

## THE ROLE OF PARENTING STYLES ON EFFORT PERSEVERANCE: THE MEDIATING ROLE OF CONSCIENTIOUSNESS AND MINDFULNESS

Simin Zeqeibi Ghannad<sup>1</sup>  
Sahar Ahmadi Chegeni<sup>2</sup>  
Mohammad Ghobadi<sup>3</sup>  
Sirous Allipour<sup>4</sup>

Department of Educational Psychology,  
<sup>1,4</sup>Shahid Chamran University of Ahvaz  
<sup>2</sup>Lorestan University, Khorramabad  
<sup>3</sup>Lorestan University of Medical Sciences

<sup>4</sup>Corresponding author: [sirousalipour1334@gmail.com](mailto:sirousalipour1334@gmail.com)

### ABSTRACT

*The present study investigates the role of parenting styles on effort perseverance with mediating roles of conscientiousness and mindfulness as moderators. For this purpose, 272 Iranian high school girl students were chosen by stratified random sampling. Data were analyzed by Path Analysis and Hierarchical Regression methods. The results showed that maternal control, parental control and maternal responsibility predict effort perseverance through conscientiousness; and paternal responsibility indicates positive and significant relationship with effort perseverance. Furthermore, findings showed that the relationship between conscientiousness and effort perseverance was moderated by mindfulness. Parenting style is an important factor in predicting effort perseverance through conscientiousness. In addition, being mindfulness has an effective role in relation to conscientiousness and effort perseverance.*

**Keywords:** parenting styles, effort perseverance, conscientiousness, mindfulness

### INTRODUCTION

Effort perseverance as one of the grit characteristic dimensions reflects the tendency to sustain the time and energy necessary for accomplishing long-term tasks (Duckworth, Peterson, Matthews & Kell, 2007). Individuals with higher levels of grit are expected to exhibit greater persistence in the pursuit of their goals despite setbacks, distractions, or other forms of interference. Within educational contexts, grit is portrayed as a potentially important influence on outcomes such as students' engagement, achievement level, retention and probability of graduation (Maddi, Matthews, Kelly, Villarreal & White, 2012; Strayhorn, 2013). This feature causes that some individuals accomplish more than others of equal

intelligence. This feature has been investigated in recent years, and the effort perseverance as its dimension has been studied very little. However, in the literature of teaching, concepts such as persistence, resiliency, and hardiness have already been proposed.

Duckworth (2010) in listing the properties that share in grit, implied to conscientiousness (Lyon, 2014). Conscientiousness as a super-trait includes other characteristics or factors such as self-control and stability (for example, McCann, Duckworth & Roberts, 2009). This feature is associated with a range of behaviors that requires planning and self-control (Roberts, Walton & Bogg, 2005). According to Witt (2002), those who follow their conscience, generally do better

things. Conscious people are reliable (responsible and accurate), efficient and diligent. They are ready to be initiative in solving problems and work methodically and finish it fully. So, it can be seen that conscientiousness is effective factor in effort perseverance.

Past studies have repeatedly shown that parenting and family education are the main factors influencing the personality formation and behavioral characteristics. Parenting is a continuous process and can be defined as activities of parents with an aim of helping their child to grow up (Maccoby & Martin, 1983). Developmental psychologists have been interested in how parents influence the development of children's social and instrumental competences. One major area in this direction is parenting styles. There are two main dimensions underlying parental behavior (Maccoby & Martin, 1983): they are parental responsiveness and parental demandingness. Parental responsiveness (also referred to as parental warmth or supportiveness or acceptance) refers to "the extends to which parents intentionally foster individuality, self-regulation and self-assertion by being attuned, supportive and acquiescent to children special needs and demands" (Baumrind, 1971). Parental demandingness (also referred to as behavioral control) refers to "the claims parents make on children to become integrated to the family whole, by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys" (Baumrind, 1971). This study seeks to investigate the role of parenting dimensions (responsiveness and demandingness or control) on conscientiousness and through conscientiousness with perseverance of effort. Results of Losoya, Callor, Rowe and Goldsmith's (1997) study indicated that parenting style relates with conscientiousness. In a sample of high school students, MacCann and Roberts (2010) found that both dimensions of grit, but especially, the effort perseverance, were positively correlated with life satisfaction, multiple aspects of

conscientiousness and teacher's rating of social behavior.

Although the idea that family education is effective on the person's behavioral and personality traits is often confirmed, it should be noted that individuals have the ability to overcome their habits, old mentality, and their mental schemas (Kiken, Garland, Bluth, Palsson, & Gaylord, 2017; Roberts, Luo, Briley, Chow, Su, & Hill, 2017). New therapies, including schema therapy, and therapies based on concepts as mindfulness and self-compassion confirm that such changes are possible (Videler et al., 2017). Therefore, this research plans to study the moderating role of mindfulness in the relationship between conscientiousness and effort perseverance. The concept of mindfulness is rooted in Buddhist traditions and it is based on this idea that attention and awareness are actively evolved. Mindfulness has been conceptualized as a psychological character which refers to the tendency of being aware to everyday life (Brown and Ryan, 2003). As Bishop, et al. (2004) noted mindfulness has two key elements: self-regulation of attention and specific orientation to experience. Bishop et al. (2004) suggest that self-regulation of attention, facilitates awareness of thoughts, emotions and senses based on direct experience of this process, rather than engaging in rumination or extensive processing these experiences. The second element of mindfulness includes experience specific orientation that refers to the person's curiosity and non-judgement attitude to experience in the present moment. It seems that mental awareness increases the mental and mental capacity of individuals with a conscientious characteristic to sustain the effort. Although no prior studies have examined whether dispositional mindfulness moderate conscientiousness–effort perseverance, there are theoretical and empirical precedents for this idea. Past researches indicated the moderating effect

of mindfulness in the relationship of individual characteristics on psychological and behavioral consequences (for example, Pidgeon, Lacota, Champion, 2013; Khan, & Mirchandani, 2008; Wei-Wen, C., & Tzu-Ping, 2017; Lee, 2017). Theoretically, attention and awareness are viewed as crucial components of effective self-regulation. Cybernetic theories of self-regulation, for example, view awareness of potentially problematic states of functioning as a somewhat necessary condition for controlling one's tendency toward problematic outcomes (Powers, 2005). Specifically, to the extent that the individual is inattentive and unaware, discrepancies between current and desired states of functioning would be missed and therefore opportunities for rectifying problematic outcomes would be missed as well (Brown & Ryan, 2004).

Therefore, this study follows two general questions: First, the mediating role of conscientiousness in relation to parenting styles with effort perseverance, second, moderating role of mindfulness in the relationship between conscientiousness and effort perseverance.

## METHOD

The present study is a correlational non-experimental research. The research design was descriptive or correlational where data were collected using descriptive statistics (mean and standard deviation) and inferential statistics (Hierarchical Regression and path analysis). In studies, of which the objective is testing relationships among variables, the 'Path Analysis' is used. Path analysis method is an extension of a regression model that compared a correlation matrix with the supposed causal models that researcher adjusts and is known as modeling causal. Also, to test the moderating effect, Hierarchical Regression method was used.

### Participants

Sampling method in this research was stratified random sampling. This study involved 272 high school girl students of Khorramabad city in the academic year of 1395-96. The sample subjects included 90 students in mathematics field, 90 in experimental field and 92 in human field. Also, 90 students of this sample were 2nd year, 92 students were 3rd year and 90 students were 4th year.

### Measures

In this study, four instruments were used to measure the variables.

The Child and Adolescent Mindfulness Measure (CAMM) is a recently developed questionnaire developed by Bruin, & Zijlstra & Bogels (2013) that assesses present-moment awareness and non-judgmental, non-avoidant responses to thoughts and feelings in children and adolescents (i.e., "I keep myself busy so I don't notice my thoughts or feelings"), and has ten items that are rated on a five-point scale. The CAMM has been shown to be reliable ( $\alpha = 0.81$ ), and positive correlations have been shown with quality of life, social skills, and academic performance. Negative correlations were shown with somatic complaints, internalizing, and externalizing symptoms (Greco, Baer & Smith, 2011). In this study, the validity of the scale was tested using confirmatory factor analysis. Results showed that factorial load for all except two items (2 & 5) was sufficient (above 0/30). The fitness indices for  $\chi^2/df$ , GFI, AGFI, CFI and RMSEA were respectively, 1/83, 0/96, 0/93, 0/91 and 0/06 respectively. Also, in this study the Cronbach's alpha coefficients for this scale was 0/70.

Gafoor & Kurukkan (2014) designed Scale of Parenting Style to measure students perceived parenting styles of their parents. This scale encompasses 38 items that are used to measure maternal and paternal parenting styles. The pupils were required to respond on the five-point scale as, "always true", "almost true", "sometimes true, sometimes false",

“almost false”, and “always false”. The score was five to one. There are no negative items. Half of the items in scale are responsiveness item (for example, shows love to me) and half of them are control item (for example, controls my game when in excess). Criterion related validity of the scale was found out by correlating the scores of this scale with Scale of Parenting Style developed by Usha & Manjusha (2006) in a sample of thirty students. The validity coefficient is found to be 0.80 for responsiveness and 0.76 for control subscale. The reliability of the scale was established by test-retest method after an interval of one week. The test-retest coefficient for reliability of responsiveness variable in the scale is 0.81 and for control is 0.83. In this study, the validity of the scale was tested using confirmatory factor analysis. Results showed that factorial load for all except two items (1 of paternal form and 7 of maternal form) was sufficient (above 0/30). Also, in this study the Cronbach's alpha coefficients for maternal control, parental control, maternal responsibility and paternal responsibility were 0/90, 0/88, 0/91 and 0/90.

The Short Grit Scale (GRIT-S; Duckworth & Quinn, 2009) assesses orientation and perseverance toward long-term goals. The scale uses a 5-point Likert scale which ranges from 1 (very much like me) to 5 (not like me at all). This measure is a shortened version of the original GRIT-O measure, which had 12 items answered on the same scale (Duckworth et. al., 2007). Examples of questions include “I have overcome setbacks to conquer an important challenge”. Wolters & Hussain (2015) conducted a confirmatory factor analysis indicating that a measurement model with two first-order latent factors fit the data well ( $\chi^2$  (19, N=213) =20.04, p=.392; RMSEA=.02 (90 % confidence interval [CI]=.00, .06), CFI=.997). In this study, we used perseverance subscale of grit scale. In this study, the validity of the scale was tested

using the confirmatory factor analysis. Results showed that factorial load for all items was sufficient (above 0/30). The fitness indices for  $\chi^2/df$ , GFI, AGFI, CFI and RMSEA were, 3/33, 0/98, 0/92, 0/98 and 0/09 respectively. Also, in this study the Cronbach's alpha coefficients for this scale was 0/80.

In this study, we used conscientiousness subscale of the NEO Personality Test (McCrae and Costa, 1985). This subscale consists of 12 items (for example, I tried very hard to achieve my goals). This test uses a scale of five degrees (0 to 4 for strongly agree to strongly disagree return) score. In the present study, to confirm the data model factor structure, the confirmatory factor analysis was used that showed all items except one item had the good factor load (above 3.0) and the model was fitted. The fitness indices for  $\chi^2/df$ , GFI, AGFI, CFI and RMSEA were respectively 2/57, 0/94, 0/91, 0/95 and 0/08 that are appropriate. Also, Cronbach's alpha coefficient was 0/86 for conscientiousness, which represents its reliability is good.

### **Ethical considerations**

In relation to the ethics of research, we obtained the informed consent of each respondent prior to the implementation of the research, and it has been pointed out that anyone who does not want to participate in our research can refuse to answer questions. It was also mentioned that the information provided in the questionnaires was kept secret and that the principle of confidentiality was respected.

### **Procedures and Data Analysis**

The descriptive results related to the mean, standard deviation, kurtosis and skewness scores of the subjects for the variables in this study are given in Table 1. Table 2 presents the values of tolerance, VIF, Eigenvalue, F, R and R<sup>2</sup> for testing the assumptions of structural equation

modeling. Before analysis of the proposed model, structural equation modeling assumptions were tested. Therefore, in the first step, the normal distribution of data was analyzed using numerical detection methods. Kurtosis and skewness of the variables in Table 1 are all in the range of -2 to 2 that confirms variables normality in this research. In the second step, assumption of linearity was evaluated and the results showed a significant linear relationship between independent and dependent variables ( $F= 9/82$ ,  $R^2 = 0/16$ ,  $P < 0/001$ ). In the third step, the collinearity test results showed a non-linear relationship between the independent variables of the study (table 2). Tolerance

test values that can be seen in the first column, is between 0 and 1. The tolerance values close to 1 indicates low collinearity between the independent variables. The second column index is Variance Inflation Factor (VIF). The low value of Variance Inflation Factor is showing low level of collinearity between the independent variables. The third column index is eigenvalue that what the values are greater than zero indicates low correlation between the independent variables. The fourth step, the Durbin-Watson test (1/59) also confirmed the independence of observations. In the final step, the outlier values were detected and removed.

Table 1: Descriptive findings of the research variables

<i>variables</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Skewness</i>	<i>Kurtosis</i>
Effort perseverance	21/71	5/51	0/55-	<b>-0/31</b>
Maternal control	67/61	15/40	-0/49	<b>-0/36</b>
Maternal responsibility	68/42	16/40	-0/61	<b>-0/37</b>
Paternal control	67/62	14/36	-0/55	<b>-0/15</b>
Paternal responsibility	68/02	14/88	-0/51	<b>-0/25</b>
Conscientiousness	34/59	6/87	-0/84	<b>-0/58</b>
Mindfulness	23/43	6/53	0/42	<b>-0/34</b>

Table 2: Collinearity test between the variables

<i>variables</i>	<i>Collinearity statistics</i>		<i>Eigenvalue</i>	<i>MR</i>	<i>RS</i>	<i>F</i>	<i>Durbin-Watson</i>
	<i>Tolerance</i>	<i>VIF</i>					
Maternal control	0/20	4/93	0/05	0/40	0/16	$F= 9/82$	1/59
Maternal responsibility	0/19	5/23	0/04			$P < 0/001$	
Paternal control	0/21	4/86	0/02				
Paternal responsibility	0/20	1/15	0/01				
Conscientiousness	0/87	1/15	0/00				

In order to validate the proposed model fitness, structural equation method

(SEM) was used and all analyses were performed using SPSS version 21 and AMOS version 21. To determine fitness

adequacy of the proposed model with the combined data, a combination of fitness indices was used.

After eliminating 4 non-significant paths of model, the proposed model fits well with data, for example some of the fitness indices of this model were GFI =

0/99, AGFI = 0/99, CFI = 0/99 and RMSEA = 0/00.

Figure 2 is the fitting correlated model of parenting styles on effort perseverance with mediating role of Conscientiousness. The numbers have been standardized on paths and parameters. Direct paths are shown in Figure 2.

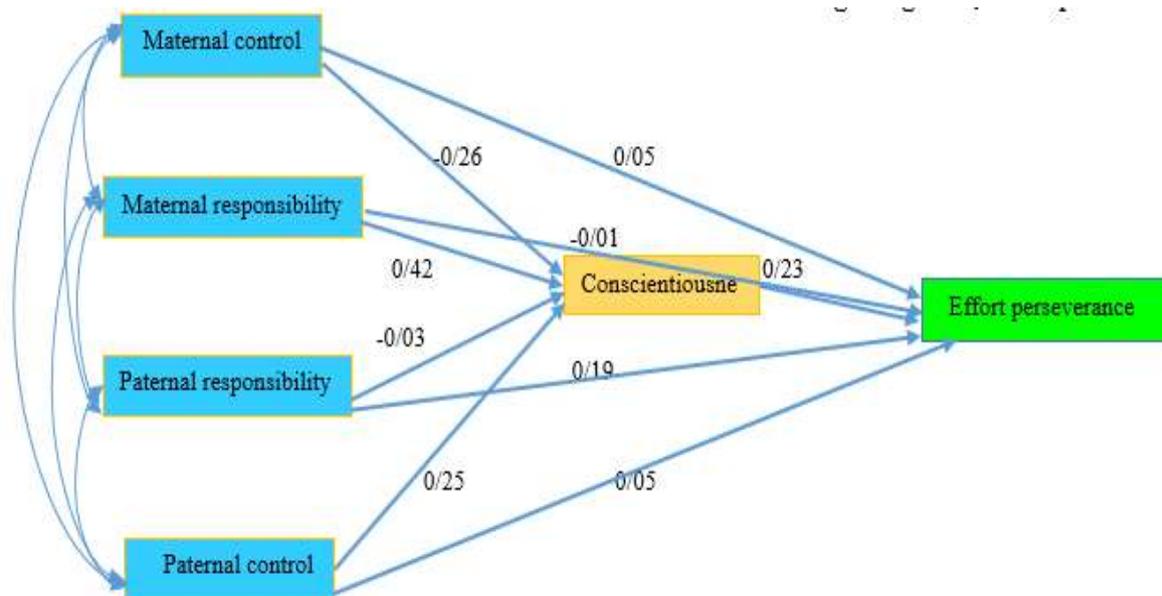


Figure 1: The proposed model of parenting styles on effort perseverance with mediating role of conscientiousness.

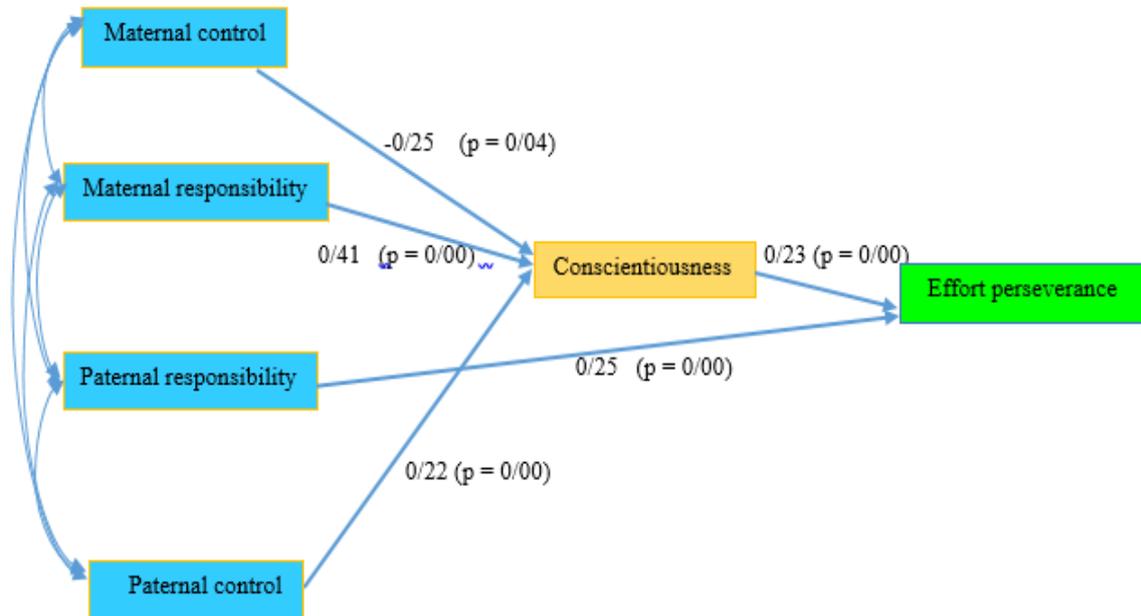


Figure 2: The fitting model of parenting styles on effort perseverance with mediating role of conscientiousness.

In the present study, to investigate the role of mindfulness as a moderating variable in the relationship between conscientiousness and effort perseverance, the Hierarchical Regression method was used. Results indicated that mindfulness has a significant moderating role in the relationship of the conscientiousness with effort perseverance ( $R^2$  change =  $0.01$ , Sig F change =  $0.04$ ).

Table 4: Results of the Hierarchical Regression method to assess the moderating role of Mindfulness in relationship of the conscientiousness with effort perseverance

Variables	R	R <sup>2</sup>	F change	Sig F change
<b>Conscientiousness</b>	0/31	0/09	F <sub>c</sub> = 27/71	0/00
			RS <sub>c</sub> = 0/09	
<b>Mindfulness</b>	0/31	0/09	F <sub>c</sub> = 13/85	0/77
			RS <sub>c</sub> = 0/00	
<b>Conscientiousness * mindfulness</b>	0/33	0/11	F <sub>c</sub> = 10/79	0/04
			RS <sub>c</sub> = 0/01	

## RESEARCH FINDING AND DISCUSSION

The goal of this study was to investigate the role of parenting styles on effort perseverance and the mediating roles of conscientiousness and mindfulness as

moderators. Model was analyzed by using the path analysis method. After eliminating all non-significant paths, model fitted the data. Among direct paths, 4 paths (maternal responsibility to effort perseverance, maternal control to effort perseverance, paternal control to effort

perseverance and paternal responsibility to conscientiousness) were eliminated. Also, there was a negative relationship between maternal control and conscientiousness. Other finding in this research was that mindfulness has a moderating role in the relationship of conscientiousness and effort perseverance.

In supportive of this research findings, results of Losoya et al. (1997) indicated that parenting style relate to conscientiousness. Ivcevic and Brackett (2014), in their study, have predicted educational outcomes through the variables conscientiousness, grit and emotional regulation ability. Regression analysis showed that emotional regulation ability and conscientiousness are significant predictors of educational outcomes but grit did not make such a significant relationship. Also, their research has confirmed the significant relationship between conscientiousness and grit (0/44). In a sample of high school students, MacCann and Roberts (2010) found that both dimensions of grit, but especially the effort perseverance, were positively correlated with life satisfaction, multiple aspects of conscientiousness and teacher's rating of social behavior.

The current research findings showed that in students who are girls, paternal control and maternal responsibility enhance conscientiousness. Conscientious students, regard to their sense of responsibility, are capable of controlling impulses and desires. they can be careful, cautious, flexible, punctual, reliable and manage their behaviors to achieve their goals. Parental control and mother's responsibility lead to improved effort and endurance through increased conscience. Paternal responsibility directly related to effort perseverance. This finding indicates that modelling the social role of father for daughters is important. Also, maternal control has negative relationship with conscientious; while, controlling father has shown a positive impact on effort

perseverance. This fact implies that the control behavior of mothers in the case of daughters had a negative impact in terms of being conscientious and perseverance development. As said in introduction, control parenting is the claims parents make on children to become integrated to the family whole, by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys. Mothers and fathers difference on the effectiveness of control construct due to the mother special role in house and their more detailed management in relation to children. It is also possible that the girl children accept their father's control behavior better than mother control behavior. Mother control behavior because closeness and being in touch with their children are awarded, are more likely to be in many life items and so, meet with resistance from children. This is despite the fact that fathers are usually in control of general areas of life such as education and social behavior of children. As a result, children are more comfortable within the limits and prohibitions of fathers.

On the other hand, when conscientious people be mindful can pay attention to what is occurring and have the ability to view and access a constant stream of thoughts, feelings and senses change at any moment (Bishop et al., 2004). So, mindful people well regulate their emotions and are calmer than other people. Also, they have more accessibility to conscientious ideas.

#### **Limitations of the study and directions for future research**

This study faces limitations for generalizing its results. Proving causal relationships among variables should be done cautiously because of using path analysis method. The subjects of the present study were students of high schools in Iran; then, one should be cautious to generalize the results to other populations (for example, boys) and educational levels. Another limitation of

the study relates to the fact that using a single method for a research can be biased. Using self-reporting questionnaires, respondents' dishonesty, their carelessness, and slackness in responding the questionnaires in spite of the researcher's monitoring and encouraging procedures to do the research reduces the constructive validity of the study.

Psychologists have sought to correlate the personality and behavioral traits of children with the way they are nurtured and reared during development. The findings of this study offer insights regarding the role of parenting components on effort perseverance to psychologists. Since grit and specially effort perseverance has been conceptualized in relation to the main and priorities goals for a long time, creating and providing external and internal conditions of such a feature in the early years of raising children and students is necessary to parents and educators. The present study shows that in high school girls, paternal control and maternal and paternal responsibility are important factors that through promoting the sense of conscientiousness on the effort perseverance in various fields, including academic achievement. However, in the mindful persons, the sense of conscientiousness relates to effort perseverance.

### **Acknowledgements**

Researchers in the study thank and appreciate the cooperation of the authorities, teachers and students of the high schools participating in this research.

## REFERENCES

- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monograph*, 4(1, 2), 1-103.
- Bishop, S., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, 11 (3), 230–241.
- 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 (4), 822–848.
- Bruin, E. I., Zijlstra, B. J. H., & Bogels, S. M. (2013). The meaning of mindfulness in children and adolescents: further validation of the child and adolescent Mindfulness Measure (CAMM) in Two Independent Samples from The Netherlands. *Mindfulness*, 5 (4), 422-430.
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and Passion for Long-Term Goals. *Journal of Personality and Social Psychology*, 92 (6), 1087–1101.
- Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT-S). *Journal of Personality Assessment*, 91 (2), 166–174.
- Gafoor, A. K., & Kurukkan, A. (2014). Construction and validation of Scale of Parenting Style. *Guru Journal of Behavioral and Social Sciences*, 2 (4), 315-323.
- Greco, L. A., Baer, R. A., & Smith, G. T. (2011). Assessing mindfulness in children and adolescents: Development and validation of the Child and Adolescent Mindfulness Measure (CAMM). *Psychological Assessment*, 23, 606–614.
- Khan, S., A. & Mirchandani, D. (2008). The Moderating Effect of Top Management's Collective Mindfulness on the Relationship between Top Management Support and IS Function Performance. *AMCIS Proceedings*. 193.
- Lee, K. S. F. (2017). Boredom proneness and symptoms of depression, anxiety and stress: the moderating effect of mindfulness. Alliant International University. Dissertation for the Degree of Doctor of Psychology. National Taiwan Normal University
- Losoya, S. H., Callor, S., Rowe, D. C., & Goldsmith, H. H. (1997). Origins of familial similarity in parenting: A study of twins and adoptive siblings. *Developmental Psychology*, 33 (6), 1012-23.
- Lyon, A. C. (2014). *Teaching and fostering qualities related to grit*. Master's Degree, Dartmouth College.
- MacCann, C., Duckworth, A. L., & Roberts, R. D. (2009). Empirical identification of the major facets of conscientiousness. *Learning and Individual Differences*, 19, 451–458.
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. Mussen and E.M. Hetherington, editors, *Handbook of Child Psychology*, volume IV: Socialization, personality, and social development. New York: Wiley.
- Maddi, S. R., Matthews, M. D., Kelly, D. R., Villarreal, B., & White, M. (2012). The role of hardiness and grit in predicting performance and retention of USMA cadets. *Military Psychology*, 24 (1), 19–28.
- Pidgeon, A., Lacota, K., Champion, J.(2013). The Moderating Effects of

- Mindfulness on Psychological Distress and Emotional Eating Behavior. *Australian Psychologist*.
- Powers WT. *Behavior: The control of perception* (2nd ed.). New Canaan, CT: Benchmark Press. 2005.
- Roberts BW, Walton KE, Bogg T. (2005). Conscientiousness and health across the life course. *Review of General Psychology*. 2005; 9: 156–168.
- Strayhorn TL. What role does grit play in the academic success of Black male collegians at predominantly white institutions? *Journal of African American Studies*. 2013; 18 (1): 1–10.
- Videler, A. C., van Alphen, S. P. J., van Royen, R. J. J., van der Feltz-Cornelis, C. M., Rossi, G., & Arntz, A. (2017). Schema therapy for personality disorders in older adults: a multiple-baseline study. *Aging Ment Health*, 21, 1-10. doi: 10.1080/13607863.2017.1318260.
- Wei-Wen, C., & Tzu-Ping, Y. (2017). The Relationship between Cultural Intelligence and Psychological Well-being with the Moderating Effects of Mindfulness: A Study of International Students in Taiwan. *European Journal of Multidisciplinary Studies*, 5 (1), 384-391.
- Witt LA. The Interactive Effects of Extraversion and Conscientiousness on Performance, *Journal of Management*. 2002; 23: 835–851.
- Wolters CA, Hussain M. Investigating grit and its relations with college students' self-regulated learning and academic achievement. *Metacognition Learning*. 2015; 10 (3): 293-311.