RESEARCH ARTICLE

THE ROLE OF GENDER AND PERSONALITY IN THE IMPLEMENTATION OF TRANSFORMATIONAL LEADERSHIP

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ARTICLE INFO	ABSTRACT
	Over the last three decades, empirical research has been conducted on examining the relationship between transformational leadership and the improvement of school units. Under that context, leader characteristics have been found to be important factors in explaining the implemented leadership style. The purpose of this empirical study is to examine (a) the impact of gender on transformational leadership, (b) the impact of gender on five main personality traits (extraversion, neuroticism, agreeableness, openness and conscientiousness), (c) the impact of these personality traits on the implementation of transformational leadership. The population of this study consists of primary school leaders. The survey included a final sample of 165 school directors from different regions of one country, namely Greece. The appropriate statistical analysis revealed that the implementation of transformational practices by women is higher than the implementation of transformational practices than men, but these differences were not found to be statistically significant. Moreover, differences between male and female directors were observed in all personality traits, while statistically significant differences were only identified in two of these traits (openness and conscientiousness). Additionally, regression analysis revealed that the five personality traits can explain 27.6% of the variance in the factor "transformative leadership". The most significant dimensions of personality, when examining their impact on "transformative leadership", were conscientiousness, agreeability and neuroticism. The present study can significantly assist in the appropriate selection and training of school directors.

INTRODUCTION

The increase in the importance of school leadership over the past 30 years has been accompanied by the development of theory and research that proposed new leadership models aiming to promote the academic achievement of students. The study of Bush (1985) provided evidence of transformational leadership approaches aiming at broadening leadership by committing to the objectives of the school through the development of a common vision that is shared by all collaborators (Bush and Glover, 2014). Moreover, Bass (1999) highlighted the personality of the leader as an important factor in the implementation of leadership practices (Bass, 1990; Bass, 1999). The main objective of this study is to investigate whether gender (male, female) differentiates the implementation of transformational leadership practices and the personality of the directors (the latter measured through five factors: extraversion, neuroticism, agreeableness, openness, conscientiousness).

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Moreover, the impact of personality on the implementation of transformational leadership practices is also investigated. This survey is conducted in Greece, using a representative sample of managers (school directors) from all the educational regions of the country.

Theoretical Background

Transformational leadership: Leadership has been associated with behaviors that promote communication, confidence building, care and empowerment. All of these characteristics have a positive impact on the self-effectiveness of all involving parties (Northfield, 2014; Hendriks and Scheerens, 2013). Bass (1999) described transformational leadership as a type of leadership in which leaders transform the perceptions of their subordinates. Moreover, Sergiovanni (1998) argued that transformational leadership leads the path to organizational change, by putting emphasis on people, rather than on structures. Sun and Leithwood (2017) reviewed 107 studies of transformational leadership conducted in the field of education, published between 1996 and 2008. They examined the impact of implemented leadership practices on the feelings of teachers and, subsequently, on the achievement of their pupils. The

practices investigated were personalized support, intellectual stimulation and modeling of desirable practices, while teachers were evaluated on the basis of their commitment, collective efficiency and trust in others. The appropriate meta-analysis revealed that leaders have a significant impact on most school learning outcomes (Robinson, Lloyd, and Rowe, 2008). Waters, Marzano and McNulty (2005) reviewed empirical studies published from the early 1970s to 2000, examining the impact of educational leadership on student achievements, founding that such a relationship actually exists. More specifically, 66 leadership practices were incorporated into 21 leadership responsibilities (e.g. inspiration for innovation, the role of the manager as a driving force of change), each having a statistically significant impact on student achievements. Transformational leadership practices were found to have a positive impact on teacher ability to cooperate and commit to the values and goals of the educational organization (Ross and Gray, 2006). Moreover, leader personality contributes to the successful exercise of transformational leadership (Bass, 1990). The international literature refers to the seven "strong claims" of the educational leadership that make it effective. In addition, studies recognize school leadership as the second most significant factor, after classroom teaching, in improving teaching and indirect learning (Leithwood, Jantzi and Hopkins, 2006).

Personality (Five factors theory): One of the leading scholars in the scientific field of leadership, Bass (1990), argued that leadership is a phenomenon that heavily relies on personality. The concept of personality refers to the most stable and permanent aspects of every person; meaning that people have psychological features that can withstand the passage of time. The invariant traits that characterize each individual and stand out from the rest are referred to as "personality structures" (Cervone and Pervin, 2013). The theory of the five factors supports that five characteristics (extraversion, neuroticism, agreeableness, openness and conscientiousness) comprise the psychological structure of most people (Cervone and Pervin, 2013). Goldberg (1990) argued that each model that investigates individual differences between people encompasses the "Five Factors theory". According to Costa *et al.* (1992), one of the most important criteria for considering a factor as a basic dimension of personality is its universality. Intercultural studies conducted in various socio-economic environments have, indeed, verified the universality of the model of the five factors (Tsaousis and Kerpelis, 2004).

The "Five Factors theory" seems to be consistent with the views expressed by the majority of the theoretical scientists of the 20th century. Each of the five factors measures different aspects of personality. Neuroticism measures six aspects of personality: anxiety, self-consciousness, depression, vulnerability, impulsivity, debilitating hostility (Costa and McCrae, 1987). Extroversion measures six aspects: sociability, level of energy, capacity, pursuit of emotions, positive emotions, tenderness. Pretension measures six aspects: straightness, trust, altruism, modesty, sensitivity to the opinion of others, compliance (Pervin and John, 2001). Consciousness measures six aspects: self-discipline, sense of duty, ability, class, reflection, struggle to achieve goals (Harari, Cort. And Laginess, 2015). Empirical research has shown that statistical differences in the mean scores of these five factors can predict the outcome in other significant areas, like professional guidance, personality diagnosis, work behavior, etc. (Cervone and Pervin, 2013; Judge, Bono, Ilies, and Gerhardt, 2002).

Gender, transformational leadership and personality: Hallinger *et al.* (2016), in a meta-analysis of 28 empirical surveys that had a cumulative sample of 2,000 principals, conducted between 1983 and 2014, concluded that there is a small, but statistically significant effect of gender on educational leadership (women had a more active leadership role). Zane and Stewart (2016), used the Multifactor Leadership Questionnaire (MLQ) in sample of 2,696 male principals (42.1%) and 3,658 female principals (57.9%) in the USA and concluded that gender does not significantly affect leadership. But research conducted in 570 teachers in Israel with the same research tool highlighted that the socio-economic context plays an important role in shaping the principal's style of leadership (Berkovich, 2018). Also, Oreg and Berson (2011) in a study conducted in Israel argued that the personality traits, values and behaviors of leaders are reflected in teachers' attitudes. More specifically, leadership created more ideas for consultation and original solutions to the groups of teachers working with principals with higher levels of transformational leadership than to the groups of teachers working with principals with lower levels of transformational leadership (Sosik, Kahai and Avolio, 1998).

Objectives and Hypotheses

As mentioned earlier, the purpose of this empirical study is to examine: (a) the impact of gender on transformational leadership, (b) the impact of gender on five main personality traits (extraversion, neuroticism, agreeableness, openness and conscientiousness), (c) the impact of these personality traits on the implementation of transformational leadership.

The hypotheses of this study are the following:

Hypothesis 1: There are statistically significant differences in the implementation of transformational leadership practices between male and female school principals.

Hypothesis 2: There are statistically significant differences in the five main personality traits between male and female school principals.

Hypothesis 3: The five main personality traits have a positive impact on the implementation of transformational leadership practices.

MATERIALS AND METHODS

Sample

One hundred and sixty three principals (88 male and 75 female) from different regions of Greece, with administrative experience from 3 to 16 years (mean = 3 years) participated voluntarily in this empirical study. Seventy-five had a master degree or held a PhD.

Research instrument

Transformational Leadership Practices: Transformational leadership practices were evaluated using the Leithwood (2006) questionnaire, as translated and utilized by Theofilidis (2012) in Greece. It contains the features of the International Successful School Principal Project (ISSPP) (Hendriks and Scheerens, 2013; Leithwood, Jantzi and Hopkins, 2006). More specifically, it consists of twenty (20) questions measuring the

characteristics and behaviors of transformational leadership. The responses were provided on a 5-point Likert-scale, where (1) meant "Totally disagree" and (5) "Totally agree" (e.g. I encourage co-operation between faculty members). Table 1 presents the results of the Factor Analysis. Four distinct factors were extracted: (a) Providing information and individual attention (including 8 items), (b) Developing a vision and giving direction (including 5 items), (c) Cooperative climate (including 4 items); (d) Improved teaching (including 3 items).

NEO Personality Inventory Revised (NEO-PI-R): The personality traits were captured via the NEO-PI-R questionnaire (Five factor model) (Cervone and Pervin, 2013; Costa, McCrae and Dye, 1991), as translated and utilized in the Greek environment by Tsaousis and Kerpelis (2004). This instrument contains seventy-five (75) questions. Previous research findings support the validity and reliability of the five factor model (e.g. Costa, Mccrae, and Dye, 1991; Goldberg, 1990; Tsaousis, Kerpelis 2004). The five personality factors are: (a) Neuroticism (including 16 items); (b) Extraversion (including 17 items); (c) Agreeableness (including 16 items), (d) Openness (including 12 items), (e) Conscientiousness (including 14 items). The research tool, as in the case of the "transformational leadership practices", was tested for its construct validity (EFA) and the corresponding results were satisfactory. However, analytically presenting these results is not the purpose of this study.

Data collection

The questionnaire (research instrument) was uploaded on "Google forms" and distributed to the school principals of the sample. It included no information that could harm the mental or social status of the participants. Under that context, the participants (school principals) filled up the questionnaire without recording any personal information that could reveal their identity.

Statistical approach

Independent sample t-test (ANOVA) was used in order to investigate the effect of gender on the two variables under investigation (transformational leadership and personality traits) (Hypotheses 1 and 2). Additionally, correlation analysis and linear regression analysis was used in order to examine the relationship between the personality traits and the transformational leadership practices (Hypothesis 3).

RESULTS

Means and standard deviations of the five dimensions of personality (extraversion, neuroticism, agreeableness, openness and conscientiousness) and the four factors of transformational leadership (providing information and individual attention, developing a vision and giving direction, cooperative climate, improved teaching) are presented in Table 2. The empirical results reveal that gender does not have any statistically significant effect on the implementation of transformational practices, while it only has an effect on two dimensions of personality (openness and conscientiousness). Therefore, hypothesis 1 (gender differentiates the implementation of transformational leadership practices) is totally rejected by the empirical data. Also, hypothesis 2 (the personality traits of male and female school directors are different) is only partially supported; females directors are more open and conscious than

the men directors of the sample. Moreover, a correlation analysis was conducted between the five dimensions of personality and the four factors of transformational leadership, in order to determine the nature of their relationship (Table 3). The analysis revealed the existence of statistically significant correlations between all dimensions of personality and two factors of transformational leadership (providing information and individual attention, developing a vision and giving direction). Additionally, four dimensions of personality had a statistically significant relationship with the other two factors of transformational leadership (cooperative climate, improved teaching). Overall, only two relationships in Table 3 were not found to be statistically significant, meaning that there is a high degree of correlation between personality traits and the implementation of transformational leadership practices. Therefore, hypothesis 3 (there are positive relationships between personality traits and the implementation of transformational leadership practices) is totally supported by the empirical data.

Finally, linear regression analysis was used in order to further investigate the relationship between the five dimensions of personality and the four factors of transformational leadership (Table 4). More specifically, five different models were examined; the big-five factors of personality (extraversion, neuroticism, agreeableness, openness, conscientiousness) were used as independent factors, while the dependent factors in each model were the four factors of transformational leadership (Models 1, 2, 3, 4). Finally, Model 5 utilized the aggregate mean score of transformational leadership, examining the degree in which personality traits can explain the variation in the implementation of transformational leadership practices. Overall, empirical results revealed that personality traits can explain 27.6% of the variation in the implementation of transformational leadership practices. More specifically, Models 1 and 2 had the higher predictive power (27.9% and 34.4% respectively), arguing that the big-five factors of personality have the most significant impact (effect) on the first two dimensions of transformational leadership (providing information and individual attention, developing a vision and giving direction), something that has also been underlined by correlation analysis. On the other hand, Model 4 had the lowest predictive power (8.2%), revealing that the personality traits of the directors have a limited effect on the level of teaching of their subordinates; something that seems reasonable.

DISCUSSION

The purpose of this study was to examine whether there are statistically significant differences in the implementation of transformational leadership practices between male and female school principals. Based on the empirical results, female principals seem to implement transformational leadership practices to a higher extent. However, the effect of gender was not statistically significant in any case that was examined (hypothesis 1 is rejected). The international literature argues that female school directors have a more active leadership role (e.g. Hallinger, Dongyu, and Wang, 2016), but no other study has concluded that the leadership style is directly related to gender. Young (2004) suggested that personality and experience may be the main factors that influence the adoption of transformative practices and behaviors. Moreover, the present study examined whether there are statistically significant differences in the main personality characteristics

Table 1. Exploratory Factor Analysis (EFA) - Transformational leadership

Factors	Sub-factors	No of items	Items	Bartlett's Test	KMO	Eigen-value	TVE	Cronbach's Alpha
Transformational leadership	A1. Providing information and individual attention	8	TL1 TL9 TL11 TL12 TL13 TL18 TL19 TL20	1334.805 *p < 0.01*	0. 890	7.211	59.370	0.864
	A2. Developing a vision and giving direction	5	TL3 TL4 TL5 TL6 TL7					0.798
	A3. Cooperative climate	4	TL2 TL8 TL10 TL14					0.621
	A4. Improve teaching	3	TL15 TL16 TL17					0.728
	Total	20						

Table 2. Analysis of Variance (ANOVA)

Variables	Genre	N	Mean	SD	p
Extraversion	Males	88	4.0292	0.53896	0.814
	Females	75	4.0514	0.64815	
Neuroticism	Males	88	2.0497	0.68741	0.151
	Females	75	2.1983	0.62840	
Agreeableness	Males	88	4.0852	0.53858	0.932
	Females	75	4.0933	0.65730	
Openness	Males	88	3.6500	0.99666	0.000
	Females	75	4.2480	0.61849	
Conscientiousness	Males	88	4.2094	0.54879	0.008
	Females	75	4.4286	0.48983	
Providing information and individual attention	Males	88	4.3310	0.51348	0.162
	Females	75	4.4433	0.50307	
Developing a vision and giving direction	Males	88	4.3205	0.52657	0.316
	Females	75	4.4027	0.51517	
Cooperative climate	Males	88	4.4545	0.44777	0.354
	Females	75	4.5167	0.40548	
Improved teaching	Males	88	3.4545	0.85049	0.697
	Females	75	3.5067	0.85135	

Table 3. Correlation analysis

Variables	Providing information and individual attention	Developing a vision and giving direction	Cooperative climate	Improved teaching
Extraversion	0.325**	0.460**	0.156*	0.239**
Neuroticism	-0.274**	-0.288**	-0.284**	-0.125
Agreeableness	0.362**	0.446**	0.268**	0.172*
Openness	0.219**	0.198*	0.141	0.188*
Conscientiousness	0.473**	0.480**	0.370**	0.187*

* Correlations is significant at the 0.05 level.
** Correlations is significant at the 0.01 leve

Table 4. Regression models

	Dependent Factors				
	Model 1: Providing information and individual attention	*Model 2*: Developing a vision and giving direction	*Model 3*: Cooperative climate	*Model 4*: Improved teaching	*Model 5*: Transformational Leadership
	R^2	R^2	R^2	R^2	R^2
Independent Factors: Big-Five Factors of personality (Extraversion, Neuroticism, Agreeableness, Openness, Conscientiousness)	27.9%	34.4%	20.2%	8.2%	27.6%

of male and female school principals (leaders). Empirical results partially verified that assumption, arguing that female directors are more open and conscious than the men directors of the sample. The international literature has shown that women tend to have higher rates of neuroticism, extraversion, conscientiousness and agreeableness (e.g. Costa, Terracciano and McCrae, 2001). It is, therefore, expected that female principals are more social, dynamic, positive, tender, righteous, trustworthy, altruistic, modest and sensitive to the opinion of others. Finally, the present research revealed that the five main personality traits have a positive impact on the implementation of transformational leadership practices. In that direction, in order to achieve the professional development of their associates, principals should have self-discipline, sense of duty, ability to maintain order, righteousness, trust, altruism, modesty and sensitivity to the opinion of others, imagination,

aesthetics, ideas and values. Similar findings have been found in previous studies of other fields (e.g. Barrick and Mount, 1991)

Conclusion

Firstly, the gender of school directors does not differentiate the implementation of transformational leadership practices. Secondly, the gender of school directors differentiates two of the five categories of personality traits. More specifically, female principals seem to be more developed in the areas of openness and conscientiousness. Thirdly, personality traits have a significant impact on the level of implementation of transformational leadership practices, as it has been supported in the literature. Based on these conclusions, specific criteria can be used in order to contribute to the selection of competent educational staff and the development of educational programs that can contribute to the development of principals' skills and abilities.

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