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The Influence of Leadership Self-efficacy on College Students' Leadership Practice: The Mediating Role of Motivation to Lead

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The Influence of Leadership Self-efficacy on College Students' Leadership Practice: The Mediating Role of Motivation to Lead

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Abstract

Leadership research show that important leadership antecedents such as leadership self-efficacy and motivation to lead have a significant impact on the development of leadership behaviors of individuals. This study investigated the associations between leadership self-efficacy, motivation to lead and leadership practices that influence the leadership behaviours of higher education students. In the study in which the cross-sectional research design, the sample comprised 545 undergraduates from Turkey. The results showed that increasing student leadership self-efficacy beliefs directly affected leadership practices. Also, in research found the motivation to lead to having an important partially mediated role in the relationship between student self-efficacy beliefs and leadership practices. This study contributes to the existing body of international knowledge on school leadership research by concluding that the effect of leadership self-efficacy and students' motivation to lead on student practices. As a result, in study propose that educational activities aimed at enhancing undergraduate students' leadership self-efficacy and motivation to lead include elements that concentrate on developing students' leadership self-efficacy and motivation to lead. Implications for policy, practice and research are discussed.

Keywords: Leadership self-efficacy, motivation to lead, leadership practice, undergraduate student.

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La Influencia de la Autoeficacia del Liderazgo en la Práctica de Liderazgo de Estudiantes Universitarios: el Rol Mediador de la Motivación para Liderar

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Resumen

Los estudios de liderazgo muestran que importantes antecedentes de liderazgo, como la autoeficacia del liderazgo y la motivación para liderar, tienen un impacto significativo en el desarrollo de las conductas de liderazgo de las personas. Este estudio investigó la relación entre la autoeficacia del liderazgo, la motivación para liderar y las prácticas de liderazgo que influyen en los comportamientos de liderazgo de los estudiantes de educación superior. En el estudio en el que se diseñó la investigación transversal, la muestra estuvo compuesta por 545 estudiantes universitarios de Turquía. Los resultados mostraron que el aumento de las creencias de autoeficacia del liderazgo estudiantil afectaba directamente las prácticas de liderazgo. Además, en la investigación se encontró la motivación para llevar a tener un papel importante parcialmente mediado en la relación entre las creencias de autoeficacia de los estudiantes y las prácticas de liderazgo. Como resultado, en un estudio proponen que las actividades educativas dirigidas a mejorar la autoeficacia del liderazgo de los estudiantes de pregrado y la motivación para liderar incluyen elementos que se concentran en desarrollar la autoeficacia del liderazgo de los estudiantes y la motivación para liderar. Se discuten las implicaciones para la política, la práctica y la investigación

Palabras clave: Autoeficacia del liderazgo, motivación para liderar, práctica de liderazgo, estudiante de pregrado.

Towards the end of the 20th century, with the growing interest in the leadership development of college students, many trends focused on developing students' leadership skills (Astin & Astin, 2000; Brungardt, 1997; Chan & Drasgow, 2001). These trends include changing the leadership paradigm, strengthening social identity groups, developing new leadership models for university students, and professionalizing the student leadership educator role (Kezar, 2000, Owen, Komives, Lucas, & McMahan, 2007; Northouse, 2007; Posner, 2004). Existing movements have reconciled to develop socially responsible leaders of higher education institutions. However, there is a sense that this task is possible not only through leadership training or leadership programmes, but through the collaboration of the university community.

Traditional leadership beliefs hold that a person can learn leadership skills through experience and management positions (Northouse, 2007); however, contemporary organizations believe that leadership development can be gained through education (Day, 2000; Posner, 2004; Kouzes & Posner, 2018). Thus, researchers focus on the training of higher education students under the workforce due to the increasing diversity in the workforce and with the effect of globalization and technology (Astin & Astin, 2000; Chan, Rounds & Drasgow, 2000; Chan & Drasgow, 2001; Rosch et al., 2017). In the United States, until the 1990s, policymakers did not realize that the direct and indirect aim of education is to train leaders (Antonio, 2001; Cress et al., 2001; Clark & Clark, 1994). Higher education programs in the United States (Council for the Advancement of Standards in Higher Education and National Association of Colleges and Employers) struggle to ensure that students receive a quality education and have leadership and team management skills that are aligned with employer demands within this framework (Chan & Drasgow, 2001; Cho, Harrist, Steele & Murn, 2015; Rosch & Schwartz, 2009; Rosch et al., 2017).

Individuals' leadership self-efficacy and motivation are essential psychological structures in their leadership practices (Cho et al., 2015). While there is a plethora of research on the development of university students' leadership capacities, leadership self-efficacy, and motivation to lead (Chan & Drasgow, 2001; Cho et al., 2015; Rosh et al., 2014), there is limited research on the role of leadership motivation and leadership self-efficacy in university

students' leadership practices (Day, 2000; Keating et al., 2014; Stajkovic & Luthans, 1998). Although research has shown the benefits of leadership experience in higher education institutions, little is known about how students acquire this experience (Rosch, Collier, & Thompson, 2015). Recent studies in the United States, especially a western society, have focused on developing students' leadership capabilities. In Turkish higher education, which is a non-western culture, it is beneficial to examine the leadership competencies of students. Therefore, the current study sought to examine the role of Leadership Self-Efficacy (LSE) and Motivation to Lead (MTL) in Student Leadership Practices (SLP).

- RQ1. How are the associations between leadership self-efficacy, leadership motivation, and leadership practice?
- RQ2. How does leadership self-efficacy affect student leadership practice and motivation to lead?
- RQ3. How does motivation to lead mediate the effect of leadership self-efficacy on student leadership practice?

Context

In Turkey, higher education institutions are autonomous organizations. Since the central government governs the funding of these institutions, its dominance over higher education policies and practices is very high. The central government established a supreme council called the Council for Higher Education (YÖK) to keep universities under its control. This council has concentrated on two important issues such as access to higher education and quality over the past 20 years in higher education reform studies (Altınsoy, 2011). Regarding the evaluation of the scope of education, the central government has dramatically established universities (currently 204) since 2006, with the intention of increasing access to higher education. As of 2018, the enrolment rate in higher education is 46% (Gür, Çelik, & Yurdakul, 2019). On the other hand, students in higher education, who lack the leadership skills needed in the information age, face placement challenges (Göktaş, 2008). In a recent report, the Turkish Higher Education Quality Council (THEC) found that meeting the expectations of the universities remained at a very low level (20%) in developing student leadership, which is

among 21st-century skills (THEC, 2018). According to the report in 2019, student-centered practices reach the desired level (77%) in universities (THEC, 2019). This study has the potential to assist universities in reviewing their training programs. As well, it can provide information on how students can develop beliefs about LSE and MTL.

Theoretical Framework

Leadership Practice

Individuals' adaptation to social environments and inherent personality characteristics are strong determinants of a leader's effectiveness, according to traditional leadership theories (Cho et al., 2015; Astin & Astin, 2000). However, recent leadership research suggests that leadership abilities can be enhanced (Amit & Bar-Lev, 2013; Cress et al., 2001; Kouzes & Posner, 2007; Rosch et al., 2014; Waldman, Galvin & Walumbwa, 2013; Yukl, 1989). Their main point is that leadership skills can be developed through teamwork, interactions, and training programs (Dugan, 2011; Kouzes & Posner, 2007; Posner & Kouzes, 1988). Ohio and Michigan were the first states to implement SLP in the 1960s. The emergence of various models, such as transformational, transactional, and charismatic, followed (Day, 2001; Yukl, 1989, 2012). It's difficult to comprehend how individuals put these leadership models into motion (Posner & Kouzes, 1988). Burns (1978), Bass (1985), and Kouzes and Posner (1988, 2007, 2018) provided SLP researchers with measuring tools and resources for training leaders. Kouzes and Posner's leadership practices (2007, 2016, 2018) are designed to help leaders who want to know what they are doing at the right time and place.

This study follows the conceptualization of Kouzes and Posner (2007, 2016, 2018) identifying five practices of exemplary leadership entitled model the way, inspire a shared vision, challenge the process, and enable others to act encourage the heart. Exemplary leader serves as a model and behaves consistently. Leaders who inspire a shared vision are passionate about their hopes and dreams. They are inspiring who teach others how to solve their problems in the process of mutual learning. They can predict goals. Challenging leaders take initiative and offer organizational opportunities to

develop. Leaders who enable others to act believe that teamwork will fulfil every member's dreams. Therefore, leaders facilitate working together by promoting collaboration and building trust among members. Meanwhile, the leader empowers members to use their energy for the benefit of everyone. Finally, encouraging leaders know that achieving goals is a challenging process. Frustrations may arise in this process. At that very moment, leaders' step in, giving members the courage to show patience and perseverance. They ensure that people work harmoniously, considering the feelings and attitudes of others.

Motivation to Lead

One of the research subjects of conventional motivation theories is meeting the needs or desires of individuals for organizational performance (Herzberg, Mausner & Snyderman 1959; Maslow, 1954; McClelland, 1985). In the last two decades, however, ideas and studies have explored into the factors that inspire people to become leaders (Arvey, Zhang, Avolio & Krueger, 2007; Chan & Drasgow, 2001; Cho et al., 2015; Rosch, et al., 2014). Individuals' ability to participate in activities aimed at assuming a leadership position or improving leadership skills, as well as their levels of robustness in these initiatives, are referred to as MTL (Chan et al., 2000; Chan & Drasgow, 2001; Felfe & Schyns, 2014; Stiehl, Felfe, Elprana & Gatzka, 2015). MTL has been associated with social normativity, infertility, and emotional identity in theory (Chan et al., 2000; Chan & Drasgow, 2001). Individuals with a high social normative MTL are more socially responsible and inspired. These people support the social order and assume that neither leaders nor viewers are willing to change their positions. Non-calculative MTL considers the costs and benefits of leadership before an individual takes the reins. Individuals with a high non-calculative MTL concentrate on how leadership experience will help them individually (Chan & Drasgow, 2001; Cho et al., 2015; Ryan & Deci, 2000). Individuals with a strong emotional identity MTL want to be in control of their lives. These people are extroverted, social, entrepreneurial, and competitive, and because of their experience, they depend more on their leadership abilities (Bobbio & Rattazzi, 2006; Chan et al., 2000; Cho et al., 2015). As a result, it may be worthwhile to investigate how MTL can be built in people who want to be leaders.

It relates MTL to the intensity of the individual's efforts to show leadership practices (Chan & Drasgow, 2001). MTL is effective in individuals preferring and maintaining leadership because we assume motivation to be related to the leader's practice and success (Chan et al., 2000; Felfe & Schyns, 2014; Stiehl, Felfe, Elprana & Gatzka, 2015). According to Chan & Drasgow (2001), instilling MTL to individuals and providing them with opportunities to play a leadership role strengthens their leadership abilities. However, individuals with high MTL continue their leadership duties and enjoy doing leadership behaviors (Kark & van Dijk, 2007). Research shows evidence that individuals with high MTL strive to become leaders and students who lead make career goals to improve their skills (Amit & Bar-Lev, 2013; Felfe & Schyns, 2014; Guillén, Mayo & Korotov, 2015; Hong, Catano & Liao, 2011; Lord & Hall, 2005; Rosch et al., 2015). MTL has an important role in deciphering students' SLP. Based on this evidence, it would be suggested that students' MTL has an effect on SLP (Hypothesis 1).

Leadership self-efficacy

Rooted in the social cognitive theory, self-efficacy corresponds to the belief that individuals can do the best to achieve what they want. The self-efficacy of individuals is determined by experience, modeling, social persuasion, and other environmental factors (Bandura, 1993, 1995, 1999). LSE includes individuals' confidence in their knowledge and skills to meet their needs and overcome difficulties while performing a task (Anderson et al., 2008; Chemers, Watson & May, 2000; Ng, Ang & Chan, 2008; Murphy, 2002; Paglis, 2010; Hoyt, 2005). LSE denotes the extent to which the individuals can lead by establishing relationships with their followers, guiding them, and overcoming the obstacles (Paglis & Green, 2002). Researchers who developed measurement tools regarding LSE focused on confidence, goal setting, coordination, teamwork, collaboration, and communication (Bobbio & Manganelli, 2009; Moen & Federici, 2012; Paglis & Green, 2002). In the measurement tool I used in this study, the dimensions of LSE included starting and leading change processes in groups, choosing effective followers and delegating responsibilities, building and managing interpersonal relationships within the group, showing self-awareness and self-confidence, motivating

people, and gaining consensus of group members (Bobbio & Manganelli, 2009). This study would contribute to a better understanding of LSE and display its antecedents and results.

In research, MTL is affected by personality traits, values, and LSE (Bandura, 1999; Rosch et al., 2015). As LSE develops, motivation to fulfil role expectations increases (Arvey et al., 2007; Keating et al., 2014). Chan and Drasgow (2001) advocate that MTL is the result of individuals' experience, values, personality traits, and LSE. Individuals with high LSE are aware of their responsibilities and have the belief to overcome obstacles. This increases their MTL. However, Leaders with LSE attribute their failures to lack of skills (Hannah, Avolio, Luthans & Harms, 2008). LSE both directly affects MTL and mediates leadership attitudes (Chan & Drasgow, 2001; Rosch et al., 2017). Especially, research on student leadership shows that the more motivated students with strong LSE beliefs are, the greater their involvement and commitment to group work (Krauss & Abdul Hamid, 2015; Schunk, Meece & Pintrich, 2014). Thus, LSE has a positive effect on MTL as students' beliefs about their leadership roles or experiences are reflected in their MTL (Hypothesis 2). According to Dugan (2011), if experts and educators want to develop student leadership development programs, they should focus on strengthening students' LSE beliefs and MTL needs. Research emphasizes the mediating role of MTL regarding the effect of the leaders' personality traits, values, and self-efficacy over leadership practices (Chan & Drasgow, 2001; Kark & van Dijk, 2007; Paglis, 2010). Therefore, it would be argued that the effect of LSE on SLP is mediated by MTL (Hypothesis 3).

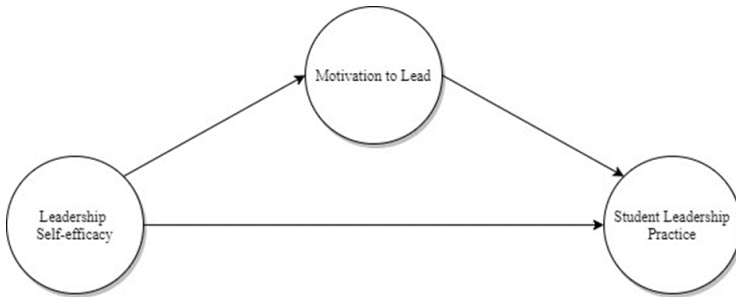
Personality traits (e.g., extraversion and conscientiousness) and values of individuals impact their LSE beliefs (Ng et al., 2008). Research has provided evidence that LSE directly affects leaders' effectiveness and performance (Anderson et al., 2008; Chan & Drasgow, 2001; McCormick, 2001; McCormick & Tanguma, 2007). There is evidence that strong LSE guides leaders' practices (Bobbio & Manganelli, 2009; Chemers et al., 2000; Kane et al., 2002). LSE is stated to be an important determinant of leadership behaviours, frequency of participation in working groups, and whether they are open to change in the organization (McCormick, Tanguma & Lopez-Forment, 2002; Paglis & Green, 2002). Also, Hoyt and Blascovich (2010) found that LSE has a positive effect on leadership and organizational

performance. Theoretical and empirical evidence shows that students' LSE beliefs have an impact on SLP (Hypothesis 4).

Research Model

This research provided a theoretical model for understanding the attitudes of LSE and MTL in the leadership practices of higher education students (see Figure 1). The basic assumption of the model was to reveal to what extent students' LSE beliefs were reflected in their leadership behavior through their MTL. Studies found that students' LSE beliefs are related to their MTL attitudes (Chan & Drasgow, 2001; Rosch et al., 2015; Rosch et al., 2017). Besides, studies discovered that students' LSE beliefs encourage students to exhibit their leadership behaviors (Anderson, Krajewski, Goffin & Jackson, 2008; Kark & van Dijk, 2007; Rosch et al., 2015). Furthermore, studies have shown that university students' MTL attitudes influence their leadership behaviors (Anderson et al., 2008; Chan et al., 2000; Chan & Drasgow, 2001; Rosch et al., 2015). As a result, this research has the potential to contribute to the field of leadership development research. In this regard, the current study sought to add to the existing body of knowledge by looking into the relationship between students' LSE beliefs and SLP activities, as well as the mediating role of MTL in this relationship.

Figure 1
Conceptual framework of the study



Method

In this study, a cross-sectional survey design was used to examine the relationships between LSE, MTL, and students SLP suggested in Figure 1. This part presents the sample, data collection tools, and data analysis strategies

Procedure and sample

This research conducted this study at a public university in north-western Turkey in December 2019. The sample consisted of 545 undergraduates. After obtaining legal permits from the Social and Humanities Ethics Committee, volunteers were given brief information and research forms were distributed. In the study, convenience sampling was adopted and participants with different demographics studying from different faculties were included in the study to ensure diversity. Participants were 418 (76.7%) females and 127 (23.3%) males, who were studying in first grade (n=57, [10.5%]), second grade (n=53, [9.7%]), third grade (n=71, [13%]), and fourth grade (n=364, [66.8%]). Their ages varied between 19 and 32 (M=22.86, SD= 2.53).

Instrument

Student leadership self-efficacy. The scale is a 5-point Likert scale (1- strongly Disagree to 5- strongly Agree) developed by Bobbio and Manganeli (2009) and comprising 21 items and five sub-dimensions entitled starting and leading change processes in groups, choosing effective followers, and delegating responsibilities, building and managing interpersonal relationships within the group, showing self-awareness and self-confidence, motivating people, gaining consensus of group members). The scale was adapted to Turkish culture by Polatcan and Cansoy (2018). As a result of Confirmatory Factor Analysis (CFA), two items with low factor load were excluded and the scale was found to have a single factor structure. Among the items is “I am confident in my ability to choose group members in order to build up an effective and efficient team”. DFA showed that the fit indexes of the scale were good ($\chi^2 = 351.780$, $df = 136$, $\chi^2/df = 2.58$, $RMSEA = .05$, $IFI = .97$, $CFI = .97$, $TLI = .96$, $SRMR = .030$).

Motivation to lead. The scale was developed by Chan and Drasgow (2001) and adapted to Turkish culture by Polatcan and Cansoy (2020). The 5-point Likert scale (1- strongly disagree to 5- strongly agree) includes 27 items and three sub-dimensions: affective-identity, non-calculative, and social-normative MTL. Representative statements are “I am the type of person who likes to oversee others”, “I would agree to lead other even if there are no special rewards or benefits with that role”, and “It is an honor and privilege to be asked to lead” for affective-identity, non-calculative, and social-normative dimensions, respectively. CFA displayed that the fit indexes of the scale were found to be acceptable ($\chi^2=912.353$, $df=276$, $\chi^2/df=3.30$, RMSEA=.06, IFI=.94, CFI=.94, TLI=.93, SRMR=.067).

Student leadership practices. The scale was developed by Kousez and Posner (2018) and adapted to Turkish culture by Konuk (2018). The 5-point Likert scale (1- never to 5- always) consists of 30 items and five sub-dimensions: Model the way (e.g., Talks about values and principles), Inspire a shared vision (e.g., Shows others how their interests can be realized), Challenge the process (e.g., Develops skills and abilities), Enable others to act (e.g., Fosters cooperative relationships), and Encourage the Heart (e.g., Creatively recognizes people). According to CFA, the fit indices of the scale were acceptable ($\chi^2=1378.577$, $df=373$, $\chi^2/df=3.69$, RMSEA=.07, IFI=.92, CFI=.92, TLI=.91, SRMR=.045).

Analytical strategy

Data analysis used SPSS 25 and AMOS 25 statistics programs for analyses. A two-step structural equation model (SEM) analysis was used to test LSE (predictor variable), MTL (mediator variable), and SLP (result variable). In the first stage, the direct relationship between LSE and SLP was examined. In the second stage, the researcher included the MTL mediator variable in the analysis and examined the analysis results of the structural model. For confirmatory factor analysis (CFA) fit indexes in SEM analysis, the study adopted chi-square model fit criterion (χ^2/df), tucker lewis index (TLI), comparative fit index (CFI), standardized root means square residual (SRMR), and root mean square error of approximation (RMSEA). The fit indices to be within the specified standards indicates good fit ($\chi^2/df < 3$),

(RMR = < 0.06), (RMSEA < 0.08), (IFI > 0.90), (TLI > 0.90) ve (CFI > 0.90) (Hu & Bentler, 1999; Kline, 2005).

The researcher used the bootstrap method for the analysis of direct, indirect, and total effects between the predictor, mediator, and result variables (Preacher & Hayes, 2008). There is examined the mediating effect of MTL in the effect of LSE over SLP. It calculates the indirect effect of the predictor variable on the result variable in the Bootstrap approach at 95% confidence interval (Confident Interval-CI) (Fritz & MacKinnon, 2007). Thus, the researcher applied the 2000 bootstrap samples for the CI of total, indirect, and direct effects. At the end of the bootstrap analysis, the 95% CI estimation intervals should not contain zero (0) value (Preacher & Hayes, 2008). For analysis, LSE, MTL, and SLP dimensions were included as the observed variable.

Results

This part includes descriptive statistics of the scales, correlation analysis between variables, and two-step structural equation model.

Preliminary analysis

The Cronbach Alpha Coefficient and composite reliability (C.R.) values of the research variables exceeded 0.70 threshold and the average variance (AVE) values are above 0.50 (Hair et al., 2010). These findings show that the measurement tools are reliable. While LSE beliefs of undergraduates were above the medium-level (M=3.88, SD=.77), MTL (M=3.44, SD=.86) and SLP (M=4.01, SD=.71) were found to be high. Overall, the students' perceptions of SLP applications were relatively higher than their LSE beliefs and MTL. However, when the standard deviations of the variables were considered, there was a higher level of discrepancy between students' views on MTL (see Table 1).

Table 1

Descriptive statistics and correlation among variables

	α	C.R.	AVE	LSE	MTL	AI	N	SN	SLP	MW	ISV	CP	EOA	EH
LSE	.96	.95	.55	-	.498**	.475**	.424**	.350**	.533**	.526**	.521**	.524**	.469**	.492**
MTL	.95	.96	.55			.930**	.883**	.676**	.508**	.510**	.497**	.537**	.434**	.435**
AI	.96	.95	.73				.649**	.586**	.402**	.409**	.411**	.449**	.314**	.325**
N	.88	.51	.87					.651**	.539**	.533**	.503**	.540**	.498**	.486**
SN	.87	.52	.88						.491**	.472**	.487**	.493**	.443**	.435**
SLP	.97	.97	.55							.960**	.963**	.944**	.938**	.947**
MW	.88	.89	.57								.918**	.888**	.870**	.887**
ISV	.89	.89	.58									.910**	.864**	.884**
CP	.86	.87	.52										.844**	.845**
EOA	.84	.85	.51											.886**
EH	.87	.88	.54											
M				3.88	3.44	3.27	3.60	3.39	4.01	4.02	4.00	3.93	4.05	4.07
SD				.77	.86	1.05	.82	.84	.71	.75	.76	.75	.72	.74

** : $p < .01$, C.R.: Compozit Realibility, AVE: Advertising Value Equivalent, SD: Standard Deviation, LSE: Leadership Self-efficacy, MTL: Motivation to lead, AI: Affective-identity, N: Noncalculative, SN: Social normative, SLP: Student Leadership Practice, MW: Model the way, ISV: Inspired a shared vision, CP: Challenge the process, EOA: Enable others to act, EH: Encourage the heart.

The correlation analysis revealed significant positive relationships between all variables (see Table 1). There are found positive and moderate significant relationships LSE and MTL ($r = .50, p < .01$), between LSE and SLP ($r = .53, p < .01$), and between MTL and SLP ($r = .51, p < .01$). Besides, positive and moderate significant relationships were found between affective-identity ($r = .48, p < .01$), non-calculative ($r = .42, p < .01$), and social-normative ($r = .35, p < .01$). Positive and moderately significant relationships were observed between the dimensions of SLP: model the way ($r = .53, p < .01$), inspired a shared vision ($r = .52, p < .01$), challenge the process ($r = .52, p < .01$), enable others to act ($r = .47, p < .01$) and encourage the heart ($r = .49, p < .01$). Although these relationships are not high, they are important in predicting the path effects in the SEM.

Table 2

Comparison of measurement models for study variables.

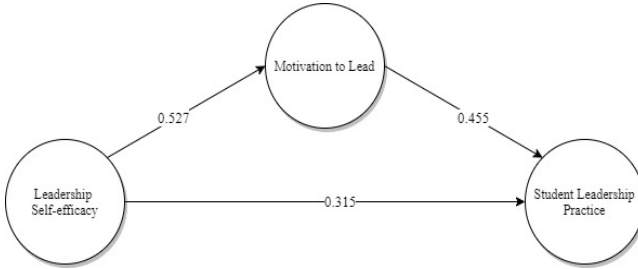
Model	χ^2	df	χ^2/df	RMSEA	CFI	IFI	TLI	SRMR
Model 1	538.402	233	2.31	0.049	.97	.97	.96	0.030
Model 2	818.845	351	2,33	0.050	.96	.96	.95	0.036

SEM analysis

In step, it is applied two-stage SEM analysis to verify the measurement model (see Table 2). In the first stage, the effect of predictive variable on the result variable was examined. There are found that LSE had a direct significant effect on students' SLP, and the fit indexes of the model were good ($\beta = 0.56, p < .01$) (Model 1). In the second stage, there is included the mediator variable in the model and examined the mediating effect. With including MTL, the significant effect of LSE on SLP continued (Model 2).

Figure 2

SEM results regarding structural relationships among study variables



Considering path relationships, LSE was directly and significantly related to both MTL ($\beta= 0.53, p<.01$) and SLP ($\beta= 0.32, p<.01$). MTL was directly related to SLP ($\beta= 0.45, p<.01$). Thus, the researcher switched to bootstrap analysis to determine the indirect and total mediating effects of MTL (Preacher & Hayes, 2008). Bootstrap confirmed both the direct and indirect effects of LSE on students' leadership practices (see Table 3).

Table 3

Bootstrapping results for mediation models of leadership self-efficacy, motivation to lead and leadership practice

Construct	Product of coefficient			95% Bootstrap CI		R ²	p
	β	SE	z	Lower	Upper		
Standardized total effects							
LSE → SLP	.555	.050	-	.449	.648	.457	.00
Standardized direct effects							
LSE → SLP	.315	.059	6.928	.203	.437	-	.00
LSE → MTL	.527	.047	9.903	.430	.612	.277	.00
MTL → SLP	.455	.056	9.429	.344	.561		.00
Standardized indirect effects							
LSE → MTL → SLP	.240	.036	-	.172	.317	-	.00

Based on 2000 bootstrapped samples. CI = confidence interval. Standardized indirect effects = 95% CI does not include zero.

The overall impact of students' LSE beliefs on SLP was significant ($\beta=0.555$, CI [0.449, 0.648], $p<.01$). This total effect is a moderate direct effect ($\beta=0.315$, CI [0.203, 0.437], $p<.01$) and a small level indirect effect through MTL ($\beta=0.240$, CI (0.172, 0.317, $p<.01$). Also, MTL had a direct effect on students' SLP ($\beta=0.455$, CI [0.344, 0.561, $p<.01$) and LSE had a direct effect on students' MTL ($\beta=0.527$, CI [0.430, 0.612, $p<.01$). According to the bootstrap, the total effect of the students' LSE beliefs on SLP was ($R^2=45.7\%$) while the indirect effect was ($R^2=27.7\%$) because of MTL. Also, MTL had a mediating role. This indicates that students' LSE beliefs play an important role in shaping leadership practices.

Discussion

The current research sought to examine the influence of LSE on students' SLP, as well as the mediating role of students' MTL, by employing structural equation modelling on a dataset of 545 university students in Turkey.

Interpretation of the Results

This study confirmed the relationship between LSE, MTL, and SLP. This study also provided evidence of a significant link between LSE and MTL, as well as SLP. In this study, gender and age yielded no effect on MTL and SLP, supporting similar findings from a line of research (e.g., [Hong et al., 2011](#); [Rosch et al., 2014](#); [Rosch et al., 2015](#)). In current research, this means that gender and age are not determinants of MTL. Past research strongly argues that theoretically state that participation in leadership development programs is crucial for developing leadership skills ([Clark & Clark, 1994](#); [Day, 2000](#); [Dugan, 2011](#); [Kark & van Dijk, 2007](#)). However, similar our findings, several studies evidenced that the desire to lead has a direct effect on leadership practice ([Chan et al., 2000](#); [Chan & Drasgow, 2001](#); [McCormick & Tanguma, 2007](#); [Paglis & Green, 2002](#); [Roch et al., 2015](#); [Stiehl et al., 2015](#)). Consequently, the results suggest that students willing to participate in leadership work have a positive effect on the development of leadership skills. Students' MTL is a salient factor for participation in leadership activities.

This research also uncovered that LSE is an antecedent of MTL. This means that the students are more likely to exert more efforts to lead, which turns into a desire to lead. As Bandura (1997) states, the self-efficacy of individuals is effective in predicting their motivation. Similarly, Cho et al. (2015) points out that students' LSE beliefs trigger the desire to engage in leadership practices. Felfe and Schyns (2014) believe that the expectations of individuals with high LSE beliefs can be met so that they engage in leadership practice. Chan and Drasgow (2001) argue that individuals' MTL is directly affected by LSE, personality, and values. Students who rely on their leadership abilities were found to have higher MTL. Consistent with this research literature, in our study leadership self-efficacy exerted a strong influence on motivation to lead. Thus, leadership self-efficacy must reach a certain level so that the individual can be motivated to lead.

To conclude, LSE beliefs have an indirect positive effect on MTL mediating effect and SLP. This result shows that university students whose basic qualification needs are met tend to have a high level of LSE and MTL, which causes SLP to increase. Although the previous studies found that leadership self-efficacy is an important precursor in predicting leadership behavior (Chan & Drasgow, 2001; Chemers et al., 2000; Cho et al., 2015; McCormick, et al., 2002; Roch, et al., 2015), the current findings displayed that motivation to lead plays an important role in this effect.

Implications

This research provides new lenses to leadership research by testing a theoretical model of analysing the theoretic and empiric effects of higher education students' LSE and MTL on their SLP. Traditional leadership theories (situational, cognitive, and transformational) focus ultimately on leadership performance, rather than the reasons for the emergence of the leader (Bass, 1985; Yukl, 1989). In the theoretical model, I tried empirically to integrate the leadership development process and ultimate leadership practice (Kouzes & Posner, 2018; Posner, 2004). Personality and values play a determinant role on SLP. Investigating student leadership practices in different cultures and contexts adds depth to the field (Chan & Drasgow, 2001; Cho et al., 2015; McCormick, 2001; McCormick et al., 2002). Students' LSE

beliefs and MTL have direct and indirect effects on leadership effectiveness (Chan & Drasgow, 2001; Kane et al., 2002; Roch, et al., 2015). A line of research investigated the results of self-efficacy and motivation of individuals working in various organizations.

The theoretical framework of LSE and MTL offers many practical implications for the leadership development in organizations. Intense participation in leadership practices is related to students' leadership experiences and the offered leadership opportunities. These opportunities can be facilitated through leadership programs, role model, and follower experiences (Posner, 2004). Thus, it is suggested that experts provide appropriate learning environments which develop students' LSE and MTL during the development of their leadership skills and provide feedback (Chan et al., 2000; Chemers, et al., 2000; McCormick, 2001). Thus, examining antecedents such as LSE and MTL, which improve the leadership behavior of university students, will be a guide for the universities to train future leaders. Students' LSE beliefs and MTL, have a dynamic structure that can be changed through social learning processes, interpersonal relationships and experiences (Astin & Astin, 2000; Cho et al., 2015; Kouzes & Posner, 2018; Rosh et al., 2014). Thus, it may be useful that universities include hands-on leadership courses in their education programs to improve students' leadership attitudes and behaviors. Through applied leadership courses, we can better understand the complex relationships between individuals' LSE beliefs, MTL attitudes and leadership behaviors.

Conclusion

Initiatives to improve the leadership skills of university students have increasing (Kouzes & Posner, 2018; Posner, 2014; Roch, et al., 2015; Rosch, et al., 2017). Discussions on leadership in higher education revealed that university students' intense participation in leadership practices is associated with students' leadership experiences and leadership opportunities offered (Chan et al., 2000; Cho et al., 2015). In this respect, studies provide evidence that antecedents such as leadership self-efficacy and leader motivation are effective in developing students' leadership practices. This research aims to add to the growing literature on the relationship between student leadership self-efficacy and motivation to lead and their leadership practices by

providing evidence from Turkish university students and examining how they contribute to the organizational conditions of their institutions and their professional leadership skills. While this is in line with the organizational leadership literature, it is important for the Turkish higher education context. Thus, we state that Turkish university students' leadership self-efficacy is effective in their leadership practices through motivating leadership. This suggests that Turkish universities can play an important role in their efforts to develop leadership skills in their programs. We, therefore, suggest that universities develop student leadership training programs that include practices such as leadership self-efficacy and leadership motivation in order to develop students' leadership capacity.

This research has several limitations. The first is concerned with the research design. It is difficult to establish a causal relationship between the variables in this cross-sectional survey analysis. While we assumed that LSE and MTL will influence students' leadership behaviors in our evidence model, research indicates that leadership development programs can influence individuals' LSE and MTL beliefs (Kouzes & Posner, 2018), implying reciprocal causality between these variables. Thus, additional longitudinal and experimental research may be conducted to explore university students' leadership interactions in professional life and the causal relationships between LSE and MTL after they graduate from university. Second, based on participant self-reports, there may be prejudice associated with social acceptance. Third, although the sample size is sufficient to evoke statistical interpretations, the results are difficult to generalize due to the convenience sampling. Thus, using purposive sampling techniques to allow more robust statistical interpretations will contribute to the reliability of future studies' findings. As a result, the implications of this restriction can be mitigated by potential studies involving several institutions and postgraduate students.

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