

ORIGINAL RESEARCH PAPER

The relationship between individual characteristics and practices of self-leadership strategies in Academia

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ARTICLE INFO

Article History:

Received 28 November 2020

Revised 01 January 2021

Accepted 28 March 2021

Keywords:

Behavioral strategies

Conscientiousness

Constructive strategies

Motivation

Natural reward strategies

ABSTRACT

BACKGROUND AND OBJECTIVES: Self-leadership is an uplifting concept in this technologically driven world. Given the potential benefits of self-leadership and its increasing popularity, it is surprising that self-leadership is an under-researched topic. The purpose of this study was to understand the personality factors related to the use of self-leadership behaviors.

METHODS: This study analyzed data obtained from 217 respondents through an online survey. The study proposed model was tested using multiple regression to analyze individual characteristics of self-leaders and the results indicated that the model was partially supported.

FINDINGS: The findings indicate that individual characteristics do predict self-leadership. Personality traits variables conscientiousness ($\beta = .32, p < .01$) and openness ($\beta = .26, p < .05$) have a significant positive relationship with self-leadership practices. Surprisingly, this study found emotional stability has no significant relationship with self-leadership behavior.

CONCLUSION: The results of this study suggested that conscientiousness is important in the development of self-leadership meta-skills possibly through self-directed self-regulation and the practice of self-leadership. This study also employed a rigorous validation technique therefore, this study was able to address some of the methodological limitations of previous studies such as common method variance by examining the proposed relationships in a longitudinal setting.

DOI: [10.22034/IJHCUM.2022.01.03](https://doi.org/10.22034/IJHCUM.2022.01.03)

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NUMBER OF REFERENCES

54



NUMBER OF FIGURES

1



NUMBER OF TABLES

4

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Note: Discussion period for this manuscript open until April 1, 2022 on IJHCUM website at the "Show Article."

INTRODUCTION

Following the event, Great Recession 2008–2013, the environment for business organizations has become volatile, and full of unpredictable events that challenged professionals to perform in a reality (Furtner et al., 2015). Previous research supports self-leadership strategies are to be effective in enhancing the performance of individuals in work, athletic, and educational settings (Houghton et al., 2004; Ingvarson, 2009; Stashevsky et al., 2006). However, it is important to explain that for an organization to survive nowadays productivity, it has to build a specific leadership that can demonstrate intelligence, in all its aspects within the organization to persuade others, and introduce the management appropriate tend always the consideration of motivation the staff. However, to ensure that they feel happy with their job to the evolution of organization (Dinh et al., 2014; Marques et al., 2019; Zehnder et al., 2017). Self-leadership practices offer many potential benefits, however, it is surprising that self-leadership is an under-researched topic (Bush et al., 2020). Some research has investigated the relationship between self-leadership and personality (Bendell et al., 2019; Gagné and Deci, 2005; Neck and Manz, 2010), yet few rigorous studies have been conducted. According to (Stewart et al., 2019), little or less is known about the characteristics of individuals who are self-leaders. This is surprising given that some studies of self-leadership assume that personality traits are mostly responsible for self-leadership behavior (Prussia et al., 1998). Given this focus on personality, it is not surprising that attention has not been paid to non-personality characteristics, such as the attitudes of individuals. Furthermore, yet, from a managerial point of view, understanding how traits and the work context affect employees' self-leadership behavior, and not just outcomes can be immensely helpful. This is because an understanding of how individual factors influence self-leadership can help top-level management make more informed decisions when implementing human resources development programs in their organizations. Given the relatively scarce, and fragmented research on the links between individual factors, on the one hand, and with self-leadership, on the other, more rigorous studies must be conducted to fill the gap. Thus, this study goes beyond existing studies by investigating the effect of individual factors on the practice of

self-leadership. More specifically, it is necessary to understand the degree to which individual differences (i.e., personality traits and attitudes) and situational factors (i.e., job autonomy, time pressure, the perceived stressfulness of the environment) are related to self-leadership. Given the mounting interest in the effects of personality on individual behavior in the workplace, research on personality and other individual differences as predictors of self-leadership has been urged (Houghton et al., 2004) due to limited studies that have been done so far. Therefore, this study will examine the interactive effect of individual factors on self-leadership. Besides, to date, outside of Western populations, very little self-leadership research has been conducted. However, the self-leadership application is likely to differ across cultures and regions. While there have been a few studies on self-leadership done in Western countries. However, no research has been done in the world's 6th most populous and multicultural country like Pakistan. It is therefore important to investigate self-leadership in multicultural contexts because it will provide a foundation for understanding its generalizability potential. Neck and Milliman (1994) argued that it is vital for individuals to know how to lead themselves before they lead or manage others. Therefore, they need first to make sure that they are themselves effective self-leaders so that they can set an example for the people they want to lead. This study provides a compelling background for a research study grounded in the discipline of human capital. It is vital to understand the contributing factors that influence the practice of self-leadership in academic settings because they occupy a prominent position in the knowledge production processes. The findings of this study will increase the understanding of not only the characteristics of individuals with the propensity to practice self-leadership but also of the types of contexts or situations that may facilitate self-leadership behavior. Second, this study contributes to self-leadership theory and empirical knowledge by investigating the interaction between individual factors that influence self-leadership behavior. Individuals who self-lead can initiate positive behavioral outcomes; thus, it is important to know if the individual's self-leadership would be different in every context and situation. Further, the self-leadership construct has been relatively slow to develop (Neck and Houghton 2006) due to the lack

of a validated measurement scale. This study will fill a void in the literature since it is empirical as opposed to conceptual.

Theoretical background and hypotheses development

The self-leadership concept originated from the social cognitive theory which suggests that human behavior can be best explained by a triadic model that includes cognitive influences, environmental influences, and behavior (Bandura, 1986). This theory describes human behavior as cognitive processes that are put into action by the effects of the environment (Neck and Houghton, 2006). One aspect which illustrates a uniquely human capability that people utilize to evaluate and alter their thought and behavior is self-reflection (Bandura, 1986). In line with this thought, the beliefs that individuals have about themselves and their abilities are essential elements of self-control (Neck and Manz, 1996). This is where the term self-efficacy, which refers to individuals' self-assessments of their capabilities, emerged. The importance of self-efficacy is in the way in which it affects the direction and persistence of effort. Self-determination theory (Deci and Ryan, 1985), which suggests individual motivation consists of extrinsic motivation and intrinsic motivation. Extrinsic motivation refers to external factors such as tangible rewards, whereas intrinsic motivation is developed internally within a person (Deci and Ryan, 1985) proposed that humans are active participants who seek to achieve their needs and goals, which become internalized. Indeed, (Locke and Latham, 2004) argued that humans can make choices and act according to their interests and goals. However, having can choices and act according to one's interests and goals would not be of much help without efficacy (Gagné and Deci, 2005). This brings us back to social cognitive theory's emphasis on the importance of self-efficacy, which refers to the necessity of a person's self-assessment of their capabilities to perform a task (Manz and Sims Jr, 1980). In other words, having the will to do something with the ability to do it will be a reality with the wants and needs to do it. Having said that, self-determination theory has become an important part of self-leadership, in which natural rewards strategies represent a form of intrinsic motivation in self-regulation (Manz, 1986; Neck and Houghton, 2006; Pinskaya et al., 2021; Ghazalia et al., 2021). Neck and Milliman, (1994) linked self-

leadership with cognitive therapy by suggesting various strategies, such as challenging dysfunctional thoughts by using rational thoughts and beliefs. However, many of the problems that individuals encounter in today's world result from dysfunctional thought processes that often lead to depression. In response to this, constructive thought pattern strategies seek to eliminate such distorted beliefs (Neck and Manz, 2010).

Self-leadership strategies

The utilization of mental and behavioral techniques can be further divided into three sets of strategies namely: constructive, behavior, and natural reward strategies (Houghton et al., 2004; Manz, 1986; Neck and Milliman, 1994; S. Williams, 1997). These strategies teach people to be conscious of their behavior and thought to be more effective in their work-life. According to Neck and Manz (1996), effective designed behavior strategies aimed to enhance desirable positive behavior that results in successful outcomes, while in contrast, it reduces undesirable negative behavior that may result in unsuccessful outcomes (Mahoney, 1978; Neck et al., 1999). The behavior strategic approach focuses on identifying and replacing undesired behavior with more effective desirable behavior through self-setting goal process, self-correcting, self-observation, self-cueing, and self-reward (Mahoney, 1978; Mahoney and Hermodson, 1979; Manz and Sims Jr, 1980; Neck and Houghton, 2006). Plenty of research work suggests that specific, realistic, and challenging goal setting impact significantly performance suggests task achievement. This process is consisting of certain goals adoption while accepting challenging goals can affect individual motivation to perform (Locke and Latham, 1990). While one can improve performance through self-assessment, with pre-defined goals or targets (Manz and Sims, 1980; Neck et al., 1999). While constructive self-examination of unproductive behavior and reshape into a more positive desirable direction (Marques-Quinteiro and Curral, 2012; Politis, 2006). The next step is to link self-reward to goal achievement. This self-reward varies with the level of goal achievement. While individuals need reward contingencies to energize direct necessary behavior towards better performance (Mahoney, 1978; Mahoney and Hermodson, 1979; Manz and Sims, 1980). Similarly, to shape desirable behavior

effectively self-feedback can also be used (Manz and Sims, 2001). However, more importantly, is the practice desire behavior which helps an individual in the correction if needed, which may avoid costly miscues. Winding up, behavior strategies encourage and motivate the desirable positive behavior by suppressing negative undesirable behavior which could lead to successful outcomes (Manz, 1992; Manz and Sims Jr, 1980; Neck et al., 1999). Constructive focus strategies in contrast, to behavior aimed strategies, is the formation of positive constructive patterns of thought thinking in habitual ways that may impact improved performance (Neck and Houghton, 2006). Alves and Wood (2006), constructive positive thinking reduces dysfunctional beliefs, negative assumptions, while increase and build a positive self-image. To align cognition with positive behavior, individuals may apply constructive focus strategies at the time when they engage in visualizing performance (Neck and Manz, 1996). However, these strategies involve the habitual functional pattern of thinking to create and maintain constructive thought. The self-analysis process, may enable individuals to identify, comfort, and replace negative assumptions with more positive and rational ones (Manz, 1992; Marques, 2014). Natural reward strategies increase intrinsic motivation, an essential key component for successful performance (Neck et al., 2004). However, task enjoyable features enhanced self-determination and could result in increased subjective competence experience (Alves and Wood, 2006). People primarily opt for two types of natural reward strategies, by adding more enjoyable or pleasant aspects of the activity or task, such that

it becomes naturally rewarding it-self. This can be achieved by focusing and directing one’s perception away from undesirable aspects to diverting it on the rewarding pleasant aspect of the task (Neck and Houghton, 2006; Neck et al., 2004). This could lead to enhanced competence, sense of purpose, and self-control (Deci and Ryan, 1985). While enjoyable feature building into an activity or task becomes itself gratifying by task intrinsically reward aspects (Neck and Houghton, 2006). Hence, previous research, for instance, Gomes et al., (2015) shows for innovative behavior natural reward strategies are necessary, and experience pleasant experiences during goal-striving activities.

Hypothesized model of the study

The variables hypothesized to predict self-leadership are shown below. Fig. 1 shows the model of the Study, with three personality traits proposed as predictors of self-leadership.

Personality traits

Personality is a stable pattern of characteristics and traits that shapes the behavior of individuals and differentiates people from one another (Matthews et al., 2003). Personality is also likely to influence individuals’ behavior, life and career choices, and job performance (Borghans et al., 2008). There are two ways in which personality affects self-leadership. First, personality affects self-leadership by affecting the self-regulation or self-management process directly (Barlett and Anderson, 2012). Second, personality affects self-leadership through its effect

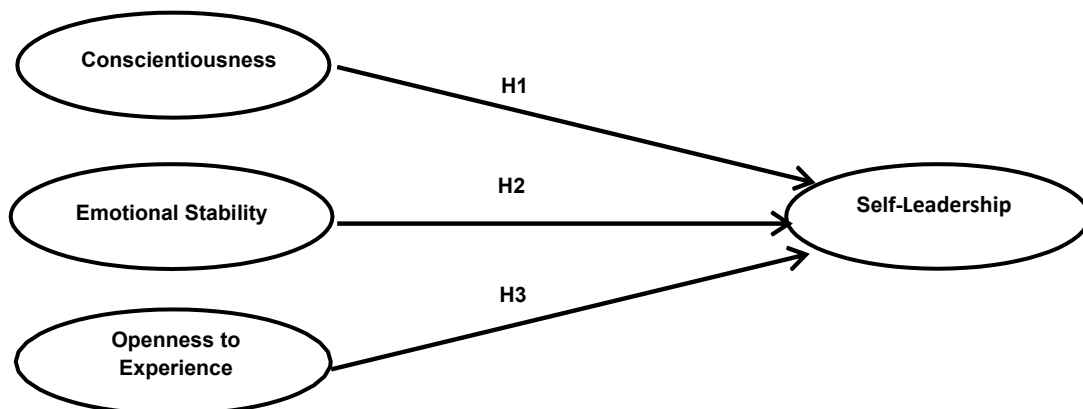


Fig. 1: Personality traits and self-leadership

on meta-learning or levels of meta-skill (Azucar *et al.*, 2018). To date, there is limited research demonstrating that personality traits are important predictors influencing the practice of self-leadership. There are exceptions though. For example, (Williams and Collins, 1995) evidenced self-management and personality as a significant positive relationship. The judging dimension, which corresponds with conscientiousness and sense, corresponds to openness to experience and was associated with self-management. As can be seen from this list of studies on self-leadership (and its predecessor, self-management) and personality traits, these studies have been cross-sectional, except the study by (Stewart *et al.*, 1996) which involved interventions. The cross-sectional studies are vulnerable to common methods variance (CMV) (Menzel *et al.*, 2010). Based on this previous research, it appears as though personality and self-leadership are likely to have a positive effect. However, there is also a limitation on previous work in terms of theory due to the use of MBTI; which is not a robust theory. Therefore, this study uses a well-validated personality model on which to develop hypotheses. This study used the Big-Five model (Goldberg *et al.*, 2006) because it is a well-accepted personality dimension and can serve as a meaningful classification of personality traits. Furthermore, the Big-Five model has been found in conceptual frameworks across different samples in various studies. Besides, previous studies show the Big Five personality traits yielded strong relationships with motivation and performance (Mount *et al.*, 2005).

Conscientiousness

Conscientiousness is defined as the tendency to be dependable (reliable, careful, and responsible), efficient (competent, organized, dutiful, purposeful, self-disciplined and thorough), and industrious (hardworking, goal-focused, achievement striving and persistent (Houghton *et al.*, 2004; Ilgen and Pulakos, 1999; Stewart *et al.*, 1996; Williams and Collins, 1995). Self-leadership involves conscious observation of one's behavior, the planning of goal setting, self-cueing, organization of one's time and environment, and consistent practice (Manz, 1986). These skills are consistent with those who tend to be hardworking, achievement-oriented, and goal-setting (Jensen *et al.*, 2002; Mount *et al.*, 2005; Roberts *et al.*, 2009; Roberts

et al., 2014; Robertson *et al.*, 2000). Empirically, (Gerhardt *et al.*, 2007) found that conscientiousness was related to self-management for a sample of 228 undergraduate students. In another separate study, (Bendell *et al.*, 2019) observed conscientiousness was related to intrinsic motivation, which is one of the natural reward strategies of self-leadership. Similarly in another study was conducted on a sample of systems engineers at a large information systems company at a Japanese automaker (Watanabe *et al.*, 2011). Following this theoretical rationale, the following hypothesis is proposed:

Hypothesis 1: Conscientiousness will be positively related to self-leadership

Emotional stability

Emotional stability, often called neuroticism, has been described in the literature as an individual's degree of self-confidence, tolerance of stress, optimism, and self-consciousness (Hills and Argyle, 2001). Emotional stability enables an individual to remain steady under pressure and to handle negative feedback (Gerhardt *et al.*, 2007; Hay and Ashman, 2003; Hills and Argyle, 2001) found that neuroticism was negatively related to goal-setting. Other than a self-goal setting, I argue that emotional stability is also related to other self-leadership strategies. (Watanabe *et al.*, 2011) the model suggested that anxiety, which is closely related to neuroticism, leads to poor self-regulation generally. In particular, the high level of emotionality (Salgado, 2002) associated with low emotional stability, would impair rational decision making and the self-awareness strategy. Finally, neurotic individuals are also more likely to have irrational beliefs and assumptions about themselves (Gerhardt *et al.*, 2007), which may cloud their judgment in assessing their ability accurately. Therefore, the following hypothesis is expected:

Hypothesis 2: Emotional stability will be positively related to self-leadership

Openness to experience

Openness to experience, or the intellectual dimension of the Big Five personality traits, is characterized by individuals who are curious, imaginative, artistic, creative, broad-minded, and intelligent and have a positive attitude toward learning. Previous studies suggested that openness to experience may influence individuals' propensity

to practice self-leadership due to their achievement orientation nature. This appears to be supported by empirical evidence. (Williams and Collins, 1995) in their study, a sample of 347 university students enrolled in educational psychology courses was invited to participate in the study during their class period. (Roberts et al., 2014) found a correlation between openness to experience and goal-setting motivation a construct which, while not exactly a self-leadership strategy is likely to be closely associated with behavioral self-leadership (Goldberg et al., 2006; Menzel et al., 2010; Terracciano et al., 2008). Furthermore, previous studies have suggested that individuals who are open to experience tend to be able to find meaningfulness and to experience feelings of competence, which is associated with the competence aspect of the natural rewards strategy. For these reasons, hypothesis 3 were developed:

Hypothesis 3: Openness to Experience will be positively related to self-leadership. The current study has been carried out in Peshawar in December 2020.

MATERIALS AND METHODS

Participants and procedure

The respondents were students from the Pakistan public universities as outlined by the Higher Education Commission of Pakistan. Before data collection, permission was sought from the Higher Education Regulatory Authority (HERA), Peshawar. Surveys were administered via the internet to ease data collection, specifically, the costs, geographical coverage, and speed of delivery. A total of 217 respondents participated in the survey. The overall response rate after data cleansing (missing values and outliers) was approximately 72%. This response rate was encouraging and greater than other related

studies regarding students with response rates ranging between 30 to 57 percent (Dee et al., 2000). Almost 66% of the students were male and many had worked previously (39.8% casual work; 30.6% part-time work; 20.4% full-time work) Table 1. Participants ranged in age from 18 to 44 years and the average years of employment were 5.69 with a standard deviation (SD) = 3.91.

Measures

A 5-point Likert scale ranging from 1 (never true) to 5 (very true) for the self-leadership scale and 1 (not at all accurate) to 5 (completely accurate) for personality traits. While conscientiousness and Openness to experience were assessed with five items from the International Personality Item Pool on a 5- 5-point Likert-style response scale (Goldberg et al., 2006). Emotional stability was assessed at time one and time two with six items from the International Personality Item Pool (Goldberg et al., 2006). Self-leadership skills were assessed with 35 items from the revised Self-Leadership Questionnaire (Houghton and Neck, 2002). In this study model hypotheses suggested that conscientiousness (Hypothesis 1), emotional stability (Hypothesis 2), and openness to experience (Hypothesis 3) would be positively related to self-leadership. To ensure no violation of the assumptions such as linearity, normality, multicollinearity, and homoscedasticity preliminary analyses were conducted. Multivariate outliers can be detected by inspecting the Mahalanobis distances using multiple regression (Riani et al., 2009). An investigation of multivariate outliers using Mahalanobis distance through the SPSS 24. Regression analysis was undertaken, as mentioned above, and based on the recommendation of Tabachnick et al. (2007) and Rucci et al. (2007) step-by-step procedure. The normality distribution of data was assessed by both graphical

Table 1: Respondents profile

	Frequency	Percent
Gender		
Male	142	65.4
Female	75	34.6
Education qualification		
14 years of schooling	146	67.3
16 years of schooling	71	32.7
Employment status		
Casual work	87	39.8
Part-time work	75	30.6
Full-time work	55	20.4

methods and statistical tests. The skewness and kurtosis were within the ± 1.0 range except for one variable. The other normality tests like Kolmogorov-Smirnov were statistically significant for a few variables. The other statistic used to assess normality was the comparison between the mean, the trimmed mean, and the median to see whether the extreme scores had a strong influence on the mean and the results show no violation of the normality distribution regarding data.

Correlation between the variables

Multivariate analysis requires variables to be correlated with each other. A correlation coefficient above .30 is preferable. Nakagawa (2004) suggested that the value of $r = .10$ to $.29$ is having a small relationship strength between variables, the value of $r = .30$ to $.49$ is considered as having a medium strength of the relationship, and the value of $r = .50$ to 1.0 is considered as large strength (Taylor, 1990). This guideline applies to both negative and positive values (Brünger, 1992). The correlations between variables are shown in Table 2. The positive correlations among conscientiousness and openness to experience with self-leadership suggest support for hypotheses 1 and 3. In this case, both of the scales (conscientiousness and openness to experience) correlate substantially with self-leadership (.315 and .316 respectively). However, hypothesis 2 may not be supported which means emotional stability was uncorrelated with self-leadership. The correlation between each of the independent variables should not be too high. Variables with a correlation of .70 or more should not be included in the same analysis. Multicollinearity is a problem when variables are very highly correlated, creating

a situation of redundant information. From Table 2 it can be seen that the correlation between each of the independent variables is not too high; which is less than .70. Also, according to, the commonly used cut-off points for determining the presence of multicollinearity are tolerance values of less than .10 or a VIF (Variation Inflation Factor) value of above 10. In this study, the tolerance value for emotional stability, openness to experience, and conscientiousness is not less than .10 (.867, .820, .941 respectively); indicating no multicollinearity problem. This is also supported by the VIF values, which are 1.15, 1.22, and 1.06 respectively; which is well below the cut-off of 10. Which are well within normal bounds, suggesting that multicollinearity is not present among the variables. To check for any retention or mortality biases, this study tested the differences between participants' genders. A t-test showed no significant differences on self-leadership scores for participants genders ($M = 3.698$, $SD = .418$) and non-participants ($M = 3.706$, $SD = .356$); $t(106) = .219$, $p = .83$ (two-tailed). There was also no significant difference on conscientiousness between male ($M = 3.888$, $SD = .672$), and female participants ($M = 3.750$, $SD = .657$); $t(106) = -1.03$, $p = .31$ (two-tailed), nor on openness to experience between male ($M = 3.366$, $SD = .616$) and female participants ($M = 3.397$, $SD = .661$); $t(106) = .25$, $p = .80$ (two-tailed). Finally, there was no significant difference between male ($M = 3.191$, $SD = .811$) and female participants ($M = 3.064$, $SD = .677$); $t(106) = -.83$, $p = .41$ (two-tailed) on emotional stability. To measure the internal consistency of the variables, Cronbach alpha (α) was used. The alpha for the variables ranged from 0.88 to 0.80 (Table 3).

Table 2: Pearson Product-Moment Correlations between variables

Scale	1	2	3
1. Self-Leadership			
2. Emotional Stab	.104		
3. Openness	.316**	.358**	
4. Conscientiousness	.315**	.011	.231*

Table 3: Means, Standard Deviations, and Scale Reliabilities

Variables	Mean	Standard Deviation	Cronbach's alpha	Number of items
Self-Leadership	3.70	.40	0.87	35
Emotional Stability	3.15	.76	0.80	6
Openness	3.38	.63	0.88	4
Conscientiousness	3.84	.67	0.83	4

RESULTS AND DISCUSSION

The hypothesis of the study model suggested that hypothesis 1 (conscientiousness), hypotheses 2 (emotional stability), and hypotheses 3 (openness to experience) likely to be positively related to self-leadership. Personality traits were regressed on self-leadership after controlling for the possible effect of demographic variables. Step 1 Age, years of education and gender, were entered, explaining 1% of the variance in self-leadership. After entry of conscientiousness, openness to experience, and emotional stability at Step 2, the total variance explained was 17.4%, $F(5, 100) = 3.08, p < .01$. An additional 15% of the variance in self-leadership (R^2 change = .15, F change (3, 100) = 5.62, $p < .001$) explained by the personality factors. Only two personality traits were statistically significant - Conscientiousness ($\beta = .32, p < .01$) and Openness to Experience ($\beta = .26, p < .05$) see Table 4.

Finally, to increase the rigor of the research, time two variables were included. Hierarchical regression analysis was used. Controlling for time one levels of self-leadership and personality factors at time one, as well as years of education, gender, and age. By including time one measures of self-leadership as well, it is possible to look at the effects of personality over and above the intervention. Essentially, by including time one measures of self-leadership in the first step, the effect of the intervention was controlled for, making it possible to examine the effect of personality independent of the intervention. This is because although personality might affect self-leadership behaviors all else being equal, it might not overcome the more proximal effect of the intervention. Therefore, Model 1 included

self-leadership at time one, personality factors at time one, as well as demographic variables such as years of employment, age, and gender. Model 1 explained 39% of the variance in self-leadership, whereas the total variance explained by Model 1 as a whole was 60%, $F(9, 59) = 5.88, p < .001$. Personality traits explained an additional 20.3% of the variance in self-leadership, after controlling levels of self-leadership and personality antecedents at time one as well as gender and age; R^2 change = .20, F change (3, 59) = 6.70, $p < .001$. In the final model, only self-leadership at time one ($\beta = .55, p < .001$) and conscientiousness at time two ($\beta = .36, p < .05$) were significant. Therefore, in this more rigorous test, Hypothesis 1 and 3 were supported but Hypotheses 2 were not. In this study, the proposed model was tested and the results of the analyses indicated that the proposed model was partially supported. In particular, conscientiousness was related to self-leadership when controlling for the previous self-leadership. Openness to experience was related to self-leadership in the cross-sectional analysis but was not significant after controlling for levels of self-leadership; whereas the relationship between emotional stability and self-leadership was not supported in analysis. The results suggest that conscientiousness is important in the development of self-leadership meta-skills possibly through self-directed self-regulation and the practice of self-leadership. Openness to experience was only related to self-leadership at time one, but not at time two. Due to the intervention within this study, the reason for this could be that the participants have changed to increase their skills through self-leadership training. This is because people who changed to experience would be interested in self-

Table 4: Hierarchical Regression

Variables and Statistics	Model 1 (β)	Model 2 (β)
Gender	0.07	0.07
Age	-0.06	-0.08
Years of education	0.13	0.13
Emotional Stability		0.03
Openness to Experience		0.26*
Conscientiousness		0.32**
R^2	0.01	0.17***
ΔR^2	0.01	0.15***
F	0.47	3.08**

leadership strategies for the first time. Once they have mastered the skills, the effect of their training could be more than the effects of their personality. Besides, (Stashevsky *et al.*, 2006) suggested that a self-leadership training intervention may have an effect on subjects' and above the effects of personality. This may be because openness to experience involves "creativity, sophistication, and curiosity" (Houghton *et al.*, 2004) and desire for knowledge (Terracciano *et al.*, 2008). However, emotional stability was not related to self-leadership. It could be that the hypothesized negative effects associated with low emotional stability (e.g., rational decision making, response to feedback) were less relevant than the fact that the characteristics that are linked to it are not related to motivational goals (Barlett and Anderson, 2012). Therefore, it does not matter what level of emotional stability one has because it would not affect one's self-leadership skills.

CONCLUSION

This study discussed the personality factors related to the use of self-leadership behaviors. Although the three dimensions of self-leadership (behavioral, natural reward, and constructive thought pattern) are all internally focused, they are also distinct from one another. A behavioral focused strategy concentrates on the behavior and is self-discipline-oriented. Natural reward strategies seek to create positive aspects within the work itself, whereas constructive thought pattern strategies are an internal approach focused on modes of thinking in positive and desirable ways. Many researchers are beginning to change direction in studying work motivation by focusing on the motivational mechanisms that sustain employees' motivation and performance. Although self-leadership can be viewed as a motivational mechanism to help individuals achieve their goals, it would be helpful to investigate when self-leadership behaviors are likely to emerge. This is because although the concept of self-leadership has been around for several years, there has been a shortage of research in certain areas. It is thus hoped that the findings of this study will facilitate knowledge-based recommendations for developing

self-leadership practice among employees. The current research is not without limitations. Future research if exploring the benefits of training if provided before the start of the online session will help understand the relationship. The same training is used as a moderator will also help in elaborate the phenomena. Further, this study relied on self-report data, however, due to the psychological nature of the variables. Because of the fairly small sample size with relatively low power and potential sampling bias, another study can build upon the results of this study in the future.

AUTHOR CONTRIBUTIONS

F. Afridi performed literature review, compiled the data, prepared the manuscript text and editing references. S. Jan performed the Methodology, and manuscript preparation. B. Ayaz helped in the literature review, and editing references.

ACKNOWLEDGEMENTS

The Authors would like to acknowledge faculty members of Islamia College Peshawar management sciences department to encourage students to participate in the survey. Authors are also very thankful to the anonymous reviewers for providing detailed comments that lead to a constructive improvement in the quality of the manuscript.

CONFLICTS OF INTEREST

The authors declare no potential conflict of interest regarding the publication of this work. In addition, the ethical issues including plagiarism, informed consent, misconduct, data fabrication and, or falsification, double publication and, or submission, and redundancy have been completely witnessed by the authors.

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ABBREVIATIONS

HERA	Higher Education Regulatory Authority
SD	Standard Deviation
P	Probability
R	Regression

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HOW TO CITE THIS ARTICLE

Afridi, F.E.A.; Jan, Sh.; Ayaz, B., (2021). *The relationship between individual characteristics and practices of self-leadership strategies in Academia*, *Int. J. Hum. Capital Urban Manage.*, 7(1): 29-40.

DOI: [10.22034/IJHCUM.2022.01.03](https://doi.org/10.22034/IJHCUM.2022.01.03)

url: http://www.ijhcum.net/article_243188.html

