

A Study on the Effect of Gratitude on Happiness and Well Being

Sareh Behzadipour¹, Alireza Sadeghi^{2*}, Mojgan Sepahmansour³

Abstract

Objective: Gratitude is a general state of thankfulness and appreciation. The majority of empirical studies indicate that there is an association between gratitude and a sense of overall well being. Currently, mental health is especially important in some occupations with harsh work conditions which require strong personal and mental capacities. Psychological well-being and happiness is especially important in personnel working in the healthcare sector. This study aimed to assess whether gratitude training affects psychological well-being and happiness in hospital personnel.

Method: In this semi-experimental study with pre-test and post-test, 72 personnel working in 5 hospitals affiliated to Shiraz University of Medical Sciences, Shiraz, Iran, participated. The participants were randomly divided into intervention and control groups using block randomization. Then, the participants in the intervention group were given 10 group sessions of 90 minutes gratitude training. Ryff's Scale of Psychological Well Being, Subjective Happiness Scale, Gratitude Questionnaire-6, and a Gratitude training package were used for data collection.

Results: The results show that there is no significant difference in the mean scores of psychological well-being, domains of psychological well-being, and happiness between the two groups at baseline, and gratitude training significantly affected all domains of psychological well-being (except for autonomy) and happiness.

Conclusion: This study demonstrates that Gratitude training is effective in enhancing psychological well-being and Happiness.

Keywords: gratitude, psychological well-being, happiness, psychological Intervention, positive psychology.

Introduction

Happiness is commonly understood how much one likes the life, or more formally, the degree to which one evaluates one's life as a whole positively (Veenhoven, 2009). Psychological research on happiness has focused on an individual's long-term emotional state of happiness and the positive evaluation of his life (Oishi & Gilbert, 2016). Argyle, Martin, and Lu (1995) proposed three possible components of happiness: positive emotions, satisfaction, and the absence of negative emotions

such as depression or anxiety. Lucas and Diener (2008) stated that the balance of positive to negative emotions is a powerful determinant of happiness or subjective well-being. Happiness is known as one of the important determinants of subjective well-being (Honkanen, Jaakko Kaprio, Honkanen, Viinama'ki, and Koskenvuo, 2005). Happiness is a remarkable trait for people and affects mental health status and is influenced by the integrity of mental capabilities (Fowler & Christakis, 2008). Happiness is a key factor of human daily life and was introduced as a main component of health by the World Health Organization (WHO) (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009). There are many research evidences that indicate significant correlations between happiness and general health outcomes

1. Ph.D of Psychology, Department of Psychology, Shiraz Branch, Islamic Azad University, Shiraz, Iran

2. Department of Psychology, Shiraz Branch, Islamic Azad University, Shiraz, Iran.

3. Ph.D of Psychology, Department of Psychology, Tehran Central Branch, Islamic Azad University, Tehran, Iran.

* Corresponding author, Email: alisad571@yahoo.com

such as commitment to have higher levels of physical exercise, healthy sleeping pattern, healthy diet, and abstain from smoking or drinking alcohol excessively (Bloodworth & McNamee, 2007; Mojs, Stanislawska-Kubiak, Skommer & Wojciak., 2009; Stubbe, de Moor, Boomsma & de Geus, 2007)

The World Health Organization defines mental health as a form of well-being in which the individual identifies his/her strength and is able to cope with stress and engage in effective activities and help the society as a whole. Well-being is considered as a state of complete physical, mental, and social welfare and not just lack of disease (Krawczynski & Olszewski, 2000). The focal point in well-being is the way with which life flourishes and reaches its highest merits and highest potentials (Seligman & Csikszentmihalyi, 2014). Ryff defines well-being as the strife towards perfection to fulfill the individual's potential capabilities (Ryff, 1995). Ryff and colleagues categorize psychological well-being based on the following six factors: self-acceptance, pursuit of goals in life, personal growth, environmental mastery, and autonomy (Ryff & Singer, 1998). Well-being results in balanced growth and health and facilitated the correct development of skills and potentials (Stephan, Caudroit, & Chalabaev, 2011). Based on a study by Sheldon and Lyubomirsky on sustainable change for well-being, three factors are involved; genetic background, life circumstances, and intentional activity (Sheldon & Lyubomirsky, 2006). Since genetics and life circumstances are hard to change, intentional activities can be targeted for enhancing well-being (Lyubomirsky, 2008). Studies have shown that well-being increases by participating in intentional activities such as gratitude (Sheldon & Lyubomirsky, 2006), and are beneficial in everyday life (Seligman, Steen, Park, & Peterson, 2005).

As an emotion, gratitude is a two-phase cognitive process: A) recognizing that something positive has been attained, and B) recognizing that the other, as an external source, is influential in this attainment

(Weiner, 1985). The construct of gratitude has been used for implying different concepts such as appreciating the help of others, wondering about the miracles of the world, performing related rituals such as praying, permanent focus on positive aspects of life, paying attention to the mortal nature of material blessings, and comparing events with worse ones (Wood, Froh, & Geraghty, 2010).

Feeling gratitude towards God, others, life, and existence could lead to mental prosperity, happiness, physical and mental health, and deeper and more satisfying interpersonal relationships (Emmons & Crumpler, 2000). Studies on gratitude and well-being show that gratitude has a strong correlation with well-being (Park, Peterson, & Seligman, 2004). In a study by Kendler and colleagues, gratitude is correlated with the reduced risk of nicotine and alcohol dependence, panic disorder, antisocial behavior, major depression, phobias, and generalized anxiety disorder (Kendler et al., 2003). Moreover, in another study on the relationship between gratitude, depression, and religion, the researchers found that gratitude protects individuals against negative effects (Tulbure, 2015). People who are grateful have a healthier mental and physical life (Hill, Allemand, & Roberts, 2013). Moreover, they have better and closer family interactions. In addition, gratitude has been shown to reduce high risk behaviors such as sexual intercourse during adolescence and preventing the use of drugs and alcohol among African-American youth (Ma, Kibler, & Sly, 2013). Researchers have found that increased well-being, in general, leads to higher efficiency in work, social interactions and health care (Keyes & Grzywacz, 2005). Moreover, well-being has a positive relationship with physiological health (Diener & Chan, 2011). Theoretically, viewing life as something to be grateful is strongly related to well-being. Wood and Joseph found that people with low degrees of well-being experience transient and uncontrollable instances of success and have higher degrees of depression, anxiety, and negative feeling

compared to others (Wood & Joseph, 2010).

Despite the importance of this construct for physical and mental health, gratitude has not been studied well in Iran; even though it is highly emphasized upon culturally and religiously. Currently, mental health is especially important in some occupations with harsh work conditions requiring strong personal and mental capacities. Occupations related to health care are among such occupations. Therefore, psychological well-being and happiness are especially important in personnel working in the healthcare sector. Main purpose of the present study is to answer the question of whether gratitude training affects psychological well-being and happiness in hospital personnel.

Methods

Ethical Considerations

Ethical Principles for protecting the identity and personal information of participants:

The researchers guaranteed the participants that all their personal details (e.g. name and contact details) will not be disclosed to anyone else except to the researchers. In addition, they ensured them that participation in this study has no social or occupational danger. All participations have the right to withdraw from this study at any time.

Participants

The research is a clinical trial study with pretest, posttest, and control group. The research population was 72 personnel working in 5 hospitals affiliated to Shiraz University of Medical Sciences, Shiraz, Iran.

Procedure

The participants were randomly divided into intervention and control groups using block randomization. Also the researchers have obtained the informed consent of all participants (consent forms). Then, the participants in the intervention group were given 10 group sessions of 90 minutes gratitude training. The sessions were held once a week and the study period lasted 7 months. The

packages, practices, and instructions for the sessions were according to those recommended by Emmons. The subjects were also instructed to do the practices in the educational booklet for at least 21 days. After the end of the educational sessions and performing the practices, the questionnaires were handed to the participants of intervention and control groups simultaneously.

Measures

In this research, the following questionnaires were used: A) Ryff's Scale of Psychological Well Being: This is a self-report questionnaire and is considered as one of the most important measures of psychological well-being. Ryff believes that the 84-item version defines psychological well-being better than the other versions (Ryff & Singer, 1998). This measure has 6 sub-scales (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance). The 84 items are scored based on a Likert scale from 1 (completely disagree) to 6 (completely agree). B) Subjective Happiness Scale (SHS): This is a four-item, 7-point scale that measures individuals' global subjective happiness (Lyubomirsky & Lepper, 1999). The reliability of SHS was $\alpha=0.77$ in the present research. C) Gratitude training package: This package was based on the book entitled "Thanks! How the New Science of Gratitude Can Make You Happier" (Emmons, 2007). It should be noted that this package was translated after obtaining the permission of Professor Emmons.

Data were analyzed using SPSS software, version 18. Descriptive (mean, frequency, standard deviation, percentage) and inferential statistics (Covariance) were used.

Results

Among 72 participants, 50 were women and 22 were men. Also, 40 were married and 32 were single. Their educational level ranged from associate degrees to Ph.D. No significant difference

was found between the two groups with respect to age ($P=0.544$), sex ($P=0.479$), marital status ($P=0.794$), and educational level ($P=0.810$).

Also no significant difference was found between the mean scores of psychological well-being, domains of psychological well-being, and subjective well-being between the two groups at baseline (Table 1).

However, significant differences were found between the two groups with respect to the mentioned variables (Table 2).

Before covariance analysis, the assumptions of the test were assessed using Kolmogorov-Smirnov test. The distribution of the scores in the population was normally in all domains and therefore all pre-assumptions were confirmed. Since the significance

Table 1. Mean±SD of the research variables at baseline

Variable	Group	N	Mean	SD	Pvalue	
Psychological Well-being	Control	35	308.45	59.92	0.844	
	Intervention	35	311.45	67.14		
Domains of Psychological Well-being	Positive Relations	Control	35	52.48	10.59	0.560
		Intervention	35	50.91	12.97	
	Autonomy	Control	35	50.54	11.54	0.838
		Intervention	35	49.97	11.69	
	Environmental Mastery	Control	35	52.94	12.54	0.776
		Intervention	35	53.82	13.34	
	Personal Growth	Control	35	52.74	14.21	0.724
		Intervention	35	54.02	16.03	
	Purpose in Life	Control	35	50.40	9.57	0.456
		Intervention	35	52.28	11.39	
	Self-acceptance	Control	35	49.34	7.61	0.591
		Intervention	35	50.42	9.12	
	Subjective Happiness	Control	35	11.17	6.85	0.970
		Intervention	35	11.22	5.78	

Table 2: Mean±SD of different domains of psychological well-being (except for autonomy), and subjective happiness, in the control and intervention groups (Post-test, Student's t test)

Variable	Group	N	Mean	SD	P value	
Psychological Well-being	Control	35	310.25	60.74	<0.001	
	Intervention	35	374.08	67.25		
Domains of Psychological Well-being	Positive Relations	Control	35	53.37	10.91	<0.001
		Intervention	35	64.40	12.97	
	Autonomy	Control	35	50.37	11.55	0.094
		Intervention	35	51.62	11.97	
	Environmental Mastery	Control	35	53.14	12.21	<0.001
		Intervention	35	65.65	13.67	
	Personal Growth	Control	35	52.77	14.38	<0.001
		Intervention	35	65.71	15.39	
	Purpose in Life	Control	35	51.85	9.49	<0.001
		Intervention	35	63.40	12.13	
	Self-acceptance	Control	35	50.08	7.44	<0.001
		Intervention	35	63.28	9.92	
	Subjective Happiness	Control	35	11.37	6.73	<0.001
		Intervention	35	17.05	5.78	

level was set as 0.05, the analysts used parametric tests for covariance analysis.

As table 3 shows, the significant level of the value of covariate interaction between the independent variables and mental health and happiness is greater than the significance level ($\alpha = 0/05$). So one can say that default and can be adhered to assimilate the slope of the regression line of multivariate analysis of covariance was used to examine the hypotheses.

As can be seen in Table 4, the significant multivariate analysis of covariance ($0 / 001 \geq p$) is smaller than the significance level ($0/05 = \alpha$). Therefore, the research hypothesis is confirmed and appreciated training affects mental health and happiness of employees significantly. To investigate which of these variables between experimental and control groups are significantly different in continuous, a one-way analysis of covariance was used as well.

The results of covariance analysis showed that gratitude training significantly affects psychological well-being. Moreover, the scores of the intervention group were higher in the post-test with respect to psychological well-being.

According to F of autonomy domain, as shown in Table 4, one can conclude that gratitude training significantly affect all domains of psychological well-being except for autonomy.

In addition, the participants in the intervention group obtained significantly higher scores in the domains of, environmental mastery, purpose in

Table 3: Survey the regression slope (the interaction between covariant and independent)

Variable	Df	F	P
Psychological Well-being	1	1.273	.129
Happiness	1	1.107	.151

Table 4: Multivariate regression analysis to test the hypothesis

Effect	Value	F	Error df	P	Eta
Pillai's Trace	.965	609.685	66.000	.000	.965
Wilks' Lambda	.035	609.685	66.000	.000	.965
Hotelling's Trace	27.713	609.685	66.000	.000	.965
Roy's Largest Root	27.713	609.685	66.000	.000	.965

life, personal growth, and self-acceptance after the intervention compared to control group. As shown in Table 5, considering the significant amount of subjective happiness, one can conclude that intervention significantly affected the happiness; moreover, by doing gratitude practices, the subjects showed more grateful in their life.

Discussion and Conclusion

The findings of the present study show that gratitude is effective in all domains of psychological well-being, except for autonomy. Considering the model that Ryff presents for psychological well-being strives to enable individuals to fulfill their potential capabilities. In psychology, well-being is defined as desirable human function (Nel, 2011). Individuals with a high sense of well-being experience positive emotions and evaluate their surrounding events and circumstances positively; while those with low sense

Table 5: Results of the Covariance test for assessing the effect of gratitude on psychological well-being, domains of psychological well-being and subjective happiness.

Index	Variable	Mean square	F	P – value
Group Effect of psychological well-being	psychological well-being	61795.71	304.69	<0.001**
	Autonomy	53.68	11.70	0.094
Group Effect of Domains of Psychological Well-being	Positive relations	2635.26	113.64	<0.001**
	Environmental mastery	2263.88	236.79	<0.001**
	Purpose in life	1636.53	138.91	<0.001**
	Personal growth	2263.42	211.59	<0.001**
Group Effect Subjective happiness	Self-acceptance	2235.71	141.70	<0.001**
	subjective Happiness	498.28	288.54	<0.001**

Significance level at 1%**

of well-being evaluate these event negatively and therefore, experience more depression, anxiety, and anger (Diener, Oishi, & Lucas, 2003).

Considering the definition of gratitude that God or someone else is involved in creating pleasing events and consequences (Weiner, 1985), hope in others and the world in general is created and a benevolent view is shaped by gratitude. It should be noted that the participants were advised to continue their gratitude practices for 21 days. It can be stated that gratitude becomes internalized over time and thus leads to sustained well-being throughout life. As shown in Emmons and McCullough study (Emmons & McCullough, 2003), when participants follow the intervention's instructions on a daily basis, the positive effect of the participants did not increase, but when their intervention continued for 21 day, the findings changed significantly.

The finding of the study showed that gratitude affects the happiness. These findings are consistent with previous studies. The effect of gratitude on the welfare and positive affect can be explained from two perspectives. Theoretically, the effect of gratitude training is related to the nature of gratitude itself. As mentioned before, gratitude is comprised of a two-phase cognitive process: A) recognizing that something positive has been attained, and B) recognizing that an external source influences that attainment (Weiner, 1985). Therefore, in the intervention, the researchers initially tried to create awareness regarding possessions and attainments as well as common events that are frequently happening around us that we do not pay attention to. As a result of gratitude training, we pay attention to these events and to sources we had not noticed previously. Thus, gratitude training increases satisfaction and positive affect (Froh, Sefick, & Emmons, 2008; Seligman et al., 2005). Sheldon and Lyubomirsky considered gratitude as one of the methods of becoming happier, which is consistent with our study (Sheldon & Lyubomirsky, 2006).

Spiritually, gratitude is in line with happiness and in contrast to emotions such as anger, anxiety, and jealousy (McCullough et al., 2002) and enables individuals to pay attention to the positive aspects of their social environment and therefore have higher life satisfaction. The role of gratitude is also evident in clinical psychology. Researchers believe that gratitude is also related to clinical psychology for two reasons: the high significance of gratitude in defining well-being and enhancing well-being through developing the sense of gratitude by simple practices. Seligman and colleagues showed that gratitude has the potential to be a powerful foundation for treatment in reducing psychological pain and stress (Seligman et al., 2005). Moreover, Gratitude interventions are also seen in clinical interventions (Lee Duckworth, Steen, & Seligman, 2005). Since healthcare personnel are the most important health care providers and are at risk of psychological and physical stress and complications (Cavendish et al., 2003), gratitude training could enhance their psychological and subjective well-being.

Since healthcare personnel are the most important health care providers and are at risk of psychological and physical stress and complications, gratitude training could enhance their psychological well-being and happiness. This study had several limitations. At first, long term effects of gratitude on well-being was not accessible by the researchers. Also, the participants in this study were educated and it was not possible to generalize the results to those with lower levels of education. The researchers thus suggest further studies to be done on all social classes and education levels in order to increase generalize ability.

Acknowledgment

We thank professor Robert A. Emmons for his guidance and we are also grateful to all who participate in this study.

References

Argyle, M., Martin, M., & Lu, L. (1995). Testing for

- stress and happiness: The role of social and cognitive factors. *Stress and emotion*, 15, 173-187.
- Bloodworth, A., McNamee, M., 2007. Conceptions of well-being in psychology and exercise psychology research: a philosophical critique. *Health Care Anal.* 15 (2), 107–121.
- Cavendish, R., Konecny, L., Mitzeliotis, C., Russo, D., Luise, B. K., Medefindt, J., & Bajo, M. A. M. (2003). Spiritual care activities of nurses using nursing interventions classification (NIC) labels. *International Journal of Nursing Terminologies and Classifications*, 14(4), 113-124.
- Cohn, M., Fredrickson, B., Brown, S., Mikels, J., Conway, A., 2009. Happiness unpacked: positive emotions increase life satisfaction by building resilience. *Emotion* 9 (3), 361–368, <http://dx.doi.org/10.1037/a0015952>
- Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being*, 3(1), 1-43.
- Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual review of psychology*, 54(1), 403-425.
- Emmons, R. A. (2007). *Thanks!: How the new science of gratitude can make you happier*: Houghton Mifflin Harcourt.
- Emmons, R. A. (2012). Queen of the virtues? Gratitude as human strength. *Reflective practice: Formation and supervision in ministry*, 32.
- Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of social and Clinical Psychology*, 19(1), 56-69.
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: an experimental investigation of gratitude and subjective well-being in daily life. *Journal of personality and social psychology*, 84(2), 377.
- Fowler, J., Christakis, N., 2008. Dynamic spread of happiness in a large social network: longitudinal analysis over 20 years in the Framingham Heart Study. *Br. Med. J. Res.*, <http://dx.doi.org/10.1136/bmj.a2338>.
- Froh, J. J., Sefick, W. J., & Emmons, R. A. (2008). Counting blessings in early adolescents: An experimental study of gratitude and subjective well-being. *Journal of School Psychology*, 46(2), 213-233.
- Hill, P. L., Allemand, M., & Roberts, B. W. (2013). Examining the pathways between gratitude and self-rated physical health across adulthood. *Personality and individual differences*, 54(1), 92-96.
- Honkanen, H., Jaakko Kaprio, J., Honkanen, R., Viinama`ki, H., Koskenvuo, M., 2005. The Stability of life satisfaction in a 15-year follow-up of adult Finns healthy at baseline. *BioMed Cent. Psychiatry* 5 (4.)
- Kendler, K. S., Liu, X.-Q., Gardner, C. O., McCullough, M. E., Larson, D., & Prescott, C. A. (2003). Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *American Journal of Psychiatry*, 160(3), 496-503.
- Keyes, C. L., & Grzywacz, J. G. (2005). Health as a complete state: The added value in work performance and healthcare costs. *Journal of Occupational and Environmental Medicine*, 47(5), 523-532.
- Krawczynski, M., & Olszewski, H. (2000). Psychological well-being associated with a physical activity programme for persons over 60 years old. *Psychology of sport and exercise*, 1(1), 57-63.
- Lee Duckworth, A., Steen, T. A., & Seligman, M. E. (2005). Positive psychology in clinical practice. *Annu. Rev. Clin. Psychol.*, 1, 629-651.
- Lucas, R. E., & Diener, E. (2008). Subjective well-being. *Handbook of emotions*, 471-484.
- Lyubomirsky, S. (2008). *The how of happiness: A scientific approach to getting the life you want*: Penguin.
- Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, 46(2), 137-155.
- Ma, M., Kibler, J. L., & Sly, K. (2013). Gratitude is associated with greater levels of protective factors and lower levels of risks in African American adolescents. *Journal of adolescence*, 36(5), 983-991.
- McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: a conceptual and

- empirical topography. *Journal of personality and social psychology*, 82(1), 112.
- Mojs, E., Stanislawska-Kubiak, M., Skommer, M., Wojciak, R., 2009. Smoking from the perspective of positive psychology. *Przegl. Lek.* 66 (10), 765–767
- Nel, L. (2011). The Psychofortological Experiences Of Master's Degree Students In Professional Psychology Programmes: An Interpretative Phenomenological Analysis. Citeseer.
- Oishi, S., & Gilbert, E. A. (2016). Current and future directions in culture and happiness research. *Current Opinion in Psychology*, 8, 54-58.
- Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of social and Clinical Psychology*, 23(5), 603-619.
- Ryff, C. D. (1995). Psychological well-being in adult life. *Current directions in psychological science*, 4(4), 99-104.
- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological inquiry*, 9(1), 1-28.
- Seligman, M. E., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction *Flow and the Foundations of Positive Psychology* (pp. 279-298): Springer.
- Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: empirical validation of interventions. *American Psychologist*, 60(5), 410.
- Sheldon, K. M., & Lyubomirsky, S. (2006). How to increase and sustain positive emotion: The effects of expressing gratitude and visualizing best possible selves. *The Journal of Positive Psychology*, 1(2), 73-82.
- Stephan, Y., Caudroit, J., & Chalabaev, A. (2011). Subjective health and memory self-efficacy as mediators in the relation between subjective age and life satisfaction among older adults. *Aging & mental health*, 15(4), 428-436.
- Stubbe, J., de Moor, M., Boomsma, D.I., de Geus, E.J.C., 2007. The association between exercise participation and well-being: a co-twin study. *Prev. Med.* 44 (2), 148– 152
- Tulbure, B. T. (2015). Appreciating the positive protects us from negative emotions: The relationship between gratitude, depression and religiosity. *Procedia-Social and Behavioral Sciences*, 187, 475-480.
- Veenhoven, R. (2009). How do we assess how happy we are? Tenets, implications and tenability of three theories. *Happiness, economics and politics*, 45-69.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological review*, 92(4), 548.
- Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical psychology review*, 30(7), 890-905.
- Wood, A. M., & Joseph, S. (2010). The absence of positive psychological (eudemonic) well-being as a risk factor for depression: A ten year cohort study. *Journal of affective disorders*, 122(3), 213-217.
- Wood, A. M., Joseph, S., & Maltby, J. (2008). Gratitude uniquely predicts satisfaction with life: Incremental validity above the domains and facets of the five factor model. *Personality and individual differences*, 45(1), 49-54.