation between life satisfaction and happiness were  $r=.77, p < .001$ , and the correlations between life satisfaction and subjective well-being, eudaimonic and hedonic happiness were respectively .60, .42, and .57 (all  $ps < .001$ ). The correlations between happiness and subjective well-being, eudaimonic and hedonic happiness were respectively .52, .42, and .62 (all  $ps < .001$ ). Using as independent variables the subjective well-being, eudaimonic and hedonic happiness, life satisfaction and happiness were predicted in two regression equations with the stepwise method.

**Table 1.** Correlations among the study variables.

	1	2	3	4	5
1. Life satisfaction					
2. Happiness	.77**				
3. Subjective well-being	.52**	.60**			
4. Eudaimonic happiness	.42**	.42**	.59**		
5. Hedonic happiness	.62**	.57**	.53**	.51**	

Note. \*\*  $p < .001$ .

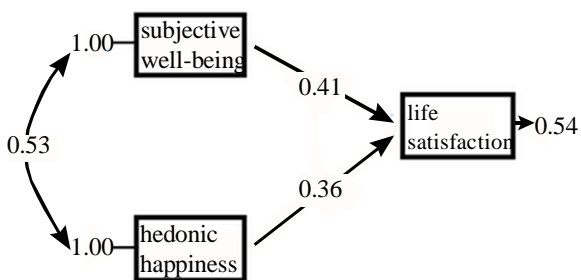
The model showed that life satisfaction was significantly predicted by the subjective well-being,  $R^2 = .36, \beta = .41, t = 9.60, p = .000$  and by hedonic happiness,  $R^2 = .08, \beta = .47, t = 8.12, p = .000$  (see Table 2).

**Table 2.** Multiple regression, stepwise method, for life satisfaction.

Dependent variable	Step	Independent variables	R <sup>2</sup>	AdjBeta	t
Life satisfaction	1	Subjective well-being	.36	.41	9.69***
	2	Hedonic happiness	.44	.35	8.12***

Note. \*\*\*  $p < .001$ .

Based on the above results the path model tested was as follows: the subjective well-being and hedonic happiness was hypothesized to influence the life satisfaction. Obtaining the results are shown in Figure 1.



**Figure 1.** Path analysis for life satisfaction.

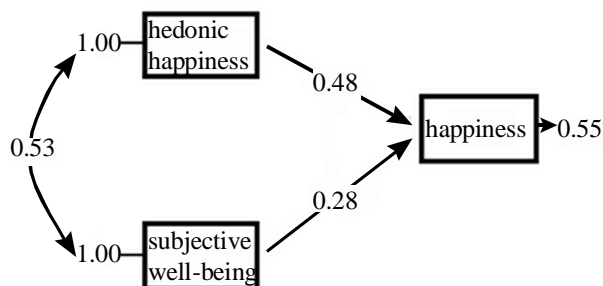
Whereas happiness was significantly predicted by hedonic happiness,  $R^2 = .38, \beta = .47, t = 10.93, p = .000$  and subjective well-being,  $R^2 = .05, \beta = .27, t = 6.33, p = .000$  (see Table 3).

**Table 3.** Multiple regression, stepwise method, for happiness.

Dependent variable	Step	Independent variables	R <sup>2</sup>	AdjBeta	t
Happiness	1	Hedonic happiness	.38	.47	10.93***
	2	Subjective well-being	.44	.27	6.33***

Note. \*\*\*  $p < .001$ .

In this case the path model tested was as follows: the subjective well-being and hedonic happiness was hypothesized to influence the happiness. The results are shown in Figure 2.



**Figure 2.** Path analysis for happiness.

Eudaimonic happiness was not a predictor for life satisfaction or for happiness.

## Discussion

The global reports of life satisfaction and happiness in the last month measured by one item scales, the ladder of life satisfaction and the happiness thermometer, were highly correlated and were predicted by the same variables, but in different ways. Even though the reports of life satisfaction and happiness were correlated with all three perspectives of happiness analyzed in this study, cognitive or subjective well-being, eudemonic and hedonic, the regression analysis showed the different strength of these predictors. Life satisfaction was mainly predicted by the subjective well-being, the cognitive global evaluation of life, 36%, and, to a lesser extent, by hedonic model of happiness, or the positive emotionality, 8%. The happiness reports, on the other end, were mainly predicted by the hedonic model, 38%, and to a lesser extent, 6%, by the subjective well-being or cognitive perspective. In the present study the eudaimonic perspective, assessed by Flourishing Scale (Diener et al., 2010), did not contribute for the explanation of the variance of life satisfaction or happiness. As in other studies no differences between sexes were found for one-item measures or the happiness as well as the measures related to the happiness models (Bartels, & Boomsma, 2009; Lucas, & Gohm, 2000). A finding which is evident in the first major review on subjec-

tive well-being (Wilson, 1967), but small differences, favoring the females, were reported in Graham and Chattopadhyay (2013) and in the last World Happiness Report (Fortin, Helliwell, & Wang, 2015), despite a general trend for females experiencing more negative emotions, namely anxiety and depression.

In this study, both global reports were presented to the participants in a similar way by a question and a by a graphic representation, the ladder for life satisfaction and the thermometer for happiness, which helped to the understanding of the measured concepts. Although their reliability is lower than multiple-item measures, they are proven to be reliable and valid instruments (Diener, Inglehart, & Tay, 2013; Dolan, Peasgood, & White, 2008; Kahneman, & Krueger, 2006; Kobau, & Snizek, 2010; Krueger, & Schkade, 2008; Larsen, Diener, & Emmons, 1985; Lucas & Donnellan, 2007; Oswald, & Wu 2010; Pavot, & Diener, 1993), and continued to dominate large scale surveys (Helliwell, Layard, & Sachs, 2012; 2013; 2015). The graphical presentation of the scales increases the comprehension level, in particular for participants with lower literary qualifications.

It seems that the two one-item global measures tapped two different concepts of the phenomena. Whereas life satisfaction, measured by the Cantril' ladder, is a more cognitive or an appraisal measure of life satisfaction, which also includes people's emotional responses, the happiness thermometer is the opposite, i.e., it is a more affective measure, reflecting the hedonic tone and the pleasures of life, and relating in a small degree with the cognitive aspects of life satisfaction. We can think about this as two continuous rating scales, one cognitive and the other emotional. The Cantril' ladder can be defined as composed by scoring higher in the cognitive scale and lower on the emotional one, whereas the happiness thermometer is the reverse, scoring higher on the emotional and lower on the cognitive scale. Helliwell (2011) suggested that life evaluations could be differentiated from mood assessments in two principal ways. Life evaluation is more stable than mood, which had more fluctuations, and

life evaluations are more closely related to life circumstances than happiness. A cognitive based measure, the Cantril' ladder, should be more attuned to the circumstances of life than happiness. For instance Kahneman and Deaton (2010) were able to report an analysis of more than 450,000 responses to the Gallup-Healthways Well-Being Index, a daily survey of 1,000 US residents conducted by the Gallup Organization that showed that life satisfaction, measured by the Cantril' ladder scale, and the emotional well-being, measured by the reports of positive feelings, have different correlates. They concluded that high income was related to life satisfaction but did not maintain for happiness, whereas low income was related both to low life evaluation and low emotional well-being. As suggested also by Diener, Kahneman, Tov and Arora (2010) and Oishi and Diener (2014) the different reports of life satisfaction and happiness reflect different conditions. The cognitive report of life evaluation reflects the prevalent economic conditions; whereas the affective report of happiness reflect the conditions of life, for instance the free time.

The lack of the relationship found between the eudaimonic model and the reports life satisfaction was unexpected, since the cognitive component of subjective well-being, life satisfaction, was considered to overlap with eudaimonia (Kashdan, Biswas-Diener, & King, 2008). Also it is accepted that integrating the eudaimonic and hedonic perspectives should lead to a more comprehensive understanding of well-being and of the pathways to wellbeing. This integration between the two models is referred as flourishing (Keyes 2007; Henderson, & Knight, 2012; Huppert, & So, 2009). The results of the present study underscore another perspective for the happiness research, the interaction between the hedonic and cognitive or appraisal models of happiness.

The results of present research are limited to the young adult sample used in this study, the generalization of the findings should be investigated namely in child and older samples.

## References

- Abdel-Khalek, A. M. (2006). Measuring happiness with a single-item scale. *Social Behavior and Personality*, *34*, 139-150. doi: 10.2224/sbp.2006.34.2.139
- Abbott, R. A., Ploubidis, G. B., Huppert, F. A., Kuh, D., & Croudace, T. J. (2010). An evaluation of the precision of the measurement of Ryff' psychological well-being scales in a population sample. *Social Indicators Research*, *97*, 357-733. doi: 10.1007/s11205-009-9506-x
- Aknin, L. B., Dunn, E. W., & Norton, M. I. (2012). Happiness runs in a circular motion: Evidence for a positive feedback loop between prosocial spending and happiness. *Journal of Happiness Studies*, *13*, 347-355. doi: 10.1007/s10902-011-9267-5
- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being*. New York: Plenum Press.
- Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In J. P. Forgas, & J. M. Innes (Eds.), *Recent advances in social psychology: An international perspective* (pp. 189-203). North-Holland: Elsevier.
- Asano, R., Igarashi, T., & Tsukamoto, S. (2014). The Hedonic and Eudaimonic Motives for Activities (HEMA) in Japan: the pursuit of well-being. *The Japanese Journal of Psychology*, *85*, 69-79. doi: 10.4992/jpsy.85.69
- Bartels, M., & Boomsma, D. I. (2009). Born to be happy? The etiology of subjective well-being. *Behavior Genetics*, *39*, 605-615. doi: 10.1007/s10519-009-9294-8
- Baird, B. M., Lucas, R. E., & Donnellan, M. B. (2010). Life satisfaction across the lifespan: Findings from two nationally representative panel studies. *Social Indicators Research*, *99*, 183-203. doi: 10.1007/s11205-010-9584-9
- Benjamin, D. J., Heffetz, O., Kimball, M. S., & Rees-Jones, A. (2012). What do you think would make you happier? What do you think you would choose? *American Economic Review*, *5*, 2083-2110. doi: 10.1257/aer.102.5.2083
- Berridge, K. C., & Kringelbach, M. L. (2011). Building a neuroscience of pleasure and well-being. *Psychology of Well-Being: Theory, Research and Practice*, *1*, 1-3. doi:10.1186/2211-1522-1-3

- Boyce, C. J., & Wood, A. M. (2011). Personality prior to disability determines adaptation: agreeable individuals recover lost life satisfaction faster and more completely. *Psychological Science*, 22, 1397-1402. doi: 10.1177/0956797611421790
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine
- Cantril, H. (1965). *The pattern of human concerns*. New Brunswick, NJ: Rutgers University Press.
- Deaton, A. (2008). Income, aging, health and wellbeing around the world: Evidence from the Gallup World Poll. *Journal of Economic Perspectives*, 22, 53-72. doi: 10.1257/jep.22.2.53
- Delle Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., & Wissing, M. (2011). The eudaimonic and hedonic components of happiness: Qualitative and quantitative findings. *Social Indicators Research*, 100, 185-207. http://dx.doi.org/10.1007/s11205-010-9632-5
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575. doi:10.1037/0033-2909.95.3.542
- Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research*, 31, 103-157. doi: 10.1007/BF01207052
- Diener, E. (1995). A value based index for measuring national quality of life. *Social Indicators Research*, 36, 107-127. doi: 10.1007/BF01079721
- Diener, E. (2000). Subjective well-being: The science of happiness, and a proposal for a national index. *American Psychologist*, 55, 34-43. doi:10.1037/0003-066X.55.1.34
- Diener, E. (2012). New findings and future directions for subjective well-being research. *American Psychologist*, 67, 590-597. doi: 10.1037/a0029541
- Diener, E. (2013). The remarkable changes in the science of subjective well-being. *Perspectives on Psychological Science*, 8, 663-666. doi: 10.1177/1745691613507583
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75. doi: 10.1207/s15327752jpa4901\_13
- Diener, E., Kesebir, P., & Lucas, R. (2008). Benefits of accounts of well-being — for societies and for psychological science. *Applied Psychology*, 57, 37-53. doi:10.1111/j.1464-0597.2008.00353.x
- Diener, E., Ng, W., Harter, J., & Arora, R. (2010). Wealth and happiness across the world: Material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. *Journal of Personality and Social Psychology*, 99, 52-61. doi: 10.1037/a0018066
- Diener, E., Inglehart, R., & Tay, L. (2013). Theory and validity of life satisfaction scales. *Social Indicators Research*, 112, 497-527. doi: 10.1007/s11205-012-0076-y.
- Diener, E., & Seligman, M. E. P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, 5, 1-31. doi:10.1111/j.0963-7214.2004.00501001.x
- Diener, E., Smith, H., & Fujita, F. (1995). The personality structure of affect. *Journal of Personality and Social Psychology*, 69, 130-141. http://dx.doi.org/10.1037/0022-3514.69.1.130
- Diener, E., & Tay, L. (2015). Subjective well-being and human welfare around the world as reflected in the Gallup World Poll. *International Journal of Psychology*, 50, 135-149. doi: 10.1002/ijop.12136
- Diener, E., Kahneman, D., Tov, W., & Arora, R. (2010). Income's association with judgments of life versus feelings. In E. Diener, J. Helliwell, & D. Kahneman (Eds.), *International differences in well-being* (pp. 3-15). New York, NY: Oxford University Press.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess Flourishing and Positive and Negative Feelings. *Social Indicators Research*, 97, 143-156. doi: 10.1007/s11205-009-9493-y
- Di Tella, R., Haisken-De New, J., MacCulloch, R. (2010). Happiness adaptation to income and to status in an individual panel. *Journal of Economic Behavior & Organization*, 76, 834-852. doi:10.1016/j.jebo.2010.09.016
- Dolan, P., & Metcalfe, R. (2012). Measuring subjective wellbeing: recommendations on measures for use by national governments. *Journal of Social Policy*, 41, 409-427. doi: 10.1017/S0047279411000833
- Dolan, P., Peasegood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29, 94-122. doi: 10.1016/j.joep.2007.09.001.
- Fava, G. A., & Tomba, E. (2009). Increasing psychological well-being and resilience by psychotherapeutic methods. *Journal of Personality*, 77, 1903-1934. doi: 10.1111/j.1467-6494.2009.00604.x
- Fleurbaey, M. (2009). Beyond GDP: The quest for a measure of social welfare. *Journal of Economic Literature*, 47, 1029-1075. doi: 10.1257/jel.47.4.1029
- Fordyce, M. W. (1977). Development of a program to increase personal happiness. *Journal of Counseling Psychology*, 24, 511-521. http://dx.doi.org/10.1037/0022-0167.24.6.511
- Fordyce, M. W. (1988). A review of the research on the happiness measures: A sixty second index of happiness and mental health. *Social Research Indicators*, 20, 355-381. doi: 10.1007/BF00302333
- Fortin, N., Helliwell, J. F., & Wang, S. (2015). How does subjective well-being vary around the world by gender and age? In J. Helliwell, R. Layard, & J. Sachs (Eds.), *World Happiness Report* (pp. 42-75). New York: Earth Institute, Columbia University.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218-226. http://dx.doi.org/10.1037/0003-066x.56.3.218
- Fredrickson, B. L. (2013). Positive emotions broaden and build. In E. A. Plant & P. G. Devine (Eds.), *Advances on Experimental Social Psychology*, 47, 1-53. Burlington: Academic Press.
- Frey, B. S., & Stutzer, A. (2002). *Happiness and economics: How the economy and institutions affect human well-being*. Oxford: Princeton University Press.
- Graham, C., & Chattopadhyay, S. (2013). Gender and well-being around the world. *International Journal of Happiness and Development*, 1, 212 - 232. doi: 10.1504/IJHD.2013.055648
- Gilovich, T., Kumar, A., & Jampol, L. (2015). A wonderful life: Experiential consumption and the pursuit of happiness. *Journal of Consumer Psychology*, 25, 152-165. doi:10.1016/j.jcps.2014.08.004
- Headey, B. W., Muffels, R. J. A., & Wagner, G. G. (2010). Long-running German panel survey shows that personal and economic choices, not just genes, matter for happiness. *Proceedings of the National Academy of Sciences*, 107, 17922-17926. doi: 10.1073/pnas.1008612107
- Helliwell, J. (2011) How Can subjective well-being be improved? In F. Gorbet & A. Sharpe (Eds.), *New Directions for Intelligent Government in Canada* (pp. 283-304), Ottawa: Centre for the Study of Living Standards.
- Helliwell, J., & Huang, H. (2013). Comparing the happiness effects of real and on-line friends. *PLoS ONE*, 8: e72754. doi:10.1371/journal.pone.0072754
- Helliwell, J., Layard, R., & Sachs J. (2012). *World Happiness Report*. New York: Earth Institute, Columbia University.
- Helliwell, J., Layard, R., & Sachs J. (2013). *World Happiness Report*. New York: Earth Institute, Columbia University.
- Helliwell, J., Layard, R., & Sachs J. (2015). *World Happiness Report*. New York: Earth Institute, Columbia University.
- Henderson, L. W., & Knight, T. (2012). Integrating the hedonic and eudaimonic perspectives to more comprehensively understand wellbeing and pathways to wellbeing. *International Journal of Wellbeing*, 2, 196-221. doi:10.5502/ijw.v2i3.3
- Henderson, L. W., Knight, T., & Richardson, B. (2013). An exploration of the well-being benefits of hedonic and eudaimonic behaviour. *The Journal of Positive Psychology*, 8, 322-336. doi:10.1080/17439760.2013.803596
- Hills, P., & Argyle, M. (2002). The Oxford Happiness Questionnaire: A compact scale for the measurement of psychological well-being. *Personality and Individual Differences*, 33, 1073-1082. http://dx.doi.org/10.1016/S0191-8869(01)00213-6
- Huppert, F. A., & So, T. T. (2013). Flourishing across Europe: Application of a new conceptual framework for defining well-being. *Social Indicators Research*, 110, 837-861. doi: 10.1007/s11205-011-9966-7
- Huta, V., & Ryan, R. M. (2010). Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives. *Journal of Happiness Studies*, 11, 735-762. http://dx.doi.org/10.1007/s10902-009-9171-4
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener & N. Schwarz (Eds.), *Well-being: Foundations of hedonic psychology* (pp. 3-25). New York: Russell Sage Foundation Press.
- Kahneman, D. (2000). Experienced utility and objective happiness: A moment based approach. In D. Kahneman & A. Tversky (Eds.), *Choices, values and frames* (pp. 673-692). New York: Russell Sage Foundation.

- Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences of the United States of America*, *107*, 16489-16493. doi: 10.1073/pnas.1011492107
- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives*, *20*, 3-24. doi: 10.1257/089533006776526030
- Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: the costs of distinguishing between hedonics and eudaimonia. *The Journal of Positive Psychology*, *3*, 219 - 233. doi: 10.1080/17439760802303044
- Keys, C. L. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist*, *62*(2), 95-108. <http://dx.doi.org/10.1037/0003-066x.62.2.95>
- Keys, C. L., & Annas, J. (2009). Feeling good and functioning well: distinctive concepts in ancient philosophy and contemporary science. *The Journal of Positive Psychology*, *4*, 197-201. <http://dx.doi.org/10.1080/17439760902844228>
- Kobau, R., & Sniezek, J. (2010). Well-being assessment: An evaluation of well-being scales for public health and population estimates of well-being among US adults. *Applied Psychology: Health and Well-Being*, *2*, 272-297. doi:10.1111/j.1758-0854.2010.01035.x.
- Krueger, A. B. (2009). *Measuring the subjective well-being of nations: National accounts of time use and well-being*. Chicago, IL: The University of Chicago Press.
- Krueger, A. B., & Schkade, D. A. (2008). The reliability of subjective well-being measures. *Journal of Public Economics*, *92*, 1833-1845. doi:10.1016/j.jpubeco.2007.12.015
- Krueger, A. B., & Stone, A. A. (2014). Progress in measuring subjective well-being: Moving toward national indicators and policy evaluations. *Science*, *346*, 42-43. doi: 10.1126/science.1256392
- Kuppens, P., Realo, A., & Diener, E. (2008). The role of positive and negative emotions in life satisfaction judgment across nations. *Journal of Personality and Social Psychology*, *95*, 66-75. <http://dx.doi.org/10.1037/0022-3514.95.1.66>
- Larsen, R. J., Diener, E., & Emmons, R. A. (1985). An evaluation of subjective well-being measures. *Social Indicators Research*, *17*, 1-17. doi: 10.1007/BF00354108
- Layard, R. (2010). Measuring subjective well-being. *Science*, *327*, 534-535. doi: 10.1126/science.1186315
- Levin, K. A., & Currie, C. (2014). Reliability and validity of an adapted version of the Cantril Ladder for use with adolescent samples. *Social Indicators Research*, *119*, 1047-1063. doi: 10.1007/s11205-013-0507-4
- Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology*, *71*, 616-628. <http://dx.doi.org/10.1037/0022-3514.71.3.616>
- Lucas, R. E., & Donnellan, M. B. (2007). How stable is happiness? Using the STARTS model to estimate the stability of life satisfaction. *Journal of Research in Personality*, *41*, 1091-1098. doi: 10.1016/j.jrp.2006.11.005
- Lucas, R. E., & Gohm, C. L. (2000). Age and sex differences in subjective well-being across cultures. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 291-317). Cambridge: The MIT Press.
- Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, *46*, 137-155. doi: 10.1023/A:1006824100041
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, *9*, 111-131. <http://dx.doi.org/10.1037/1089-2680.9.2.111>
- Morrison, M., Tay, L., & Diener, E. (2011). Subjective well-being and national satisfaction: Findings from a worldwide survey. *Psychological Science*, *22*, 166-171. doi: 10.1177/10956797610396224
- Mitchell, L., Frank, M. R., Harris, K. D., Dodds, P. S., & Danforth, C. M. (2013). The geography of happiness: Connecting Twitter sentiment and expression, demographics, and objective characteristics of place. *PLoS ONE*, *8*, e64417. doi:10.1371/journal.pone.0064417
- Neto, F. (1993). The Satisfaction with Life Scale: Psychometrics properties in an adolescent sample. *Journal of Youth and Adolescence*, *22*, 125-134. doi: 10.1007/BF01536648
- O'Donnell, G., Deaton, A., Durand, M., Alpern, D., & Layard, R. (2014). *Well-being and policy*. Legatum Institute
- Oishi, S., & Diener, E. (2014). Can and should happiness be a policy goal? *Policy Insights from Behavioral and Brain Sciences*, *1*, 195-203. doi: 10.1177/2372732214548427
- Oswald, A. J., & Wu, S. (2010). Objective confirmation of subjective measures of human well-being: Evidence from the U.S.A. *Science*, *327*, 576-579. doi: 10.1126/science.1180606
- Oswald, A. J., & Wu, S. (2011). Well-being across America. *Review of Economics and Statistics*, *93*, 1118-1134. doi: 10.1162/rest\_a\_00133
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment*, *5*, 164-172. doi: <http://dx.doi.org/10.1037/1040-3590.5.2.164>
- Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *Journal of Positive Psychology*, *3*, 137-152. doi: 10.1080/17439760701756946
- Pavot, W. G., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, *57*, 149-161. doi: 10.1207/s15327752jpa5701\_17
- Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, *6*, 25-41. doi: 10.1007/s10902-004-1278-z
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, *52*, 141-166. <http://dx.doi.org/10.1146/annurev.psych.52.1.141>
- Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, *9*, 139-170. doi: 10.1007/s10902-006-9023-4
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality & Social Psychology*, *6*, 1069-1081. <http://dx.doi.org/10.1037/0022-3514.57.6.1069>
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*, 5-14. doi: 10.1037//0003-066X.55.1.5
- Silva, A. J., & Caetano, A. (2013). Validation of the Flourishing Scale and Scale of Positive and Negative Experience in Portugal. *Social Indicators Research*, *110*, 469-478. doi: 10.1007/s11205-011-9938-y
- Stiglitz, J., Sen, A., & Fitoussi, J.-P. (2009). *Report by the commission on the measurement of economic and social progress*. Paris: OECD. Retrieved from [http://www.stiglitz-sen-fitoussi.fr/documents/rapport\\_anglais.pdf](http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf)
- Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of Sciences U S A*, *107*, 9985-9990. doi: 10.1073/pnas.1003744107
- Veenhoven, R. (2010). Greater happiness for a greater number. Is that possible and desirable? *Journal of Happiness Studies*, *11*, 605-629. doi: 10.1007/s10902-010-9204-z
- Vitterso, J., & Soholt, Y. (2011). Life satisfaction goes with pleasure and personal growth goes with interest: Further arguments for separating hedonic and eudaimonic well-being. *The Journal of Positive Psychology*, *6*, 326-335. <http://dx.doi.org/10.1080/17439760.2011.584548>
- Waterman, A. S. (2008). Reconsidering happiness: A eudaimonist' perspective. *The Journal of Positive Psychology*, *3*, 234-252. <http://dx.doi.org/10.1080/17439760802303002>
- Wilson, W. (1967). Correlates of avowed happiness. *Psychological Bulletin*, *67*, 279-301. <http://dx.doi.org/10.1037/h0024431>
- Wojcik, S. P., & Ditto, P. H. (2014). Motivated happiness: Self-enhancement inflates self-reported subjective well-being. *Social Psychological and Personality Science*, *5*, 185-194. doi: 10.1177/1948550614534699

(Article received: 18-06-2015; revised: 09-08-2015; accepted: 30-09-2015)