THE RELATIONSHIP BETWEEN MINDFULNESS, ANXIETY AND SELF ESTEEM

ALEXANDRA, ERHAN [a], MIHAELA CHRAIF [a]

[a] *University of Bucharest, Faculty of Psychology and Educational Sciences
Department of Psychology*

Abstract

Mindfulness is essential in Buddhist teachings and denotes a careful state of mental perception (individual perceptions, sensations, thoughts and feelings) (Walach, Buchheld, Buttenműller, Kleinknecht & Schmidt, 2006). The objectives of the study are focused on evidencing the relations between the variables: self-esteem, anxiety and mindfulness. The hypotheses tested the bivariate correlation between the anxiety and low level of self-esteem and also the prediction between the mindfulness dimensions, and anxiety and self-esteem. The method: The participants are a group of 53 people aged between 22 and 45, both women and men. The instruments are the followings: The Five-factor Mindfulness Questionnaire (FMQ) (Baer et al., 2006); Coopersmith Self-Esteem Inventory (Coopersmith, 1967); General Anxiety Questionnaire (Spitzer, Kroenke, Williams & Lowe, 2006). The variables for testing the predictive models were the followings: Independent variables: Observing, Nonjudging of inner experience, Nonreactivity to inner experience and Dependent variables: Self-Esteem, Low level of anxiety. The results confirmed the hypotheses at statistically significant level (p<.05). Future directions on the study are focused on the relationship between mindfulness and organizational variables as: burnout, work involvement, overload work and many others.

Keywords: *mindfulness, observation, nonjudging of inner experience, nonreactivity to inner experience.*

1. INTRODUCTION

Jain Veneziani & Voc (2015) adapted the Cognitive and Affective Mindfulness Scale-Revised on an Italian population. The authors underline that Feldman, Hayes, Kumar, Greeson & Laurenceau (2007) highlighted that mindfulness include four dimensions: Attention, Present focus, Awareness and Acceptance. The study focused on validation of the CAMS-R scale on the Italian

*Mihaela Chraif
E-mail address: mihaela.chraif@fpse.unibuc.ro
Alexandra Erhan
E-mail address: alexandra.erhan@fpse.unibuc.ro*

population and running the factorial analysis in order to load the items on the fourth factors.

The authors tested the convergent validity between the Italian version of CAMS-R and the Mindful Attention Awareness Scale (Brown & Ryan, 2003). The authors tested the confirmatory factor analysis and after the participant's reduction to a sample of 407, the goodness-of-fit indexes sustained the model.

The main objectives of the authors Kotzé & Nel (2016) were interested to analyse the psychometric properties of the Mindful Attention Awareness Scale and also the Freiburg Mindfulness Inventory. Both inventories measure facets of the mindfulness. The authors conducted a Confirmatory Factor Analysis (CFA) and the indicators sustained the model. Also, the Alpha Cronbach reliability was above .70.

Comparing the reliabilities and validity of the Mindful Attention Awareness Scale and also the Freiburg Mindfulness Inventory on a South African sample, the findings evidenced the unidimensional factor structure.

Dekeyser, Raes, Leijssen, Leysen & Dewulf (2008) were interested to study the relationship between mindfulness skills and interpersonal behaviour. The authors were interested to investigate the factor structure and the reliability of the Kentucky Inventory of Mindfulness Skills (Baer, Smith, & Allen, 2004). They replicate the factors of the instrument: Observe, Describe, Act with Awareness and Accept without Judgement. The mindfulness factors were positively and statistically significant associated with expressing oneself in social situations. The observation factor was associated with the engagement in empathy.

Baas, Nevicka & Ten Velden (2014) were interested to study the relationship between the mindfulness and the creativity. The mindfulness instrument was the MAAS scale (Brown & Ryan, 2003). For the creativity (Creative achievements and behaviour) measurement the authors used the scale Creative Achievement Questionnaire (Carson et al., 2005). In order to measure the creativity in an optimum assessment, the authors used the "Creative ideation" performance test. They found out that the observation dimension of the mindfulness scale is statistically significant related with the variables: creative achievements, self-reported creativity, and originality of ideas. the flexibility played a mediating role between the observation and creativity. In the third study the authors highlighted that mindfulness dimensions description act with awareness are predictors for the creative achievement, creative behaviour and originality.

Shapiro, Carlson, Astin & Freedman (2006) were interested to study the implications of mindfulness either in physical or physical symptoms.

Pepping, O'Donovan & Davis (2013) conducted two studies focused on evidencing the positive effects of mindfulness on self-esteem. The authors found out that the four facets of the mindfulness scale predict the variables self-esteem

and life satisfaction. The experimental design from the second study highlighted that the mindfulness state induced had effects in increasing the level of self-esteem.

Greeson & Brantley (2009) were interested to evidence the relationship between mindfulness and anxiety disorders taking as central element the fear experience.

Quaglia, Braun, Freeman, McDaniel & Brown (2016) conducted a meta-analytic study highlighting effects of mindfulness training on the dispositional mindfulness. In their study, the authors analysed the Five Facet Mindfulness Questionnaire (Baer et al., 2006), Kentucky Inventory of Mindfulness Skills (Baer et al., 2004), Mindful Attention Awareness Scale (Brown & Ryan, 2003) and Philadelphia Mindfulness Scale (Cardaciotto et al., 2008). The meta-analytic study included a number of 88 articles based on the effect of mindfulness training on the variable mindfulness as self-reported.

Webb, Beard, Forgeard & Björgvinsson (2019) were interested to evidence that the mindfulness factors predict the anxiety and depression. The participants were a number of 134 patients (ages 18–72 years old), patients with anxiety and depression that were able to complete the questionnaires. The authors used the Five Facet Mindfulness Questionnaire – Short Form (Bohlmeijer et al. 2011), Cognitive Behavioral Therapy-Skills Checklist (Jarrett et al. 2011), Patient Health Questionnaire – 9 Items (Kroenke and Spitzer, 2002), Generalized Anxiety Disorder Scale – 7 Items (Spitzer et al., 2006), Miniature International Neuropsychiatric Interview (Sheehan et al., 1998). The findings highlighted the association between mindfulness skills according the five facets mindfulness scale, cognitive behavioural scale and both depressive and anxiety symptoms improvement. The authors were interested to evidence the behavioral activation, cognitive restructuring in predicting anxiety symptom change. They find out that nonreactivity predicts symptom change as individuals with higher levels of anxiety may have a positive improvement from mindfulness training. Baer (2011) was interested to investigate the methods for assessing psychological variables and the development of mindfulness questionnaires.

2. **OBJECTIVE AND HYPOTHESES**

2.1. OBJECTIVE

The general objective of the research highlights the relations between mindfulness, general anxiety and self-esteem.

Secondary objectives:

- Establishing bivariate correlation between self-perceived anxiety and self-esteem.
- Establishing regression models in order to be able to predict the level of anxiety starting from the ability to detach, relax, tend to meditate and reduce voluntary control.

2.2. HYPOTHESES

The research hypotheses are both bivariate correlation between variables and prediction.

1. We assume that there is a statistically significant correlation between high anxiety level and low self-esteem.
2. The tendency to observe things naturally (involuntarily, undirected) predicts an increased level of self-esteem.
3. Non-reactivity to inner experience predicts a low level of anxiety.
4. Not judging future experience predicts a low level of anxiety.

3. METHOD

3.1 THE PARTICIPANTS

The participants were a group of approximately 53 people aged between 22 and 45, both women and men from different professional backgrounds. They responded by filling out a Google document form.

3.2. THE INSTRUMENTS

1. The five-factor Mindfulness Questionnaire (FMQ) (Baer et al., 2006) consists of 5 factors with a number of 39 items on the Likert scale from 1 to 5. The five factors of the questionnaire are the followings: Observing, Describing, Acting with Awareness, Nonjudging of inner experience, Nonreactivity to inner experience.
2. Coopersmith Self-Esteem Inventory (Coopersmith, 1967) - the internal consistency (Alpha Cronbach) is estimated between 0.61 and 0.71. The reliability was estimated by Johnson et al. (1983). Test-retest reliability was estimated at 0.88 (Coopersmith, 1967). For the present study it was calculated the total score of the self -esteem scale.
3. General Anxiety Questionnaire (Spitzer, Kroenke, Williams & Lowe, 2006) with 7 items on a scale from 1 to 4.

Löwe et al. (2008) investigated the structure of GAD-7 factor on a group of 5030 people reporting one-dimensional structure in a nationally representative

study. Kertz et al. (2013) used confirmatory factor analysis (CFA) in an acute psychiatric sample of 232 patients.

Studies on psychometric characteristics were conducted regarding: internal consistency, test-retest fidelity, criterion validity, construct validity, concurrent validity and convergent validity (Löwe et al. 2008; Mossman et al. 2007; Ruiz et al. 2011).

3.3. PROCEDURE

The Ethical code and GDPR legislation for research were respected. The instruments were applied on-line by filling out a Google document form. The participants were informed about the research consent and also about the anonymous identity.

3.4. THE DESIGN

Testing the correlation hypothesis the variables were: low self-esteem and anxiety.

In order to test the regression hypotheses, the variables were the followings:

- Independent variables: Observing, Nonjudging of inner experience, Nonreactivity to inner experience,
- Dependent variables: Self-Esteem, Low level of anxiety.

4. RESULTS

After the data collection the hypothesis were tested using the program SPSS.

Testing hypothesis 1: 'We assume that there is a statistically significant correlation between anxiety level and low self-esteem'. The low self-esteem variable was obtained reversing the items of the self-esteem questionnaire.

Table 1 – Correlation matrix

	low self-esteem	anxiety
low self-esteem	1	r = .894
anxiety	r = .894	1

The hypothesis was statistically significantly confirmed at the .01 threshold with a Pearson bivariate correlation coefficient r = .894

Testing the second hypothesis: "The tendency to observe things naturally (involuntarily, undirected) predicts an increased level of self-esteem." In table 2 can be seen the R and R Square values for the prediction model. For testing this

hypothesis, the variable self-esteem was calculated as the sum of all the items of the questionnaire after reversing the low self-esteem items.

Table 2 – Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.958a	.918	.916	5.26

a. Predictors: (Constant), Self-Esteem

b. Dependent Variable: Observe

In the table 3 can be seen the Constant, the Unstandardized Coefficients and the Standardized Coefficients of the regression model.

Table 3 – Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.509	1.296		1.764	.050
	Observing	2.166	.091	.958	23.852	.000

a. Dependent Variable: Self-Esteem

Hence, the hypotheses regarding the dimension observing of the mindfulness as predictor for the self-esteem has been confirmed at the significance p=.029<.05. The regression equation according the presented model is the following:

Self-Esteem =1.509+2.166* Observing

Testing the third hypothesis regarding the "Non-reactivity to inner experience predicts a low level of anxiety", the R and R Square values can be seen in the table 4.

Table 4– Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.881a	.776	.771	6.8660

a. Predictors: (Constant), Non-reactivity to inner experience

b. Dependent Variable: Low level of anxiety

According the standarized coefficients for the regression model, the regression equation is the following:

Low level of anxiety =3.812-1.262* Non-reactivity to inner experience
Hence, the hypothesis has been confirmed for the statistically significant threshold p<.01.
The fourth hypothesis "Not judging future experience predicts a low level of self-perceived anxiety" was tested with the simple linear regression model.
In the table 5 can be seen the R and R Square values for the regression model.

Table 5 – Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.885a	.783	.779	6.75

a. Predictors: (Constant), Not judging future experience

Appling the linear regression model, the regression equation is the following:

Low level of anxiety =3.343-1.276* Not judging future experience
Hence, the hypothesis has been confirmed for the statistically significant threshold p<.05.

5. CONCLUSIONS

The research hypotheses were confirmed at the statistically significant threshold p<.05. The five facets of the mindfulness questionnaire: Observing, Describing, Acting with awareness, Nonjudging of inner experience, Nonreactivity to inner experience are basic variables in establishing low level of anxiety (Webb, Beard, Forgeard, & Björgvinsson, 2019). Hence the results highlight that the dimensions non-reactivity to inner experience and not judging future experience predict statistically significant (p<.05) the low level of anxiety. The observing dimension of the mindfulness scale predicts statistically significant positive the level of self-esteem (p=.029<.05). Brown & Ryan (2003) highlighted the importance of the mindfulness in psychological wellbeing. Also, Pepping, O'Donovan & Davis (2013) supported by their study the positive effects of mindfulness on self-esteem. The findings by testing the first hypothesis evidence that anxiety level and low self-esteem are positive statistically significant correlated (p<.05). As support for the findings, Sowislo & Ulrich (2013) in their study presented at page 217 the relation between low self esteem and anxiety.

Further studies will start from the findings and shall be relate the mindfulness, anxiety and self-esteem with organizational variables as: burnout, work involvement, overload work and many others.

REFERENCES

Baas, M., Nevicka, B., & Ten Velden, F. S. (2014). Specific Mindfulness Skills Differentially Predict Creative Performance. *Personality and Social Psychology Bulletin*, *40*(9), 1092–1106. http://doi.org/10.1177/0146167214535813

Baer, R. A. (2011). Measuring mindfulness. *Contemporary Buddhism, 12* (1), 241-261. DOI: 10.1080/14639947.2011.564842

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment,* 11, 191–206. http://dx.doi.org/10.1177/1073191104268029

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment,* 13, 27–45. http://dx.doi.org/10.1177/1073191105283504

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*, 822-848. http://dx.doi.org/10.1037/0022-3514.84.4.822

Bohlmeijer, E., ten Klooster, P. M., Fledderus, M., Veehof, M., & Baer, R. (2011). Psychometric properties of the five facet mindfulness questionnaire in depressed adults and development of a short form. *Assessment, 18*(3), 308–320. https://doi.org/10.1177/1073191111408231

Cardaciotto, L., Herbert, J. D., Forman, E. M., Moitra, E., & Farrow, V. (2008). The assessment of present-moment awareness and acceptance: The Philadelphia Mindfulness Scale. *Assessment,* 15, 204–223. http://dx.doi.org/10.1177/1073191107311467

Carson, S. H., Peterson, J. B., Higgins, D. M. (2005). Reliability, validity, and factor structure of the Creative Achievement Questionnaire. *Creativity Research Journal, 17*, 37-50.

Coopersmith, S. (1967). *The antecedents of self-esteem*. San Francisco: W. H. Freeman & Co.

Dekeyser, M., Raes, F., Leijssen, M., Leysen, S., & Dewulf, D. (2008). Mindfulness skills and interpersonal behaviour. *Personality and Individual Differences, 44*, 1235-1245.

Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J. (2007). Mindfulness and emotional regulation: The development and initial validation of the cognitive and affective mindfulness scalerevised (CAMS-R*). Journal of Psychopathology and Behavioral Assessment, 29,* 177-190. http://dx.doi.org/10.1007/s10862-006-9035-8

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 78*(2), 169–183. https://doi.org/10.1037/a0018555

Jeffrey, G. & Jeffrey, B. (2009). Mindfulness and Anxiety Disorders: Developing a Wise Relationship with the Inner Experience of Fear. In the *Clinical handbook of mindfulness*. Editor. Fabrizio Didonna, New York: Springer.   (pp.171-188) http://dx.doi.org/10.1007/978-0-387-09593-6_11

Johnson, B. W., Redfield, D.L., Miller, R. L. & Simpson, R.E. (1983).The Coopersmith self-esteem inventory: A construct validation study. *Educational and Psychological Measurement, 43* (3), 907–913.

Kotzé, M. & Nel, P. (2016). The psychometric properties of the Mindful Attention Awareness Scale (MAAS) and Freiburg Mindfulness Inventory (FMI) as measures of mindfulness and their relationship with burnout and work engagement. *SA Journal of Industrial Psychology* ISSN: (Online) 2071-0763, (Print) 0258-5200.

Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: a new depression diagnostic and severity measure. *Psychiatric Annals, 32*(9), 509–515.

Löwe, B., Decker, O., Muller, S., Brahler, E., Schellburg, D., Herzog, W. & Herzberg, PY. (2008). Validation and standardisation of the GAD-7. *Medical Care, 46*(3), 266-274, http://dx.doi.org/10.1097/MLR.0b013e318160d093

Pepping, C.A., O'Donovan, A. & Davis, P.J. (2013). The positive effects of mindfulness on self-esteem. The Journal of Positive Psychology, *Dedicated to furthering research and promoting good practice, 8* (5), 376-386. http://dx.doi.org/10.1080/17439760.2013.807353

Ruiz, M., Zamorano, E., García-Campayo, J., Pardo, A., Freire, O., & Rejas, J. (2011). Validity of the GAD-7 scale as an outcome measure of disability in patients with generalized anxiety disorders in primary care. *Journal of Affective Disorders, 128*(3), 277-286

Quaglia, J. T., Braun, S. E., Freeman, S. P., McDaniel, M. A., & Brown, K. W. (2016). Meta-analytic evidence for effects of mindfulness training on dimensions of self-reported dispositional mindfulness. *Psychological Assessment* 28(7), 1-16. http://dx.doi.org/10.1037/pas0000268

Mossman, S. A., Luft, M. J., Schroeder, H. K., Varney, S. T., Fleck, D. E., Barzman, D. H., … Strawn, J. R. (2017). The Generalized Anxiety Disorder 7-item scale in adolescents with generalized anxiety disorder: Signal detection and validation. *Annals of clinical psychiatry: official journal of the American Academy of Clinical Psychiatrists, 29*(4), 227–234A.

Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology, 62*, 373-386.

Sheehan, D. V., Lecrubier, Y., Sheehan, H. K., Amorim, P., Janavs, J., Weiller, E.,…Dunbar, G. C. (1998). The mini-international neuropsychiatric interview (M.I.N.I.): the development and validation of a structured diagnostic interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry, 59* (suppl 20), 22e33.

Sowislo, J. & Ulrich, O. (2013). Does Low Self-Esteem Predict Depression and Anxiety? A Meta-Analysis of Longitudinal Studies. *Psychological Bulletin, 139*, 213-240. 10.1037/a0028931.

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Veneziani, C. A. & Voci, A. (2015). The Italian Adaptation of the Cognitive and Affective Mindfulness Scale-Revised, Testing, Psychometrics. *Methodology in Applied Psychology, 22* (1), 43-52.

Walach, H., Buchheld, N., Buttenmüller, V., Kleinknecht, N., and Schmidt, S. (2006). Measuring mindfulness—the Freiburg Mindfulness Inventory (FMI), *Personality and Individual Differences, 40,* 1543–1555.

Webb, C.A., Beard, C., Forgeard, M., & Björgvinsson, T. (2019). Facets of Mindfulness Predict Depressive and Anxiety Symptom Improvement Above CBT Skills. *Mindfulness, 10*, 559-570.