

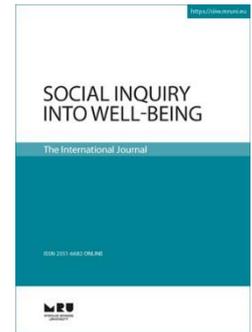


MYKOLAS ROMERIS  
UNIVERSITY

<http://siw.mruni.eu>  
2017, Vol. 3, No. 1

DOI:10.13165/SIIW-17-3-1-02

## Social Inquiry into Well-Being



E-ISSN 2351-6682

# Happiness-Increasing Strategies and Personality Traits as Predictors of Happiness in Croatian Youth

Andreja Brajša-Žganec, Sanja Ivanušević Grgas, Ana Petak

\* Corresponding author email address:

Andreja Brajša-Žganec

E-mail: [andreja.brajsa.zganec@pilar.hr](mailto:andreja.brajsa.zganec@pilar.hr)

### Abstract

The present study investigates some of the key elements of long-term happiness model. The main goal of this study was to examine the relationship between happiness-increasing strategies, personality traits and happiness level on the sample of Croatian students. A sample of 573 undergraduate students aged between 18 to 22 years, completed the List of Happiness-Increasing Strategies, Subjective Happiness Scale and the Croatian version of International Personality Item Pool – IPIP50. The results showed that females are generally happier than males. Comparing the frequency of use of happiness-increasing strategies between genders, females reported more often use of almost all happiness-increasing strategies (*Social Affiliation, Cognitive-Behavioural Interventions, Partying and Clubbing, Instrumental Goal Pursuit, Passive Leisure, Active Leisure and Religion*), whereas males reported more often use of *Sport and Hobby*. Results of hierarchical multiple regression analyses showed that gender, personality traits and strategies explain for 51.4% of the happiness variance. Gender explained about 3% of happiness variance, personality traits in the second step of variables explained for 41.1% of the happiness variance, and happiness-increasing strategies in the third step explained an additional 8% of the happiness variance. When we reversed the set of variables entered in the model, happiness-increasing strategies in the second step explained for 25% of the happiness variance and personality traits in the third step explained an additional 26% of the happiness variance. Regardless of what set of variables was entered in the second or third step, results showed the same significant variables in the final regression analysis: Extraversion, Emotional Stability, Party and Clubbing and Cognitive-Behavioural Interventions. The findings showed the importance of personal traits as well as happiness-increasing strategies in predicting happiness among Croatian students.

**Keywords:** happiness, personality traits, happiness-increasing strategies

### Introduction

The impact of personal happiness on different aspects of life has been clearly recognized in contemporary scientific literature. When exploring happiness, most researchers rely on one of the basic theories of happiness focused on hedonic or eudaimonic approach. The hedonic approach centres around the experience of pleasure, positive emotions and moods, and defines happiness as subjective well-being (Diener, 2000). The alternative, eudaimonic approach,

implies that a person can choose pleasant activities, but these activities are not a direct path to well-being. According to the eudaimonic perspective, happiness is not equal to well-being and is achieved only through engagement in activities consistent with our values (Waterman, 1993). The present study explores happiness within the hedonic approach and defines happiness as a relatively stable level of subjective well-being and positive experiences over a limited period of time from 3 to 6 months (Lyubomirsky, 2001).

Happiness has become a focus of an increasing number of researches, and their findings point to the connection between happiness and various favourable circumstances and outcomes. According to some authors (e.g. Lyubomirsky, King and Diener, 2005, Boehm, Lyubomirsky and Sheldon, 2011), happiness is crucial for the adaptation and positive mental health, and is associated with numerous benefits for the individual, family and community. This is supported by the findings indicating that happy people get married more frequently, get divorced less frequently, have more friends, stronger social support and richer social interactions than less happy people (Harker and Keltner, 2001). Happy people are more active and have more energy (Csikszentmihalyi & Wong, 1991), they successfully handle stress (Fredrickson & Joiner, 2002) and are more satisfied with their jobs (Bowling, Eschleman and Wang, 2010). Additionally, according to some authors, they are likely to live longer than people who perceive themselves as less happy (Lelkes, 2008).

Based on their interest in the possibility of influencing the level of happiness, Lyubomirsky, Sheldon and Schkade (2005) have created a model of long-term happiness, which defines the happiness-predicting factors and deals with the issues of potential happiness-increasing mechanisms. According to these authors, happiness can be predicted on the basis of genetic inheritance (personality traits and temperament), current circumstances (demographic, geographic and contextual variables) and individual's intentional activities (behavioural, cognitive and conative). Other studies confirm that approach to a certain extent. Happiness was proved to be associated with personality traits (DeNeve and Cooper, 1998, Brajša-Žganec, Ivanović, Kaliterna-Lipovčan, 2011). Extraverts and emotionally stable individuals consider themselves happier than introverts and neurotic individuals, but happiness is also positively associated with personality dimensions of agreeableness and conscientiousness (Costa and McCrae, 1980). According to Weiss, Bates and Luciano (2008) happiness is associated with the combination of high extraversion and conscientiousness and low neuroticism. Kendler, Garden, Gatz and Pedersen (2007) compared a relationship between happiness and personality traits to comorbidity in psychopathology. Their results suggest that personality traits help an individual to restore subjective well-being in stressful situations (Weiss et al, 2008).

However, results from studies on the relationship between life circumstances and levels of happiness are inconsistent. While some researchers have not found any associations between happiness and gender (Wood, Rhodes, and Whelan, 1989), the other authors (Myers and Diener, 1995, Eddington and Shuman, 2006) determined that women tend to consider themselves happier than men. In contrast to gender, the association between race and happiness was not found (Diener, Sandvik, Seidlitz and Diener, 1993). Therefore, it is not a surprising finding that all life circumstances taken together predict only 8 to 15% variance of happiness (Argyl, 1999). There is no doubt that life circumstances are important contributors to happiness and life satisfaction. Lyubomirsky and colleagues (2005) explain the low percentage with the fast adaptation to new life circumstances due to the human ability to adapt to constant

and repeating stimuli. However, some authors (Doherty and Kelly, 2010) found that circumstances related to the community, household and personal beliefs can explain 22.5% of the happiness variance among Europeans. Regardless of the power of predicting life circumstances, it is clear that people cannot focus on seeking life satisfaction if their basic needs are not being fulfilled (Lyubomirsky et al., 2005). Therefore, life circumstances, as well as demographic variables, surely have a role in predicting happiness. Considering the small contribution of life circumstances to happiness and the evidence for interaction between gender and personality in predicting behavior (Huszczo and Endres, 2013), the present study selected only gender as a predictor of happiness among the demographic group of variables.

Unlike life circumstances, which are beyond an individual's control, people can choose the way they respond to situations and circumstances which affected their life. Behaviours and activities that people choose to maintain or which increase their levels of happiness proved to be good predictors of happiness level (Lyubomirsky et al., 2005). Tkach and Lyubomirsky (2006) called these behaviours "happiness-increasing strategies". There are several categories of happiness-increasing strategies (*Affiliation, Partying, Mental Control, Goal Pursuit, Passive Leisure, Active Leisure, Religion and Direct Attempts*) and in addition to the control of personality traits, these strategies explain for 16% of the happiness variance (Tkach and Lyubomirsky, 2006).

However, it was shown that intentional behaviours undertaken in order to increase happiness do not have the same impact in all cultures. Boehm, Lyubomirsky and Sheldon (2011) established that intentional behaviour has a greater impact on increasing the happiness level among Anglo-Americans compared to Americans of Asian descent. Among several explanations of these findings (Boehm et al., 2011) the most prominent are the effect of social pressure and a sense of personal responsibility for our own happiness, which are more common in individualistic cultures.

Due to inconsistent results of previous studies and detected cultural differences, the main goal of this study is to examine some of the key elements of the long-term happiness model by investigating the relationship between personality traits, happiness-increasing strategies and happiness levels on the sample of Croatian students. Based on prior research, we hypothesized that both happiness-increasing strategies and personality traits predict happiness.

## Methods

### Participants

Data were collected from a sample of 573 undergraduate students aged between 18 and 22 years, during their regular lecture attendance at the University of Zagreb. The study included 281 females and 286 males, and six participants have not specified their gender. Among participants, 55% were first-year students, 35% of them were second-year students and 10% were third or higher year students. A data were collected during the year 2007.

## Measures

The participants completed the self-report measures assessing their happiness, happiness-increasing strategies and personality traits.

**Happiness.** The Subjective Happiness Scale (SHS), created by Lyubomirsky and Lepper (1997), was used for measuring happiness. The scale represents the individuals' subjective assessment on whether they find themselves happy or unhappy. The scale consists of four items and participants recorded their answers on a 7-point Likert scale. Lyubomirsky and Lepper (1997) found single factor structure of the scale, a satisfying construct validity, high internal reliability (Cronbach's alpha = 0.79-0.94) and the stability of results over time among 14 different samples. In the present study, similar results were obtained. Principal components analysis showed that all items were highly saturated with one factor (0.78-0.90). The internal reliability (Cronbach's alpha = 0.86) was satisfactory.

**Happiness-Increasing Strategies.** The happiness-increasing strategies were measured using the List of Happiness-Increasing Strategies (Tkach and Lyubomirsky, 2006). The scale consists of 53 items and participants recorded their answers on a 7-point Likert scale. A total of 53 statements, representing 8 groups of happiness-increasing strategies, were translated into the Croatian language (Ivanušević, 2007). The eight groups of happiness-increasing strategies are Social Affiliation, Partying and Clubbing, Mental Control, Instrumental Goal Pursuit, Passive Leisure and Active Leisure, Religion, and Direct Attempts. A principal component analysis was conducted with 8 factors set as an extraction criterion. In further elaboration, the items with low loadings that disrupt the factor structure (less than 0.40), or contribute less to the overall result when the variability of the viewed particles is removed from the total score, were rejected. The following items were excluded from the final analysis: *cleaning, sense of humour, trying to become a better person, thinking about what is wrong in my life, going to the movies alone, trying not to think about being unhappy and taking illegal drugs*. By using these criteria, 46 items with satisfying correlations with total score were retained. Due to the expectation that factors would correlate with each other, a principal component analysis with *direct oblimin* rotation was conducted.

Our results confirmed the expected factor structure to a limited extent. Four factors are equal to those obtained in the original research. The first one was called "*Goal Pursuit*" and represents a tendency for achieving potentials. The second factor is "*Party and Clubbing*" and represents seeking satisfaction through various forms of entertainment. The expected factors "Mental Control" and "Direct Attempts" were merged into a new factor called "*Cognitive-Behavioural Interventions*". It is a combination of cognitive and behavioural strategies which can change the way a person behaves, feels and thinks about the world. It is interesting to note that the original factor "Mental Control" was negatively correlated with happiness, but in the present study the new factor is positively correlated with happiness level. The expected factor "Passive Leisure" was divided into *Passive Leisure* and *Active Leisure*. The factor "*Passive*

*Leisure*" is saturated with items that represent activities like watching television, surfing on the Internet and sleeping, in which person is passively exposed to the content. Original "Active Leisure" factor was replaced by a new factor "Sports and Hobby". The factors called "*Religion*", "*Sport and Hobby*" and "*Affiliation*" represent set of activities that persons can also use as a strategy to increase their happiness. According to a performed factor analysis, majority of strategies from the original scale were retained: Goal Pursuit (7 items), Party and Clubbing (6 items), Religion (2 items), Affiliation (5 items), Passive Leisure (5 items), Active Leisure (7 items), and two new strategies were included: Cognitive-Behavioural Interventions (10 items) and Sport and Hobby (4 items). Cronbach's alpha was 0.87 for "*Goal Pursuit*", 0.77 for "*Party and Clubbing*", 0.83 for "*Cognitive-Behavioural Interventions*", 0.65 for "*Passive Leisure*", 0.9 for "*Religion*", 0.77 for "*Sport and Hobby*", 0.82 for "*Affiliation*" and 0.69 for *Active Leisure*.

**Personality.** Personality traits were measured by the Croatian version of Goldberg IPIP50 (International Personality Item Pool; Mlačić and Goldberg, 2007). IPIP is based on a Big Five personality model which describes personality using five dimensions: Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Intellect. Each dimension was represented by 10 items and participants recorded their answers on the Likert scale (1 - "Completely untrue", 5 - "Completely right"). In previous studies, a shortened version of the questionnaire showed good psychometric characteristics and a clear five-factor structure (Mlačić and Goldberg, 2007). In this study we have confirmed a clear factor structure for IPIP of 5 factors that taken together explain for a total of 46% variance. Cronbach's alpha calculated from this study indicates a good reliability of factor dimensions. This coefficient was 0.88 for Extraversion, 0.81 for Agreeableness, 0.82 for Conscientiousness, 0.90 for Emotional Stability and 0.78 for Intellect.

## Results

Average scores on SHS presented in Table 1 showed that participants generally considered themselves happy, but women considered themselves a bit happier than men ( $M_{\text{women}} = 5.36$ ,  $M_{\text{men}} = 4.93$ ,  $t = 4.52$ ,  $p < 0.01$ ). Significant gender differences were also recorded in the frequency of using happiness-increasing strategies. It has been shown that women use almost all happiness-increasing strategies more likely than men, except strategy "Sport and Hobby" which is the only strategy used more frequently among men ( $M_{\text{women}} = 4.08$ ,  $M_{\text{men}} = 4.39$ ,  $t = -2.78$ ,  $p < 0.01$ ).

The correlations between SHS, the List of Happiness-Increasing Strategies and IPIP50 (Table 2) showed that all variables included in the analysis are interrelated. The strongest relationship is seen between happiness level and Cognitive-Behavioural Interventions ( $r = 0.53$ ,  $p < 0.01$ ), and the weakest between happiness level and Religion ( $r = 0.14$ ,  $p < 0.01$ ). Among the personality traits, Emotional Stability has the highest correlation with happiness level ( $r = 0.55$ ,  $p < 0.01$ ), and the lowest correlation is found between happiness level and Intellect ( $r = 0.12$ ,  $p < 0.01$ ). Almost all happiness-increasing strategies are inter-correlated within the range from  $r = 0.09$  to  $r = 0.49$ , except for Religion and

Party and Clubbing, which are not significantly related. As regards personality traits and happiness-increasing

strategies, the highest correlation is found between Agreeableness and Social Affiliation ( $r = 0.49, p < 0.01$ ).

**Table 1.** Descriptive statistics and t-test results comparing females to males on SHS and List of Happiness-increasing Strategies

	All		Females	Males	t
	Mean (SD)	95% CI	Mean (SD)	Mean (SD)	
Happiness level	5.14 (1.11)	5.05-5.24	5.36 (1.08)	4.93 (1.17)	4.52**
<b>Strategies:</b>					
Social Affiliation	5.40 (0.92)	5.33-5.48	5.73 (0.71)	5.07 (0.99)	9.24**
Party and Clubbing	4.63 (1.00)	4.55-4.72	4.89 (0.93)	4.37 (1.01)	6.41**
Cog.-Beh. Interventions	4.58 (0.71)	4.52-4.64	4.73 (0.65)	4.43 (0.73)	5.42**
Goal Pursuit	4.82 (1.07)	4.72-4.91	4.87 (1.01)	4.64 (1.09)	4.07**
Passive Leisure	4.22 (1.12)	4.13-4.32	4.40 (1.12)	4.04 (1.09)	3.77**
Sport and Hobby	4.24 (1.33)	4.11-4.33	4.08 (1.33)	4.39 (1.32)	-2.78**
Active Leisure	3.91 (1.07)	3.51-3.68	4.36 (0.92)	3.42 (0.99)	12.67**
Religion	3.47 (2.03)	3.30-3.64	3.89 (2.05)	3.07 (1.93)	4.89**

Note: \*\* $p < 0.01$

In order to determine the overall contribution of gender, personality traits and strategies in predicting happiness, two

hierarchical regression analyses were conducted. The results are shown in Tables 3 and 4.

**Table 2.** Correlation of happiness, personality traits, happiness-increasing strategies and gender ( $*p < 0.05$ ;  $**p < 0.01$ ) ( $E =$  Extraversion,  $A =$  Agreeableness,  $C =$  Conscientiousness,  $ES =$  Emotional Stability,  $I =$  Intellect)

	Gender	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Happiness	-.19**													
2. Social Affiliation	-.36**	.39**												
3. Party and Clubbing	-.26**	.33**	.46**											
4. Cog.-beh. Int.	-.22**	.53**	.49**	.36**										
5. Goal pursuit	-.17**	.27**	.34**	.15**	.38**									
6. Passive leisure	-.16**	.17**	.26**	.32**	.20**	.18**								
7. Sport and Hobby	.12**	.23**	.22**	.13**	.31**	.41**	.12**							
8. Active Leisure	-.47**	.24**	.43**	.32**	.44**	.42**	.27**	.25**						
9. Religion	-.20**	.14**	.24**	.05	.24**	.19**	.09*	.14**	.23**					
10. E	-.19**	.44**	.43**	.47**	.32**	.15**	.23**	.20**	.31**	.05				
11. A	-.47**	.24**	.49**	.26**	.36**	.24**	.12**	.06	.45**	.28**	.32**			
12. C	-.12**	.17**	.17**	-.04	.20**	.41**	.02	.22**	.17**	.20**	.11**	.16**		
13. ES	.18**	.55**	.10*	.06	.34**	.09*	-.01	.20**	.02	-.05	.26**	.01	.16**	
14. I	-.06	.12**	.08	.09*	.17**	.32**	.07	.19**	.40**	.05	.25**	.28**	.14**	.07

Note: \* $p < 0.05$ ; \*\* $p < 0.01$

The data show that gender explains about 3% of the variance in happiness. Personality traits in the second block of variables explained an additional 41.1% of the variance in happiness ( $\Delta R^2 = 0.41, \Delta F = 82.96, p < 0.01$ ). Emotionally stable persons and extraverts considered themselves happier, while agreeableness, conscientiousness

and intellect do not contribute significantly to explanation of happiness. Happiness-increasing strategies in the third block explained an additional 8% of the variance in happiness ( $\Delta R^2 = 0.08, \Delta F = 11.68, p < 0.01$ ). After controlling for the effect of gender and personality, significant predictors of happiness were Party and Clubbing and

Cognitive-Behavioural Interventions. Active Leisure is recognized as a suppressor variable ( $r_p = -0.09$ ,  $p < 0.05$ ). With gender, personality traits and strategies as a selected set of variables, it is possible to explain for 51.4% of the variance in happiness.

**Table 3** Summary of hierarchical regression analysis for personal traits (step 2: Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Intellect) and happiness-increasing strategies (step 3: Goal Pursuit, Party and Clubbing, Religion, Affiliation, Passive Leisure, Active Leisure, Cognitive-Behavioural Interventions and Sport and Hobby) predicting happiness level after controlling for the gender

	<b>Happiness</b>		
	Standardized betas ( $\beta$ )		
	Step 1	Step 2	Step 3
<b>Sociodemographic variables</b>			
Gender	-.19**	-.19**	<b>-.19**</b>
<b>Personal traits</b>			
Extraversion		.25**	<b>.17**</b>
Agreeableness		.07	-.02
Conscientiousness		.04	-.02
Emotional Stability		.51**	<b>.48**</b>
Intellect		-.02	-.00
<b>Happiness-increasing strategies</b>			
Social Affiliation			.07
Party and Clubbing			<b>.08*</b>
Cognitive-Behavioural Interventions			<b>.22**</b>
Goal Pursuit			.08
Passive Leisure			.03
Sport and Hobby			.02
Active Leisure			.12**
Religion			.06
R <sup>2</sup> change	.03**	.41**	.08**
Adjusted R <sup>2</sup>	.03**	.44**	.52**
Multiple R	.19**	.67**	.73**

Notes: \*\* $p < .01$ , \* $p < .05$ ; Gender is coded into 1 = women and 2 = man; A pairwise treatment of missing data was used which can produce different significance level of the same value of standardized beta.

When we reversed the set of variables entered in the model, i.e., happiness-increasing strategies in the second and personality traits in the third step, R square change in the second step was 0.25 and in the third 0.26 (Table 4). However, regardless of which set of variables was entered in the second or third step, results showed that both sets of predictors taken together explain for 51.4% of the variance of happiness and the same significant variables in the final regression analysis (Extraversion; Emotional Stability; Party and Clubbing and Cognitive-Behavioural Interventions). Considering that Agreeableness and Extraversion are

relatively significantly associated with Social Affiliation, and Sport and Hobby is one of shorter and less reliable subscales of the Happiness-Increasing Strategies, this may be a reason that these strategies become non-significant in the last step of the hierarchical analysis. Therefore, it may be concluded that happier students are those who are more emotionally stable and more extraverted, and more likely to use happiness-increasing strategies - Party and Clubbing, Cognitive-Behavioural Interventions.

**Table 4** Summary of hierarchical regression analyses for happiness-increasing strategies (step 2: Goal Pursuit, Party and Clubbing, Religion, Affiliation, Passive Leisure, Active Leisure, Cognitive-Behavioural Interventions and Sport and Hobby) and personal traits (step 3: Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Intellect) predicting happiness after controlling for the gender

	<b>Happiness</b>		
	Standardized betas ( $\beta$ )		
	Step 1	Step 2	Step 3
<b>Sociodemographic variables</b>			
Gender	-.19**	-.09**	<b>-.19**</b>
<b>Happiness-increasing strategies</b>			
Social Affiliation		.15**	.07
Party and Clubbing		.13**	<b>.08*</b>
Cognitive-Behavioral Interventions		.34**	<b>.22**</b>
Goal Pursuit		.05	.08
Passive Leisure		.01	.03
Sport and Hobby		.09*	.02
Active Leisure		-.12**	-.12**
Religion		-.01	.06
<b>Personal traits</b>			
Extraversion			<b>.17**</b>
Agreeableness			-.02
Conscientiousness			-.02
Emotional Stability			<b>.48**</b>
Intellect			.00
R <sup>2</sup> change	.03**	.25**	.26**
Adjusted R <sup>2</sup>	.03**	.27**	.52**
Multiple R	.19**	.53**	.73**

Notes: \*\* $p < .01$ , \* $p < .05$ ; Gender is coded into 1 = women and 2 = man; A pairwise treatment of missing data was used which can produce different significance level of the same value of standardized beta.

In order to better explain the differences identified between happy and less happy youth in Croatia relating to happiness-increasing strategies and personality traits, we used person-oriented approach to data analysis, cluster or class analysis (Laursen and Hoff 2006). Hierarchical cluster analysis was conducted following the Ward's method using four items from the SHS in this analysis. Different cluster solutions were investigated, but changes in agglomeration coefficients as well as inspection of a hierarchical tree

diagram strongly supported a two-cluster solution. The t-test revealed significant difference between two clusters on the total SHS score ( $t(570) = -31.48, p < .01$ ), with students from Cluster 1 ( $M = 3.99, SD = 0.82$ ) being lower on the total happiness score compared to those from Cluster 2 ( $M = 5.86, SD = 0.60$ ). Students from Cluster 1 were lower on all four items from the SHS compared to students from Cluster 2. Cluster 1 seemed to be consistent with students reporting low results on four items and the total SHS score and Cluster 2 seemed to be consistent with students reporting high results on four items and the total SHS score. Results yielded 218 students in the lower happiness group (40% female) and 354 students in the higher happiness group (56% female).

**Table 5** Differences between the two groups of students in Happiness-increasing strategies and Personal traits

	Less happy students <i>M(SD)</i>	Happy students <i>M(SD)</i>	F
Social Affiliation	5.04(.983)	5.63(.805)	61.68**
Party and Clubbing	4.30(1.06)	4.85(.91)	42.02**
Cognitive-Behavioural Interventions	4.25(.71)	4.78(.63)	87.67**
Goal Pursuit	4.60(1.13)	4.96(1.01)	16.14**
Passive Leisure	4.06(1.06)	4.32(1.15)	7.74**
Sport and Hobby	4.01(1.23)	4.40(1.37)	11.40**
Active Leisure	3.37(.94)	3.73(1.01)	18.60**
Religion	3.22(1.94)	3.62(2.07)	5.12*
Extraversion	3.15(.62)	3.65(.60)	92.46**
Agreeableness	3.80(.54)	4.02(.52)	23.42**
Conscientiousness	3.35(.62)	3.52(.61)	10.12**
Emotional Stability	2.86(.72)	3.57(.65)	145.37**
Intellect	3.68(.551)	3.78(.526)	4.85*

Note: \*\* $p < .01$ , \* $p < .05$

The differences between the less happy students group and happy students group in Goal Pursuit, Party and Clubbing, Religion, Affiliation, Passive Leisure, Active Leisure, Cognitive-Behavioural Interventions and Sport and Hobby, Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Intellect, were tested using analysis of variance. The results are presented in Table 5 along with the means and standard deviations of the variables. In line with the predictions of long-term happiness model, the happy students group use all strategies for increasing happiness more often than the less happy students group. Furthermore, when compared to less happy students group, the happy students group reported higher level of all personality traits.

## Discussion

The present study examined relationships between happiness and sets of personal traits and happiness-increasing strategies on a sample of Croatian students ( $N = 573$ ). Our results show that, after controlling for gender and regardless of whether Happiness-Increasing Strategies were introduced in the second or third step of the hierarchical regression analysis, the happier students are those who are

more emotionally stable and extraverted, and who tend to use happiness-increasing strategies such as Partying and Clubbing and Cognitive-Behavioural Interventions more often. Additionally, by applying cluster analysis with a person-oriented approach to the analysis of our data, two groups of students were identified: less happy and happy students. The differences between the two groups were observed in all measured personal traits and happiness-increasing strategies. Happy students reported using all of 8 happiness-increasing strategies more often and achieved statistically significantly higher results on personal trait subscales when compared to less happy students. These results are in line with the studies of Gilman and Hubner (2006) who concluded that a high level of life satisfaction in adolescence is associated with some mental health benefits that are not found among youth reporting comparatively lower satisfaction levels. The findings of our study confirmed the importance of personal traits as well as happiness-increasing strategies in predicting happiness among Croatian students

According to the long-term happiness model (Lyubomirsky et al., 2005) three general categories of the predictors of happiness have been identified: life circumstances and demographics, traits and dispositions, and intentional behaviours. However, the most important statement of the model is the motivational one, according to which happiness depends on intended behaviour and activities that persons can consciously choose in order to influence their life satisfaction. The present study attempted to confirm the role of intentional activities in predicting the happiness level, but also to determine the contribution of personality traits and gender in self-reported happiness among Croatian students. The results generally support the expectations based on literature data.

In our study, the differences in the levels of happiness reported by female and male students showed that women are generally happier than men. Although Rijavec, Jurčec and Mijočević (2010) have not found gender differences in happiness among Croatian students, our results support those obtained by other authors, which confirm gender differences in happiness in favour of females (Eddington and Shuman, 2006, Myers and Diener, 1995, Warner and Vroman, 2011).

The model of long-term happiness (Lyubomirsky et al., 2005) states personal/genetic factors as important contributions to the happiness level. According to our results, the two personality traits Extraversion and Emotional Stability are the most predictive of happiness. Bahiraei, Eftekharee, Zarei and Soloukdar (2012) found that neuroticism, extraversion, conscientiousness, feelings and judgment explain for 45% of the happiness variance, and the highest correlations were found between happiness and neuroticism, extraversion and conscientiousness. Extraversion and neuroticism are personality dimensions most often associated with happiness (Brajša-Žganec et al., 2011, Steel and Ones, 2002, Cheng and Furnham, 2002). Vitterso and Nielsen (2002) found that neuroticism explains eight times more happiness variance than extraversion. The absence of depression and unpleasant affects is considered one of the main components of happiness, and consequently, emotional stability/neuroticism is strongly correlated with

the level of happiness. Neurotic persons are considered to be nervous, easily stressed, sensitive and prone to mood swings. Therefore, the lower level of happiness is expected to result from such a combination of personality traits. On the other hand, extraverts socialize more often and have more friends (Brajša-Žganec, Ivanović and Burušić, 2014), they are included in rewarding social activities and have greater social support. Findings of the studies on the relationship between personality and strategies are consistent with the theoretical expectations based on researches of Warner and Vroman (2011) and Tkach and Lyubomirsky (2006), where extraversion and agreeableness are associated with the strategies/activities directed to nurturing social relationships. It was expected that an open and pleasant person would choose a variety of social activities.

A third set of important happiness predictors from the long-term happiness model are intentional actions that individuals take to make their lives more enjoyable. In this study, the greatest association with happiness was shown for the strategy Cognitive-Behavioral Intervention, whereas the Affiliation and Goal Pursuit were the most frequently used strategies. Due to the contents of items loaded with mentioned factors, these results are consistent to those expected based on previous researches. Tkach and Lyubomirsky (2006) mentioned examples of studies that support the effectiveness of affiliation for increasing happiness. People who actively pursue their goals, actually search for a way to change themselves or their situation in order to improve their subjective well-being. An important role in subjective well-being play leisure activities, because they provide opportunities to fulfil one's life values and needs. Through participation in leisure activities people build social relationships, feel positive emotions and therefore improve their quality of life (Brajša-Žganec, Merkaš and Šverko, 2011). It was also found that participation in leisure activities increases life satisfaction scores reported by people with disabilities (Pagan, 2014).

Although some authors (Warner and Vroman, 2011, Tkach and Lyubomirsky, 2006) have not found the association between happiness and religion and spiritual activities, this relationship is complex. Lewis and Cruise (2006) observed that studies of the connection between religion and happiness provide contradictory results, which may be a consequence of methodological difficulties and unclear terminology. Lewis and Cruise (2006) offer an overview of theoretical explanations for the connection between religion and happiness. It is possible that participation in religious activities provides social support, hope and meaning of life, and for this reason religious individuals are happier. On the other hand, religiosity is associated with anxiety, fear of death and guilt (Pressman, Lyons, Larson and Gartner, 1992), and thus, religious individuals may be less happy. Therefore, it is possible that the relationship between religiosity and happiness is individual (Lewis and Cruise, 2006). Based on our results, Religion as a strategy differs between less happy and happy students, and it was more frequently used in the group of happy students.

However, due to the correlative nature of the established association between happiness and strategies, different interpretations of its causes are possible. Csikszentmihalyi

and Wong (1991) found that there is no difference in the ways happy and less happy adolescents spend free time, but differences can be found in the way they perceive their activities. Happy adolescents believe that they have choices in the selection of their behaviour and they tend to view their activities as challenges. Therefore, it is possible that their behaviours as described by the strategies are a consequence of the fact that they are happy, and not the fact that they chose certain behaviours to become happier. Similarly, Boehm et al. (2011) argue that using strategies is not enough for subjective well-being. Adequate motivation for change is also necessary, and it is stronger among members of individualistic cultures.

Previous researches identified gender differences in happiness-increasing strategies are also recorded by other researchers. *Sport and hobby* is the only strategy used more frequently by men. Warner and Vroman (2011) show that men use the avoidance of worries as a happiness-increasing strategy more often than women, while women are more prone to raising the level of satisfaction through optimism, gratitude, nurturing relationships and healthy nutrition. Carr and Steel (2010) argued that the selection of strategies is strongly influenced by socio-cultural stereotypes, but women are more likely than men to behave in accordance with the social expectations (Shaughnessy, Treadway, Breland, Williams, & Brouer, 2011), so their strategy selection is more consistent with the stereotypical expectations.

The present study showed that gender, personality traits and strategies explain for 51.4% of the happiness variance. When all mentioned findings are considered, it is clear that happiness is a phenomenon that depends on many contributing factors. The interpretation of the findings from this study is limited due to the use of a specific sample. The results obtained from student population cannot be generalized to other age groups. Modern researchers describe the relationship between age and happiness with the U curve, which shows that younger and older people are the happiest, while happiness is reduced in middle-age groups (Sutin, Terracciano, Milanese, Ferrucci and Zonderman, 2013). In addition, happiness-increasing strategies and happiness level were shown susceptible to cultural influences (Boehm et al., 2011, Ponizovsky, Dimitrova, Schachner and Schoot, 2013). Therefore, the findings of our study are representative for this specific segment of the Croatian population only, which limits the possibilities of generalizing results. Practical implications arising from this study show the tendency of Croatian students to use all happiness-increasing strategies to increase their happiness.

The present study also used a measure of happiness that has been criticized by some authors. Self-reported measures can lead to socially desirable responses (Boehm et al., 2011) and the correlative nature of results disables causal conclusions. Heritage, circumstances and intentional behavior undoubtedly contribute to the level of happiness, but it is not clearly understood to what extent and in which conditions. Therefore, additional researches are needed to clarify the causes of inconsistencies in the results and to provide a clearer picture of the factors that contribute to subjective well-being.

## References

- Argyle, M. (1999). *Causes and correlates of happiness*. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 353–373). New York: Russell Sage Foundation.
- Bahiraei, S., Eftekhareh, S., Zarei Matin, H. & Soloukdar, A. (2012). Studying the Relationship and Impact of Personality on Happiness among Successful Students and Other Students. *Journal of Basic and Applied Scientific Research*, 2, 3636-3641.
- Boehm, J. K., Lyubomirsky, S. & Sheldon, M. K. (2011). A longitudinal experimental study comparing the effectiveness of happiness-enhancing strategies in Anglo Americans and Asian Americans. *Cognition and Emotion*, 25, 1263-1272. Doi: 10.1080/02699931.2010.541227.
- Bowling, N. A., Eschleman, K. J., & Wang, Q. (2010). A meta-analytic examination of the relationship between job satisfaction and subjective well-being. *Journal of Occupational and Organizational Psychology*, 83, 915-934. Doi:10.1348/096317909X478557
- Brajša-Žganec, A., Ivanović, D. & Kaliterna-Lipovčan, Lj. (2011). Personality Traits and Social Desirability as Predictors of Subjective Well-Being. *Psychological Topics*, 20, 261-276.
- Brajša-Žganec, A., Ivanović, D. & Burušić, J. (2014). Dimensions of psychological well-being of Croatian students: gender differences and correlation with personality traits. *Napredak: časopis za pedagogijsku teoriju i praksu*, 155, 29-46.
- Brajša-Žganec, A., Merkaš, M. & Šverko, I. (2011). Quality of life and leisure activities: How do leisure activities contribute to subjective well-being? *Social Indicators Research*, 102, 81-91. Doi:10.1007/s11205-010-9724-2
- Carr, P. B. & Steele, C. M. (2010). Stereotype threat affects financial decision making. *Psychological Science*, 21 (10), 1411-1416. Doi:10.1177/0956797610384146
- Cheng, H. & Furnham, A. (2002). Personality, peer relations, and self-confidence as predictors of happiness and loneliness. *Journal of Adolescence*, 25, 327–339. DOI:10.1006/yjado.475
- Costa, P. T. & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and Unhappy people. *Journal of Personality and Social Psychology*, 38, 668-678. Doi:10.1037/0022-3514.38.4.668
- Csikszentmihalyi, M. & Wong, M. M. (1991). *The situational and personal correlates of happiness: A cross-national comparison*. In F. Strack, M. Argyle and N. Schwarz (Eds.): *Subjective well-being: An interdisciplinary perspective* (pp 193-212). Elmsford, NY: Pergamon Press.
- DeNeve, K. M. & Cooper, H. (1998). The Happy Personality: A Meta-Analysis of 137 Personality Traits and Subjective Well-Being. *Psychological Bulletin*, 124 (2), 197-229. DOI: 10.1037/0033-2909.124.2.197
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for national index. *American Psychologist*, 55, 34–43. Doi:10.1037//0003-066x.55.1.34
- Diener, E., Sandvik, E., Seidlitz, L & Diener, M. (1993). The relationship between income and subjective well-being: Relative or absolute? *Social Indicators Research*, 28, 195-223.
- Doherty, A. M. & Kelly, B. (2010). Social and psychological correlates of happiness in 17 European countries. *Irish Journal of Psychological Medicine*, 27, 130-134. Doi: 10.1017/s0790966700001294
- Eddington, N. & Shuman, R. (2006). *Subjective Well-Being (Happiness)*. San Diego: Continuing Psychology Education.
- Fredrickson, B.L. & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science*, 13, 172-175. Doi: 10.1111/1467-9280.00431
- Gilman, R., & Huebner, E. S. (2006). Characteristics of adolescents who report high life satisfaction. *Journal of Youth and Adolescence*, 35, 311–319. Doi: 10.1007/s10964-006-9036-7
- Harker, L. & Keltner, D. (2001). Expression of positive emotions in women's collage yearbook pictures and their relationship to personality and life outcomes across adulthood. *Journal of Personality and Social Psychology*, 80, 112-124. Doi: 10.1037/0022-3514.80.1.112
- Huszczo, G. & Endres, M. (2013). Joint Effects of Gender and Personality on Choice of Happiness Strategies. *Europe's Journal of Psychology*, 9, 136-149. Doi: 10.5964/ejop.v9i1.536
- Ivanušević, S. (2007). *Personality traits, happiness-increasing strategies and longterm happiness level*. Graduation thesis. University of Zagreb.
- Kendler, K.S., Gardner, C.O., Gatz, M., & Pedersen, N.L. (2007). The sources of co-morbidity between major depression and generalized anxiety disorder in a Swedish national twin sample. *Psychological Medicine*, 37, 453–462. Doi: 10.1017/S0033291706009135
- Laursen, B., & Hoff, E. (2006). Person-centered and variable-centered approaches to longitudinal data. *Merrill-Palmer Quarterly*, 52, 377–389. Doi: /10.1353/mpq.2006.0029
- Lelkes, O. (2008). Happiness Across the Life Cycle: Exploring Age-Specific Preferences. *Policy Brief*, 1-15.
- Lewis, C. L. & Cruise, S. M. (2006). Religion and happiness: Consensus, contradictions, comments and concerns. *Mental Health, Religion & Culture*, 9, 213–225. Doi: 10.1080/13694670600615276
- Lyubomirsky, S. & Lepper, H. S. (1997). A Measure of Subjective Happiness: Preliminary Reliability and construct Validation. *Social Indicators Research*, 46, 137-155. Doi: 10.1023/A:1006824100041
- Lyubomirsky, S. (2001). Why Are Some People Happier Than Others? The Role of Cognitive and Motivational Processes in Well-Being. *American Psychologist*, 3, 239-249. Doi: 10.1037/0003-066X.56.3.239

- Lyubomirsky, S., King, L. & Diener, E. (2005). The benefits of frequent positive affect. *Psychological Bulletin*, *131*, 803-855. Doi: 10.1037/0033-2909.131.6.803
- Lyubomirsky, S., Sheldon K., M. & Schkade, D. (2005). Pursuing Happiness: The Architecture of Sustainable Change. *Review of General Psychology*, *9*, 111-131. Doi: 10.1037/1089-2680.9.2.111
- Mlačić, B. & Goldbeg, L. R. (2007). An Analysis of a Cross-Cultural Personality Inventory: The IPIP Big-Five Factor Markers in Croatia. *Journal of Personality Assessment*, *88*, 168-77. Doi: 10.1080/00223890701267993
- Myres, D. G. & Diener, E. (1995). Who is Happy? *Psychological Science*, *6*, 10-19. Doi: 10.1111/j.1467-9280.1995.tb00298
- Pagan, R. (2014). How Do Leisure Activities Impact on Life Satisfaction? Evidence for German People with Disabilities. *Applied Research in Quality of Life*, *9*, Doi: 10.1007/s11482-014-9333-3.
- Ponizovsky, Y., Dimitrova, R., Schachner, M. K. & van de Schoot, R. (2013). Developmetrics: The Satisfaction With Life Scale: Measurement invariance across immigrant groups. *European Journal of Developmental psychology*, *10*, 526-532. Doi: 10.1080/17405629.2012.707778
- Pressman, P., Lyons, J. S., Larson, D. B., & Gartner, J. (1992). *Religion, anxiety and fear of death*. In J. F. Schumaker (Ed.), *Religion and mental health* (pp. 98-109). Oxford: Oxford University Press.
- Rijavec, M., Jurčec, L., & Mijočević, I. (2010). Gender Differences in the Relationship between Forgiveness and Depression/Happiness. *Psihologijske teme* *19*, 189-202.
- Shaughnessy, B. A., Treadway, D. C., Breland, J. A., Williams, L. V., & Brouer, R. L. (2011). Influence and promotability: The importance of female political skill. *Journal of Managerial Psychology*, *26*, 584-603. Doi: 10.1108/02683941111164490
- Steel, P. & Ones, D. (2002). Personality and happiness: A national-level analysis. *Journal of Personality and Social Psychology*, *83*, 767-781. Doi: 10.1037//0022-3514.83.3.767
- Sutin, A. R., Terracciano, A., Milaneschi, Y., Ferrucci, L. & Zonderman, A. B. (2013). The Effect of Birth Cohort on Well-Being: The Legacy of Economic Hard Times. *Psychological Science*, *24*, 379-385. Doi: 10.1177/0956797612459658.
- Tkach, C. & Lyubomirsky, S. (2006). How do people pursue happiness? Relating personality, happiness increasing strategies, and well-being. *Journal of Happiness Studies*, *7*, 183-225. Doi:10.1007/s10902-005-4754-1
- Vitterso, J., & Nilsen, F. (2002). The conceptual and relational structure of subjective well-being, neuroticism and extraversion. *Social Indicators Research*, *57*, 89-118. DOI: 10.1023/A:1013831602280
- Waterman, A.S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, *64*, 678-691. Doi: 10.1037//0022-3514.64.4.678
- Warner, M. R. & Vroman, K. G. (2011). Happiness Inducing Behaviors in Everyday Life: An Empirical Assessment of ‘‘The How of Happiness’’. *Journal of Happiness Studies*, *12*, 1063-1082. Doi:10.1007/s10902-010-9245-3
- Weiss, A., Bates, T. C. & Luciano, M. (2008). Happiness Is a Personal(ity) Thing. The Genetics of Personality and Well-Being in a Representative Sample. *Psychological Science*, *19*, 205-210. Doi: 10.1111/j.1467-9280.2008.02068.x
- Wood, W., Rhodes, N. & Whelan, M. (1989). Gender Differences in Positive Well-Being: A consideration of Emotional Style and Marital Status. *Psychological Bulletin*, *106*, 249-264. Doi: 10.1037/0033-2909.106.2.249