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The predictive power of university students’ self-leadership strategies on their self-efficacy

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This study aims to analyse correlations between the self-leadership strategies employed by university students and their self-efficacy and to determine whether or not their self-leadership and self-efficacy differ significantly on the basis of gender. The study is in the model of correlational survey and it uses random sampling method. The study was performed with the voluntary participation of undergraduate students (N=341), and the research data were collected through Self-Leadership Scale and General Self-Efficacy Scale. Multiple regression analysis was employed in determining the predictive power of self-leadership strategies. The analysis results demonstrated that self-leadership strategies were correlated with self-efficacy and that self-leadership strategies were predictors of self-efficacy. Accordingly, the strongest predictor of self-efficacy was natural reward strategies. In the context of the conclusions reached in this research, training and activities to promote self-leadership skills can be included in higher education programmes.

Key words: Self-leadership, self-leadership strategies, self-efficacy, university students.

INTRODUCTION

Higher education is the educational environments where students’ personal development is supported in addition to their gaining occupational knowledge and skills. Such environments have developmental potentials for students; because students who are physically away from their family in this process are expected to cope with several tasks and responsibilities. Setting goals, managing and regulating their feelings, thoughts and behaviours are a part of their daily life. On the other hand, coming across tasks that they have not come across before or the difficulty of the tasks required that they have certain skills. They need such performance promoting skills as making the new and difficult tasks enjoyable, setting appropriate goals, motivating oneself by imagining successful performance, making use of the clues in fulfilling a task, thinking constructively and positively and rewarding or punishing oneself in directing behaviours. The aforementioned skills are generally conceptualised as self-leadership in the literature (Manz, 2015).

A review of relevant studies makes it clear that the phenomenon of self-leadership is remarkable mostly in the work life. The studies mentioned in general are concerned with the correlations between employees’ self-leadership and their performance (Arı and Avcı, 2017; Kayral, 2015; Manz, 2015). In the current situation, self-
leadership is limited to the business world, and it is seen that the role played by humanity (physical and spiritual) and education is neglected despite almost forty years of work in theory and practice and an indisputable place in the daily life of human beings.

On the other hand, it is stated that self-leadership should be considered in different cultural environments and thus whether it is universal or not should be demonstrated (Stewart et al., 2011). Turkey is separated from the collectivist society as individualistic western societies (Hofstede Insights n.d.).

Moreover, no studies concerning the correlations between self-leadership strategies and self-efficacy are available. The unavailability of studies about the correlations between self-leadership and self-efficacy at university level, which prepares students to occupations and to life, has made performing this study a necessity.

**Self-leadership**

Self-leadership was first conceptualised by Manz (2015) as the art of leading oneself. Self-leadership is a process in which one decides what to do, why to do it, how to do it and when to do it and which one directs. In this process individuals make use of a number of strategies. Employing the strategies leads to individuals’ successful performance, to coping with stress and briefly to being more effective in life. The purpose in self-leadership strategies is to control and manage one’s own feelings, thoughts and behaviours on his own. Individual differences are available in the use of strategies serving to different purposes. According to the theory of self-leadership, strategies are divided into such categories as behaviour-focused strategies, constructive thought strategies and natural reward strategies (Manz, 2015).

Behaviour-focused strategies are composed of self-observation, setting goals for oneself, self-reward, self-punishment and setting reminders for oneself. These strategies cause individuals to focus on their own behaviours, to observe their own behaviours and to determine why they behave in the way they behave and to modify their behaviours to make them fit to the situation. Behaviour-focused strategies also help individuals to make decisions about their life and thus to set goals for the future. A student studying at the university can use the exchange program as a goal for going abroad. In this way, the strategies mentioned cause people to self-reward and to be more effective on attaining their goals. The student can imagine himself in the country he wants to go, he can congratulate himself when his dream abroad is realized and he can start preparations. When the reverse occurs and they cannot attain their goals or they display wrong behaviours, they punish themselves or criticise themselves. When the student’s foreign dream is not realized for a variety of reasons, s/he may be angry at himself and may blame himself. S/He may estrange himself from her/his classes and social life.

On the other hand, individuals make to-do lists throughout the day and thus remind themselves what to do and increase their motivation. After the admission of the student who is admitted to the student exchange program, preparing a list related to the obligations such as liability agreement, training protocol, passport and visa procedures can help to be done on time and result in problem-free. They try to direct their behaviours and to self-lead in this way. Constructive thought strategies, on the other hand, involve individuals’ focusing on their thoughts and transforming the non-functional thoughts into functional ones. These strategies contain individuals’ positive internal dialogues with themselves and their dreaming successful performance. Thus, they direct their thoughts and decide on what to think and how to think it. Students can face difficult and boring tasks such as making presentations, preparing homework and preparing for the exam. In these difficult and tedious tasks, it may be useful to imagine a successful presentation, to change their negative thoughts about the challenge of the homework and the exam. Finally, natural reward strategies focus on the likable sides of an individuals’ tasks or activities or make them enjoyable and thus help individuals to succeed in the tasks or activities (Neck and Houghton, 2006; Norris, 2008; Tat and Zeitel-Bank, 2013). The student who applied to the student exchange program focuses on the difficulties that the applicant will live in the acceptance of the application rather than the difficult and laborious aspects of the application.

**Self-efficacy**

Human resource needs cognitive, behavioural and self-regulated instruments in the management of the changing conditions of life. In this context, efforts were made to explain how to make human resource more effective in the theory of self-efficacy (Bandura, 2011). Self-efficacy is defined as individuals’ belief in their ability to cope with the current situation when they encounter challenging and stressful situations and feeling that they have the necessary abilities (Luszczynska et al., 2005). In other words, self-efficacy is individuals’ belief that they can skilfully perform a task (Maddux, 2002) and their self-confidence in this respect rather than their perceived skills. In this case, it is important to improve individuals’ self-belief and self-confidence because people having strong self-efficacy beliefs can overcome difficulties and can perform new tasks.

**Self-leadership and self-efficacy**

It is claimed in the literature of self-leadership that self-
efficacy should be strong in implementing cognitive and behavioural self-leadership strategies. The studies available have demonstrated that self-leadership is correlated with self-efficacy, that the correlation is positive (Marshall et al., 2012; Norris, 2008; Wang et al., 2016) and that self-leadership is predictive of self-efficacy (Marshall et al., 2012; Rice, 2014). It was observed in the studies conducted on the basis of the results of self-leadership training that self-efficacy increased (Further et al., 2015; Houghton et al., 2012; Unsworth and Mason, 2012) and it was claimed that self-leadership training can improve self-efficacy (Boss and Sims, 2008).

Self-efficacy is individuals' beliefs in organising and conducting the behaviours necessary for achieving the goals and objectives they set in different areas of their life (Sá de Souza et al., 2014), or their subjective evaluations about those beliefs (Evans and Tress, 2009). Self-efficacy is closely related to the use of self-leadership strategies which are composed of several different skills. Setting personal goals, which is among self-leadership strategies, is influenced by individuals' evaluation of their abilities (Bandura, 2011). Individuals need to focus on their mission and be persistent so that they can attain the goals they have set (Bradley and Corwyn, 2004). In that case, self-efficacy belief is important. High self-efficacy perception enables individuals to set great goals and not to give up their goals easily (Luszczynska et al., 2005).

Thus, self-efficacy can be instrumental to performance which develops depending on self-leadership. Research findings support the claim that self-efficacy is instrumental in the relations between self-leadership and performance (Konradt et al., 2009). Contrary to that, individuals who do not believe in their abilities may easily give up their goals in struggle with difficulties or failure and they may make no efforts. This, in turn, can reduce their performance achievement (O'Sullivan, 2011). Humans try not to be available for activities and environments with which they do not believe they can cope (Bandura, 2011). Those beliefs play important roles in setting certain tasks and goals and in determining the situations with which individuals will cope and the ways to cope with (Further et al., 2015). Therefore, setting personal goals as a self-leadership skill can be applied to individuals with strong self-efficacy more easily. Thus, it may be stated that self-leadership increases on the basis of self-efficacy perceptions.

It is claimed that developing self-leadership strategies will also contribute significantly to self-efficacy (Mansor et al., 2013; Stewart et al., 2011; Tat and Zeitel-Bank, 2013). Thus, self-leadership strategies serve to the formation of strong self-efficacy perceptions and beliefs (Maddux, 2002). Self-leadership strategies aiming to improve performance also promote individuals' beliefs and self-efficacy in performing a task (Marshall et al., 2012). Besides, self-efficacy is also increased through self-leadership strategies' increasing the self-control (Konradt et al., 2009). Implementing self-leadership strategies can lead to positive perceptions in individuals about their efficacy and thus can increase their personal effectiveness (Tuovinen, 2010). Thinking the opposite, experiences of competence also cause self-efficacy beliefs to strengthen (Boss and Sims, 2008; Zulkosky, 2009). People with self-leadership skills can cope with the changing conditions and challenging situations more effectively with their strong feelings of self-efficacy (Yun et al., 2006) and can adjust better. Failures, on the other hand, undermine self-efficacy (Bandura, 2011). People having lower self-efficacy perceive the tasks undertaken as more difficult than they are and they have higher likelihood of experiencing failure, depression, tenseness and helplessness (Van Dinther et al., 2011). In that case, they can resort to self-punishment in the form of negative responses or self-criticism as a result of failure (James, 2009). People who cannot lead themselves are expected to have lower self-efficacy.

It has been found that constructive thought strategies are closely related to self-efficacy. A study trying to change destructive thoughts into constructive thoughts by focussing on usual patterns of thought found that participants' self-efficacy increases (Neck and Houghton, 2006). Talking positively to oneself, a constructive thought strategy, can result in individuals' feeling that they can control themselves and thus it can lead to stronger feelings of self-efficacy and better performance (Stewart et al., 2011). It was observed that self-talk in a constructive manner, mental picturing and training focusing on beliefs and assumptions increased self-efficacy in addition to increasing the work performance and positive feelings of employees (James, 2009; Unsworth and Mason, 2012). Additionally, self-clue is also a reminder system protecting individuals in attaining their goals (James, 2009). This reminder system can influence individuals' perceptions of their self-efficacies in positive ways.

Rewarding activities which are based on natural reward strategies can help individuals to self-control and to feel more capable (Manz, 2015). Thus, envisioning successful experiences in mind can increase self-efficacy. It is known that individuals focussing on constructive thoughts and natural reward experience actualise efficacies leading to higher performance (James, 2009). Consequently, descriptions offered in the literature on the correlations between self-leadership and self-efficacy and the research findings are so different that they can cause confusion. In its relationship with self-leadership, self-efficacy is introduced and investigated as the antecedent and the predictor of self-leadership and as the consequence of or predicted by self-leadership. In this case, it may be stated that there are continuous correlations between the two supporting each other. There is need to know what self-leadership strategies increase self-efficacy. Besides, there are no studies concerning the correlations between self-leadership strategies and self-efficacy. Hence, this study is expected...
to contribute to determining the self-leadership strategies university students’ use and to clarifying the correlations between self-leadership and self-efficacy. It can also shed light on the development of university students’ self-leadership and self-efficacy skills and on the arrangement of intervention programmes to be implemented. In addition to that, it can also make contributions to the literature of self-leadership and self-efficacy.

Self-leadership, self-efficacy and gender

Gender is an important factor in both self-leadership and self-efficacy. When the self-efficacy literature is examined, it is seen that men have higher self-efficacy than girls (Aypay, 2010; De Carolia and Sagone, 2014; Spence et al., 2010). On the other hand, the literature on self-leadership shows that men appeal to less autonomy strategies than girls (Kyguoliene and Ganusauskaite, 2017). In addition, it is argued that gender can create differences in importance given to strategies of self-efficacy and for this reason it should be taken into account in theory (Bendell et al., 2019). In this case, the predictive power of self-leadership strategies with gender in terms of self-efficacy remains an untapped area. The study seeks answers to the following questions:

(1) Are there significant gender differences in university students’ general self-leadership, self-leadership strategies and self-efficacies?
(2) What are the predictive powers of university students’ self-leadership strategies on their self-efficacy?

METHODOLOGY

Participants

This study is in correlational survey model. It uses random sampling method. The participants were 341 undergraduate students who attended a state university located in the west of Turkey and who were included in the research group on the basis of volunteering, 246 of whom were female and 95 of whom were male. The average age was 20.23 (SD=1.66) and the age range was between 18 and 27.

Measures

Self-leadership scale (SLS)

It is a scale developed by Houghton and Neck (2002) from revised self-leadership list of questions (RSLQ) to measure self-leadership skills and which was later adapted into Turkish by Tabak et al. (2013). It consists of 3 strategies and 8 sub-scales. The three strategies in the scale are behaviour-focused strategies, constructive thought strategies and natural reward strategies. The 29-item scale is in 5-pointed Likert type. The total score received from the scale indicates the level of self-leadership. “I use my imagination to picture myself performing well on important tasks”, “I tend to get down on myself in my mind when I have performed poorly” and “I pay attention to how well I’m doing in my work.” These are expressions of the scale. The reliability coefficient was found as 0.88 for the scale. Confirmatory factor analysis performed demonstrated that the fit indices for the scale (X^2/df=2.90, CFI=.94, GFI=.96, NFI=.91, TLI=.91, IFI=.94, RMSEA=.07, RMR=.04) were acceptable. The Cronbach’s Alpha was found to be 0.85 in this study. The fit indices whose three-factor structure was tested in this study (X^2/df=1.84, CFI=.96, GFI=.97, NFI=.93, TLI=.95, IFI=.97, RMSEA=.05, RMR=.04) goodness of fit.

General self-efficacy scale (GSES)

The scale was developed by Schwarzer and Jerusalem (1995) to measure individuals’ perceptions of their ability to cope with stressful experiences and to adapt. The scale contains one factor and 10 items, and it requires responses between “totally agree” and “totally disagree” (in four-pointed Likert type). The scores from the scale vary between 10 and 40 and the high scores are considered to be high self-efficacy in general. “It is easy for me to stick to my aims and accomplish my goals” and “I can solve most problems if I invest the necessary effort”. These are expressions of the scale. The scale was adapted into Turkish by Aypay (2010). The internal consistency coefficient was found as 0.83 for all the scale items. The reliability coefficient for the repetition of the scale was found as 0.80 in a period of eight weeks. The Cronbach’s Alpha coefficient was 0.81. The fit indices (X^2/df= 2.53, CFI=0.95, GFI=0.95, NFI=0.92, TLI=0.93, IFI=0.95, RMSEA=0.07, RMR=0.05) for the scale had goodness of fit in this study.

FINDINGS

General self-leadership, self-leadership strategies and self-efficacy levels of university students by gender

This research analysed the correlations between self-leadership strategies and self-efficacy. The mean and standard deviations for the variables according to gender and according to total scores are shown in Table 1. An examination of Table 1 makes it clear that university students’ general self-leadership scores (M=3.90, SD=0.42) and their self-efficacy scores (M=30.53, SD=3.71) according to total scores are at “medium-high” levels. On looking at the self-leadership strategies used by them, it was found that the most frequently used strategies were natural reward strategies (M=4.09, SD=0.63), which were followed by constructive thought strategies (M=3.99, SD=0.50) and behaviour-focused strategies (M=3.56, SD=0.50), respectively.

The t test was applied to the scores obtained from the university students’ responses on the basis of self-report to seek an answer to first question posed in this study, and the results are shown in Table 2. On examining the test results, it was found that the students’ general self-leadership scores as well as their scores for behaviour-focused strategies, for constructive thought strategies and for natural reward strategies differed significantly according to gender. Thus, the female students got higher scores than the male students both in general self-leadership and the three strategies of self-leadership.
The female students used general self-leadership strategies more than the male ones. Besides, they also used behaviour-focused strategies, constructive thought strategies and natural reward strategies more than the male students. On the other hand, the female students’ self-efficacies were found to be lower than those of male students’.

The power of self-leadership strategies used by university students to predict self-efficacy

The correlations between the variables were analysed through Pearson’s correlation analysis, and binary and partial correlations were checked (Table 3). According to binary correlations, positive and significant correlations were found between behaviour-focused strategies, \( r=0.36, p<0.05 \), constructive thought strategies, \( r=0.34, p<0.05 \), natural reward strategies, \( r=0.40, p<0.05 \) and self-efficacy. As university students’ use of self-leadership strategies increase, their self-efficacy also increases. Negative and significant correlations were found between gender (female) and self-efficacy. According to the partial correlations, behaviour-focused strategies correlated positively with self-efficacy when the other variables in the regression equation were controlled \((r=0.21, p<0.05)\). By controlling the other variables, positive and significant correlations were found between constructive thought strategies and self-efficacy \((r=0.27, p<0.05)\). On controlling the other variables for natural reward strategies, the correlation coefficient for its correlations with self-efficacy was found as 0.18 \((p<0.05)\). And finally, on controlling gender and self-leadership strategies, negative correlations were found with self-efficacy \((r=-0.29, p<0.05)\).

And as the answer to the final research question gender, self-leadership strategies and self-efficacy were put to multiple regression analysis. Gender and self-leadership strategies were regarded as the independent variables and self-efficacy was regarded as the dependent variable.
dependent variable in this analysis, and efforts were made to determine the power of gender and self-leadership strategies to predict self-efficacy (Table 3). In consequence, it was found that gender along with self-leadership strategies explained 29% of the total variance in general self-efficacy ($R^2=0.29$, $F(4, 336)=33.97$, $p<0.001$). The t test results showed that all the variables included in the regression analysis were significant predictors of self-efficacy (Table 3). On examining the predictive power of the predictor variables, it was found that the most powerful predictors were natural reward strategies ($β=0.28$, $p<0.001$), gender ($β=-0.26$, $p<0.001$), behaviour-focused strategies ($β=0.21$, $p<0.001$) and constructive thought strategies ($β=0.18$, $p<0.001$).

**DISCUSSION**

This study analysed the correlations between university students’ self-leadership strategies and self-efficacy on the basis of gender. The findings obtained indicated that the students were quite good in terms of general self-leadership skills, self-leadership strategies and self-leadership levels. Gaining a place at university programmes is a challenging process. Coping with the process and being able to continue university education can be dependent on the strength of the students’ self-leadership skills and strategies and of their self-efficacy. On examining the scores the participants received from strategies, it was found that they had received similar scores. Apart from that, it was also found by looking at the scores that the students had used natural reward strategies more often. This was a finding supported by the one obtained in the literature (Kyguoliene and Ganauskaite, 2017).

The results obtained in this study demonstrated that there were significant differences between men and women in terms of general self-leadership skills, self-leadership strategies and self-efficacy. Accordingly, the women received higher scores in general self-leadership skills and in self-leadership strategies than the men. The relevant literature is supportive of these findings. Women use self-leadership strategies more often than men (Kyguoliene and Ganauskaite, 2017; Norris, 2008). The explanation for this situation can be that men are achievement oriented while women are more social adjustment oriented (Sherman et al., 2007). Loyalty and relations are important for women (Schultheiss, 2001). Family support is more important for women to continue education. Women receiving the support can be dependent on the condition for gaining their family’s trust. Self-leadership skills can play important roles in gaining the trust. On the other hand, there are also findings in the literature that there are no differences between men and women in using self-leadership strategies (Megheirkouni, 2018).

Self-efficacy was found to be in favour of male students in this study. This result can be explained with gender roles. Differences in terms of gender are attributed to men’s and women’s self-perceptions (Usher and Pajares, 2008). Women’s low expectations about handling tasks specific to men can lead to negative self-evaluations. It is claimed that while women attribute their successful performance to luck, men attribute such performance to their capabilities. Therefore, it is apparent that men have more confidence in their abilities (Bordalo et al., 2016). Apart from that, findings that there are no differences between men and women in terms of self-efficacy are also reported in the literature (Megheirkouni, 2018).

On analysing the correlations between self-leadership and self-efficacy in this study, it was found that strong self-leadership skills were possible through strong self-efficacy perceptions. The main sources of self-efficacy are the direct experiences (Bandura, 2011). The successful or unsuccessful results of the experiences can influence individuals’ judgements and feelings in positive or negative ways (Brown and Marshall, 2006; Rice, 2014; Stewart et al., 2011). This study found that there were positive and significant correlations between self-efficacy and self-leadership strategies. This was a finding consistent with the ones obtained in previous studies (Norris, 2008). Evidence was also provided in the literature that self-efficacy was a complete mediator between the use of self-leadership strategies and their consequences (Megheirkouni, 2018). The results obtained in those studies can be regarded as evidence that self-leadership contributes to self-efficacy.

The results of multiple regression analysis performed in this study showed that the findings were consistent with the ones obtained in the previous studies (Megheirkouni, 2018) and that gender, behaviour-focused strategies, natural reward strategies and constructive thought strategies contributed significantly to self-efficacy. Of the strategies, natural reward strategies were the ones with the most power to predict self-efficacy. They were followed by behaviour-focused strategies and constructive thought strategies, respectively. The findings demonstrated that self-efficacy could be predicted by self-leadership strategies as beliefs formed depending on experiences. According to Manz (2015), natural reward strategies have three elements, namely, ability feelings, self-control and goal. The three elements are fed by natural reward strategies. In that case, natural reward strategies play roles in the formation of feelings of self-control and goal in addition to increasing individuals’ positive feelings about their abilities (Ricketts et al., 2012). This study demonstrated, in support of this situation, that the use of natural reward strategies had more predictive power than the other strategies in predicting self-efficacy. Behaviour-focused strategies, however, help individuals to become aware of their behaviours and to regulate their behaviours according to feedback. Activities based on feedback can support the formation of self-efficacy. A similar finding was obtained.
in a study analysing the correlations between being aware of behaviours and willpower, constructive thought and self-efficacy. The study found that being aware of behaviours and willpower predicted self-efficacy. The strategy with the least power in predicting self-efficacy was constructive thought strategies compared to the other strategies. Constructive thought strategies can focus on thoughts and can transform negative thoughts into positive and thus can serve to the creation of positive feelings about feelings of ability. This was supported by the finding that constructive thought predicted self-efficacy (Rice, 2014). Another finding which was supportive was that replacing unhealthy thoughts with constructive thoughts led to increase in self-efficacy (Neck and Houghton, 2006). On the other hand, it was found those individuals’ thoughts focussing on external obstacles rather than on their own inadequacies could cause increase in self-efficacy (Stewart et al., 2011). Gender, which was included in the regression along with self-leadership strategies, was also found to predict self-efficacy. The value β=-0.26 obtained in the regression analysis indicated that the male participants had higher self-efficacy than the female participants.

According to the Bandura (2011), self-efficacy develops in four ways. Taking someone as a social model, having successful experiences, verbal persuasion and physical and emotional situations, which are the most effective ways of successful experiences, are effective in the development of self-efficacy. In this study, there is evidence of a strong relationship between self-leadership and self-efficacy. It can be asserted that practicing self-leadership strategies in this relationship will contribute to increase self-efficacy. Higher education is a stage of education at which the number of students increased considerably in recent years, and it is also expected that the number of students will increase substantially (Kavak, 2011). Therefore, it can be recommended that training and activities to increase students’ self-leadership be included in higher education programmes. Thus, self-efficacy can also be increased through self-leadership skills. On the other hand, stress can be reduced (McCormick et al., 2002) with contributions to self-efficacy made by self-leadership experiences and positive feelings can be increased (Unsworth and Mason, 2012). In addition to helping students to cope with difficulties they will encounter throughout their career (Megheirkouni, 2018), self-leadership skills training to be offered to students can also influence their success in their career (Houghton et al., 2012). It is stated in the literature that the need felt for employees having self-leadership knowledge and skills is increasing (Yun et al., 2006).

This study had a number of restrictions. It was conducted with data collected on the basis of self-reports from university students with the selected scales. Other studies could make use of different methods in data collection. The data can be collected through interviews, daily records and observations. This study analysed the correlations between self-leadership and self-efficacy. Different dependent and independent variables along with self-leadership and self-efficacy can be analysed together. Considering self-leadership in educational institutions and in social environments and clarifying its correlations with different variables can contribute to its development, productivity, achievement and even to the healthy relations of humans.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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The authors have not declared any conflict of interests.


