



The Mediating Role of Job Satisfaction in the Effect of Leader-Member Exchange on Burnout: A Study on Physical Education Teachers

Lider-Üye Etkileşiminin Tükenmişlik Üzerindeki Etkisinde İş Tatminin Aracı Rolü: Beden Eğitimi Öğretmenleri Üzerine Bir Araştırma

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ABSTRACT: This research was carried out to examine the mediating role of job satisfaction in the effect of physical education teachers' leader-member exchange on burnout. As data collection tools, leader-member exchange, job satisfaction and the Maslach burnout scale were used. The study group of the research consists of a total of 155 physical education teachers who work in Malatya and Hatay provinces of Turkey. The study group was selected with the convenience sampling method, one of the non-random sampling methods. A questionnaire was applied to the teachers participating in the research via electronic communication tools. Data obtained from participants were analyzed using SPSS Amos 20.0 and Process macro. In the research, descriptive statistics, correlation, confirmatory factor analysis, and bootstrap regression analysis were performed. As a result of this study, it was found that job satisfaction played a mediating role in the effect of leader-member exchange on physical education teachers' burnout levels. It can be stated that increasing physical education teachers' leader-member exchange and improving their relationships with their superiors can effectively increase job satisfaction and reduce burnout.

Keywords: Leader-member exchange, job satisfaction, burnout, physical education teacher.

ÖZ: Bu araştırma, Beden Eğitimi Öğretmenlerinin lider-üye etkileşiminin tükenmişlik üzerindeki etkisinde iş tatminin aracı rolünü incelemek amacıyla yapılmıştır. Veri toplama araçları olarak lider-üye değişimi, iş tatmini ve Maslach tükenmişlik ölçeği kullanılmıştır. Araştırmanın çalışma grubunu Türkiye'nin Malatya ve Hatay illerinde görev yapan toplam 155 Beden Eğitimi Öğretmeni oluşturmaktadır. Çalışma grubu, tesadüfi olmayan örnekleme yöntemlerinden biri olan kolayda örnekleme yöntemi ile seçilmiştir. Araştırmaya katılan öğretmenlere elektronik iletişim araçları aracılığıyla anket uygulanmıştır. Katılımcılardan elde edilen veriler SPSS Amos 20.0 ve Process makro kullanılarak analiz edilmiştir. Araştırmada tanımlayıcı istatistikler, korelasyon, doğrulayıcı faktör analizi ve bootstrap regresyon analizi yapılmıştır. Bu çalışma sonucunda lider-üye etkileşiminin Beden Eğitimi Öğretmenlerinin tükenmişlik düzeylerine etkisinde iş tatminin aracılık rolü olduğu tespit edilmiştir. Beden Eğitimi Öğretmenlerinin lider-üye etkileşimini artırmanın ve üstleriyle ilişkilerini geliştirmenin iş tatminini artırmada ve tükenmişliği azaltmada etkili olabileceği ifade edilebilir.

Anahtar kelimeler: Lider-üye değişimi, iş tatmini, tükenmişlik, beden eğitimi öğretmeni.

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Today, the role of human beings, psychology, and social relations are important factors in the formation and survival of the organizational structure. In organizations where modern approaches in management are treated as open systems, unlike classical and neo-classical theories, the interactions of different elements of the organization are evaluated with each other and with the environment (Öztürk & Soytürk, 2021). Moreover, job satisfaction is considered a function of the employee's exchange with the work environment (Navajas-Romero et al., 2020), in which the working conditions play an important role (D'Elia, 1979). Studies show that teachers with high burnout levels exhibit lower levels of job satisfaction (Nagar, 2012).

Therefore, the feeling of burnout causes the employees in the organization to experience negative emotions (loss of motivation, decrease in job satisfaction, physical and psychological diseases) and events (productivity decreases, workplace accidents, absenteeism increases) (Gabriel & Aguinis, 2021; Schaufeli et al., 2009). In particular, it has been determined that teachers experience a sense of burnout as a result of their long-term work due to their profession (Kara, 2020). For example, Vilorio et al. (2001) conducted a study on physical education teachers' burnout levels, and it was observed that 58.6% had high levels of burnout, 48.6% had moderate levels of burnout, and 10% had low levels of burnout. In addition, Martín Mateos (2006) stated that approximately 60% of physical education teachers working in Spain receiving continuous and long-term sick leave reports are associated with burnout. It has been claimed that 23.4% of these sick leave reports are primarily due to psychological disorders along with physical symptoms (Bartholomew et al., 2014). As can be seen in employees in almost all occupational groups who interact with people face to face due to their jobs, it can be said that burnout is a situation encountered in teachers who are in frequent contact with people such as parents, students, and the school administration (Yılmaz et al., 2020). In particular, it can be foreseen that the decrease in the performance of teachers will undoubtedly have a negative impact on education and training activities. Therefore, managers and employees need to be in constant communication and exchange in order to achieve organizational goals effectively (Alev, 2020). In achieving organizational success, along with the leadership characteristics of the managers or the leadership approach exhibited, the duration of exchange with the subordinates, as well as the quality of this exchange have a significant effect on the employees (Sökmen, 2020). The most important factor determining these factors is the relationship and exchange established between the leader and the member. With this feature, it is considered important in terms of examining the leader-member exchange model (Sürücü, 2021). Within the scope of this information, it is assumed that the results of our research will affect the physical education teachers' job satisfaction positively and the burnout level of the physical education teachers negatively. In the literature, although different components have been investigated on these variables, it has been observed that three variables are the subject together and studies investigating the mediating effect of job satisfaction on the relationship between leader-member exchange and burnout are very limited (Akkoç & Çiftçi, 2016). Considering the positive effects that these variables will create together, it can be said that the research is important when considering the contribution to the organizations and the literature. Considering that a high-quality leader-member exchange can positively affect the job satisfaction of teachers working in educational institutions and reduce their burnout levels, it is thought that this situation

may contribute to the performance of teachers and the educational institutions they are affiliated with. Therefore, the aim of this study is to examine whether job satisfaction has a mediating role in the effect of leader-member exchange on burnout of physical education teachers working in the public sector.

Theoretical Framework and Literature Review

Leader-member Exchange (LMX)

Leader-member exchange theory first comes into the literature the name Vertical Dyad Linkage (VDL). VDL was developed by Dansereau et al. in 1973 (Dienesch & Liden, 1986). This model focused on the exchange between leader and members within the framework of a vertical dual approach and was renamed as “Leader-Member Exchange (LMX) Theory” in the literature (Dansereau et al., 1975). LMX theory is an approach that examines the relationship quality between the superior (leader) and subordinates (member). A distinctive feature of this theory is based on the dyadic leadership level (Bauer et al., 2006). Role and social exchange theory form the basis of LMX theory (Ariani, 2012). The theoretical structure of LMX is based on Role Theory. According to role theory, the leader tests his members with various assignments. Thus, the degree of compliance and reliability of members with business demands determines the correctness of the type of LMX (Liden & Maslyn, 1998). According to social exchange theory, LMX occurs depending on social exchange (Liden et al., 1993). According to Blau (1964), loyalty, commitment, trust, and relational contracts form the basis of social exchange theory. These concepts explain why, over time, members show loyalty to their organizations and engage in behaviors that are not formally rewarded or coerced. According to the social exchange theory, when the leader shows a positive behavior towards his employee, the employee will show behaviors that will contribute to the leader’s success against these positive behaviors (Sürücü, 2021). According to LMX; the leader divides his members into two groups as “in-group (high-quality relationship)” and “out-group (low-quality relationship)” (Bauer & Green, 1996; Graen & Uhl-Bien, 1995; Liden & Maslyn, 1998; Van Breukelen et al., 2006). In-group; refers to the high-quality relationship between the leading member, where formal relations are not involved, and is a relationship involving positive behaviors (such as mutual trust, more communication, and responsibility, more support, respect, love, tolerance, mutual influence) (Buch et al., 2014; Dienesch & Liden, 1986; Kuvaas et al., 2012; Liden & Maslyn, 1998). Out-of-group relationships, members have less access to leaders, and there is a low-quality relationship within rules and agreement (Graen & Uhl-Bien, 1995; Liden et al., 1997). Relationships in this group are associated with low support, limited interaction, and less reward from members’ leaders (Dienesch & Liden, 1986; Graen & Uhl-Bien, 1995). Thus, depending on this exchange relationship, it is clarified why a more close and high-quality subordinate-superior relationship is established between some employees and superiors, while a formal and low-quality subordinate-superior relationship is established with another group of employees (Bolat, 2011a). In LMX studies, it is generally considered as four dimensions. These dimensions are “reciprocal relationship based on interpersonal attraction (Affect), the degree to which leaders and members are loyal to each other (Loyalty), work for common purposes (Contribution), and perception of dignity (Professional respect)”. Thus, the researchers stated that the measurement tool of LMX is an approach that can be explained by more than one

dimension and component, as opposed to a one-dimensional structure. Another important consequence of the multidimensional component of LMX is that there can be a lot of variability within the types of exchanges (e.g., low-and high-quality LMXs) (Liden & Maslyn, 1998). It is stated that the establishment, development, and maintenance of positive relationships between the leader and the member in the business environment occur through high-quality exchanges (for example, respect, responsibility, admiration, appreciation, support) (Dulebohn et al., 2012; Graen & Uhl-Bien, 1995; Huang et al., 2021; Kurtessis et al., 2017). A high-quality leader-member exchange in the work environment reduces stress factors, while a low-quality leader-member exchange increases stress factors more (Montani et al., 2017). Thus, it can be said that members who have higher-quality relationships with the leader will gain more job-related benefits (motivation, job satisfaction, performance, low level of burnout, organizational commitment) than members with low quality (Kim et al., 2010).

Job Satisfaction

The concept of job satisfaction was first introduced by the American psychologist Hoppock in his book “Job Satisfaction” published in 1935. Hoppock defined job satisfaction as the psychological and physical satisfaction of employees, environmental factors, and the individual’s subjective response to the work environment (Hoppock, 1935). Locke (1970) defined job satisfaction as “*a pleasant or positive emotional state that is the result of one’s evaluation of one’s job or work experiences*”. F.W. Taylor handled the first job satisfaction studies within the framework of the scientific management approach. Taylor ignored that humans were social beings; he thought that only increasing the wages would satisfy the employees, and he laid the foundations of the incentive wage system. Elton Mayo et al., as a result of the studies known as the Hawthorne researches they carried out at Western Electric Company, revealed the necessity of considering the human being as a whole with its social aspect, and concluded that employees could not be satisfied by increasing wages alone (Bağcı, 2018). Job satisfaction is considered a function of the employee’s exchange with the work environment (Navajas-Romero et al., 2020), where working conditions play an important role (D’Elia, 1979).

Burnout

Burnout is a syndrome that occurs as a physical and psychological reaction as a result of long-term emotional exhaustion in occupational groups (teaching, nursing, etc.) that deal with people. It imposes higher costs on both the organization and individuals as a result of employees in the organization having a negative attitude towards work and leading to undesirable behavior (Kang, 2013). The concept of burnout was first discussed by Freudenberger and Maslach (Maslach et al., 2001) and was used in the 1970s to describe the situation of high workload volunteers in mental health clinics (Eckleberry-Hunt et al., 2018). Burnout syndrome was first defined by Freudenberger (1974) and explained as “*the state of exhaustion of the individual’s internal resources as a result of failure, fatigue, loss of strength and energy as a result of overload or unmet needs*”. Freudenberger (1974) considered burnout work stress and an occupational hazard. Freudenberger considered burnout only in the emotional dimension and evaluated it as the erosion of emotions and exhaustion of individuals as a result of excessive work demands. According to this approach, burnout does not appear

out of anywhere. Some symptoms appear over time, and in the course of time, with the increase in emotional wear, burnout becomes evident (Yildiz, 2015). On the other hand, Maslach considers burnout as a psychological syndrome consisting of three dimensions (emotional exhaustion, depersonalization, and a sense of decline in personal accomplishment) (Maslach & Jackson, 1981).

Emotional exhaustion: This is the dimension in which an individual feels tired, without energy, and devoid of emotion. This dimension appears as the internal dimension of burnout.

Depersonalization: This dimension is seen as the interpersonal dimension of burnout. It is expressed as strict and negative attitudes and approaches towards the people to whom the individual serves and unresponsiveness to work. The depersonalization dimension is a response to emotional exhaustion.

The sense of decline in personal achievement: This dimension is expressed as the individual's feeling and evaluation of himself as inadequate and unsuccessful (Maslach et al., 2001).

Research Hypotheses

The quality of the relationship between leader and member affects employees' attitudes towards work (Breevaart et al., 2015). Employees with high-quality leader-member exchange are counted as in-group, receiving more support and attention from their leaders. This can lead to job satisfaction by taking extra-role behaviors from the leaders of employees (Liu et al., 2013). Thus, employees may be more likely to obtain both individual and organizational benefits. Studies have found that a high-quality leader-member exchange positively and significantly affects employees (Han & Jekel, 2011). Employees who are considered "in-group" (high-quality exchange) to take some additional responsibilities from their leaders and to communicate more effectively with their leaders increase the level of job satisfaction (Bitmiş & Ergeneli, 2012). Therefore, there are studies in the literature that show that LMX has an impact on job satisfaction (Eryılmaz et al., 2017; Malik et al., 2015; Mardanov et al., 2007; Shaikh et al., 2019). In line with this information, the following hypothesis has been developed.

Hypothesis 1: The LMX has a significant and positive effect on job satisfaction.

According to the LMX theory; employees in the -in-group- (high-quality exchange) will experience less burnout than those in the -out-group-. It can be said that employees in the -outgroup- (low-quality exchange) will experience more burnout as they will receive less support, attention, and resources from their leaders (Bolat, 2011b). Lee and Ji (2018), as a result of their work on clinical nurses, have determined that the exchange of leadership members has a negative and significant effect on burnout. Studies were conducted on teachers (Demir, 2019), hotel staff (Bolat, 2011a), nurses (Uğurluoğlu et al., 2013), professional football players (Yildiz, 2011b) in different sectors have found that LMX has a significant and negative effect on burnout. The following hypothesis, which is based on literature and theoretical, has been developed:

Hypothesis 2: The LMX has a significant and negative effect on burnout.

It is known that teachers' work satisfaction and burnout levels affect their private and professional lives, improve the productivity and performance of teachers with high levels of job satisfaction and reduce burnout (Kara, 2020). Studies in the

literature state that employees with high job satisfaction levels have low burnout levels (Safari, 2020; Song et al., 2020; Tarcan et al., 2017; Tsigilis et al., 2006). The following hypothesis, which is based on literature and theoretical, has been developed:

Hypothesis 3: The job satisfaction has a significant and negative effect on burnout.

Job satisfaction refers to the degree of difficulty and satisfaction with the meaning that the individual feels for their work. When employees get satisfaction from their work, it will enable them to have a better quality interaction with their leader (Ariani, 2012). In addition, it can be said that employees provide job satisfaction and reduce the level of burnout through organizational support resources received from their colleagues and leaders (Hombrados-Mendieta & Cosano-Rivas, 2013). Therefore, considering the relationship between job satisfaction and burnout, it can be mentioned that there is a mediating effect between LMX and burnout relationship. In other words, it can be said that teachers with job satisfaction will experience less burnout than those in the out-group (low-quality exchange) since they will be in the in-group (high-quality exchange according to the LMX theory. Based on these explanations, the following hypothesis was developed:

Hypothesis 4: The job satisfaction has a mediating effect on the relationship between LMX and burnout.

Method

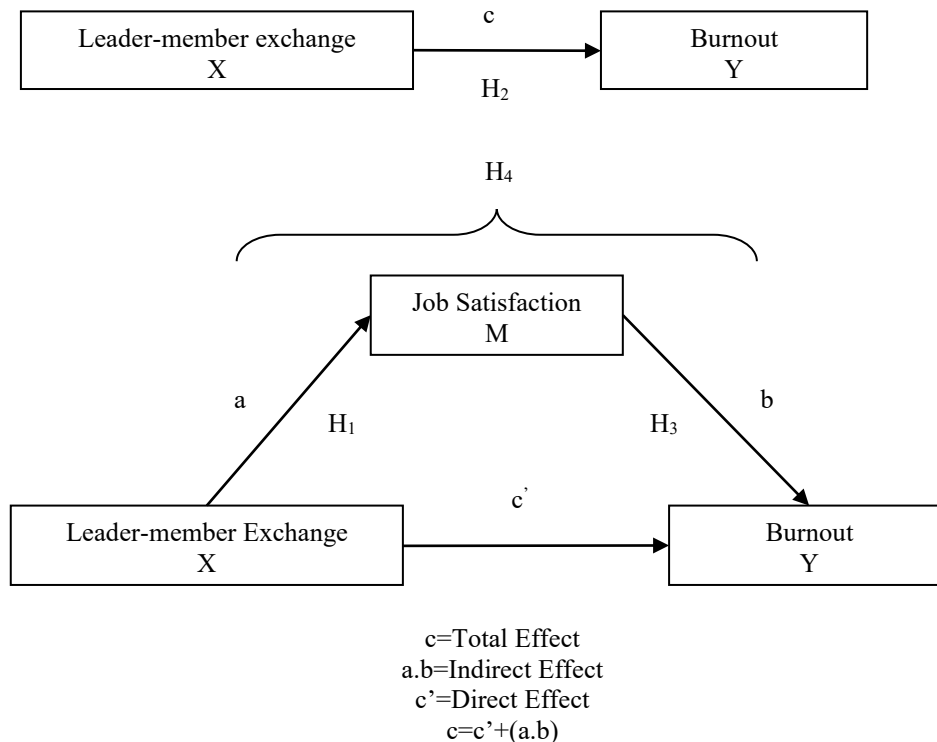
In this study, a relational screening model was used as one of the quantitative research methods. The relational screening model is a research model that aims to determine the level of variability and relationship between two or more variables (Karasar, 2011).

Research Design

The model of this study, which was conducted to examine the mediating effect of job satisfaction on leader-member exchange and burnout, is presented in Figure 1. This model shows the effect of the independent variable on the mediating variable, the independent variable on the dependent variable, and the mediating variable on the dependent variable. In the contemporary approach, the primary focus of the mediation model is the calculation of indirect effect values and inference from the calculated values. Indirect effect; which is the product of the effect of the predictor (X) on the mediating variable (M) (path a) and the mediating variable (M) on the outcome variable (Y) (path b) (a.b). According to the contemporary approach, in the mediating effect model shown in Figure 1, if there is an indirect effect of X (a.b) as a result of the bootstrap test, the mediation model is accepted as validated (Gürbüz, 2019).

Figure 1

A Model of Relationships among Leader-Member Exchange, Job Satisfaction, And Burnout



Data Analysis

In the data analysis, SPSS Amos 20 and the Process macro developed by Hayes (2018) were used. Before performing statistical analyses on the hypothesis tests, the data to be analyzed were tested using SPSS 20 for missing value, outlier, and normal distribution analysis. According to the result of the Kolmogorov-Smirnov test, the value of the leader-member exchange scale was .076 ($p > .05$), the value of the job satisfaction scale was .096 ($p > .05$), and the value of the burnout scale was .074 ($p > .05$). These values show that all three scales exhibit a normal distribution. As a result of the normality test, it was decided to perform parametric tests. Frequency and percentage calculations were made with SPSS 20 to reveal the demographic characteristics of the participants, and correlation analysis was performed to determine the direction and strength of the relationship between the variables. Then, to verify the construct validity of the scales, confirmatory factor analysis with Amos and to test the mediating role of job satisfaction in the effect of teacher-member exchanges on burnout, regression analysis based on the bootstrap model was performed using the Process macro developed by Hayes (2018).

Data Collection Tools

Leader-Member Exchange Scale

The scale was developed by Liden and Maslyn (1998) as LMX-MDM (Multidimensionality of Leader-Member Exchange) in order to determine the levels of leader-member exchange. It was adapted into Turkish, and its validity and reliability study was carried out by Başı et al. (2010) using the “Leader-Member Exchange” scale.

The scale evaluates the level of leader-member exchange in four dimensions (influence, commitment, contribution, professional respect) with a total of 12 questions. Examples of statements are: "I like my supervisor as a person, beyond the work relationship", "I enjoy working with my supervisor". Participants answered these statements by choosing one of the 5-point responses (for example, "1-I strongly disagree", "5-I totally agree") developed in accordance with each statement. Liden and Maslyn (1998) found the reliability values of the scale as $\alpha=.90$ for the influence dimension, $\alpha=.74$ for the commitment dimension, $\alpha=.57$ for the contribution dimension and $\alpha=.89$ for the professional respect dimension. Baş et al. (2010) found the reliability values of the scale as $\alpha=.92$ for the influence dimension, $\alpha=.86$ for the commitment dimension, $\alpha=.70$ for the contribution dimension, and $\alpha=.90$ for the professional respect dimension. In this study, the reliability values of the scale were determined as $\alpha=.78$ for the influence dimension, $\alpha=.70$ for the commitment dimension, $\alpha=.87$ for the contribution dimension and $\alpha=.88$ for the professional respect dimension. The reliability value of the leader-member exchange scale is $\alpha=.874$ (Table 2).

Job Satisfaction Scale

This scale, which was developed by Chang and Chang (2007), was adapted into Turkish by Yildiz (2011a) and then applied in the sports sector by Yildiz (2014). The scale has ten items and two dimensions (intrinsic and extrinsic satisfaction). Reliability values of the scale are .839 for intrinsic satisfaction, .747 for extrinsic satisfaction, and .835 in total (Yildiz, 2011a). The expression "my job provides me the chance to fulfill my ability" is an example of a scale item. The statements in the scale were measured with a 5-point Likert interval ("=I totally disagree", "5=I totally agree"). In this study, the reliability values of the job satisfaction scale were $\alpha=.82$ for the intrinsic satisfaction dimension and $\alpha=.75$ for the extrinsic satisfaction dimension total reliability value of job satisfaction $\alpha=.82$ (Table 2).

Burnout Scale

To measure the level of burnout, the Maslach Burnout Scale, developed by Maslach and Jackson (1981) and adapted to Turkish by Ergin (1992), was used for validity and reliability studies. Examples of expressions are: "I feel that I am emotionally cooling down from my work", "I feel spiritually exhausted at the end of the working day". The scale is a 5-point Likert-type (1=Never; 5=Always) scale consisting of 22 questions in total to measure three sub-dimensions of burnout: Emotional exhaustion, depersonalization, and the sense of decline in personal achievement. Maslach and Jackson (1981) found the reliability coefficients for each subtest of Maslach Burnout Scale as $\alpha=.89$ and .86 for emotional exhaustion, $\alpha=.74$ and .74 for the sense of decline in personal achievement, and $\alpha=.77$ and .72 for depersonalization. After it was adapted into Turkish by Ergin (1992), the Cronbach Alpha coefficients for these three sub-dimensions are as follows. Emotional exhaustion is $\alpha=.83$, depersonalization $\alpha=.65$, the sense of decline in personal achievement $\alpha=.72$. In this study, the reliability values of the scale were determined as $\alpha=.82$ for emotional exhaustion dimension, $\alpha=.67$ for depersonalization dimension and $\alpha=.75$ for the sense of decline in personal achievement. The reliability value of the burnout scale was $\alpha=.71$ (Table 2).

Sample Size and Procedure

This study was limited to physical education teachers working in the state sector. Physical education teachers working in the private sector were not included in the study. The study group of this research consists of a total of 155 physical education teachers, 97 males and 58 females, who work in Malatya and Hatay provinces of Turkey, selected by convenience sampling method, one of the non-random sampling methods. The convenience sampling method is one of the most widely used sampling types in the social sciences (Koç Başaran, 2017). The convenience sampling method was used in the study because of time, effort, and cost difficulties. Convenience sampling method, each sampling unit is given an equal probability of being selected. In this sampling method, all units in the universe have an equal and independent chance to be selected for the sample. In other words, all participants have the same probability of being selected, and the selection of one participant does not affect the other participant. It can be said that the convenience sampling method is superior to other methods in providing representation (Büyüköztürk et al., 2018). The study was based on voluntary participation. A questionnaire was applied to the teachers participating in the research via electronic communication tools. The number of questionnaires filled in was found to be 162. However, 7 scale forms were excluded from the study due to their extreme values. The remaining 155 forms were found suitable for analysis.

Ethical Procedures

This study received ethics approval from the Humanities Sciences Ethical Review Committee of the Social and Human Sciences Ethics Committee of İnönü University [2021/15-23].

Results

The majority of the sample was males (62.6%) and married (67.1%). Most participants had undergraduate degrees (60.6%) and were between 36 and 45 years old (37.4%). Most of the participants' income level was between 5001 TL and 6000 TL per month. Approximately 25.8% of participants had worked for the same educational institution between 1 and 5 years (Table 1).

Table 1
Demographic Characteristics of Participants

Variables		<i>f</i>	%
Gender	Male	97	62.6
	Female	58	37.4
	Total	155	100.0
Age	25 years and under	29	18.7
	26-35	27	17.4
	36-45	58	37.4
	46-55	41	26.5
	Total	155	100.0
Marital Status	Married	104	67.1

	Single	51	32.9
	Total	155	100.0
Education	Undergraduate	94	60.6
	Postgraduate	48	31.0
	PhD	13	8.4
	Total	155	100.0
Income (TL)	4000 and less	19	12.3
	4001-5000	35	22.6
	5001-6000	68	43.9
	6001 and over	33	21.3
	Total	155	100.0
Total number of years employed (year)	1-5	40	25.8
	6-10	23	14.8
	11-15	23	14.8
	16-20	19	12.3
	21-25	33	21.3
	26 years and over	17	11.0
	Total	155	100.0

Validity and Reliability Analysis

According to the results of confirmatory factor analysis used to confirm the construct validity of the scales, X^2/df values of the scales and the values of other indices had acceptable compatibility (Meydan & Şeşen, 2011; Mishra & Datta, 2011; Uzun et al., 2010). Moreover, Cronbach's alpha coefficients showed that the leader-member exchange and job satisfaction scales were highly reliable, while the burnout scale was quite reliable (Bursal, 2017) (Table 2).

Table 2

Validity and Reliability Results of the Scales

	Variables	X^2	df	CMIN/DF	GFI	AGFI	CFI	NFI	RMSEA	Cronbach's Alpha
				≤5	≥.85	≥.80	≥.90	≥.90	≤.10	
1	Leader-Member Exchange	124.28	48	2.58	.93	.85	.92	.90	.07	.874
2	Job Satisfaction	125.50	32	3.92	.87	.89	.91	.90	.08	.829
3	Burnout	411.32	20	2.06	.95	.92	.96	.92	.06	.719

Note. Goodness of fit value ranges is arranged according to "acceptable standards".

Note. (Meydan & Şeşen, 2011; Mishra & Datta, 2011; Uzun et al., 2010)

Correlation Analyses

The results of the correlation analyses reveal that there are significant relationships between the dependent and independent variables within the scope of the research model (Table 3).

Table 3
Results of Correlation Analysis

Scale and Sub-Dimensions	1	2	3	4	5	6	7	8	9	10	11	12
1. Leader-Member Exchange	1											
2. Affect	.734**	1										
3. Loyalty	.742**	.328**	1									
4. Contribution	.829**	.397**	.580**	1								
5. Professional Respect	.737**	.663**	.290**	.409**	1							
6. Job Satisfaction	.610**	.497**	.358**	.491**	.533**	1						
7. Intrinsic Satisfaction	.507**	.476**	.247**	.296**	.598**	.829**	1					
8. Extrinsic Satisfaction	.539**	.387**	.358**	.526**	.343**	.886**	.475**	1				
9. Burnout	-.024	-.033	.051	-.082	.007	-.259**	-.243**	-.206**	1			
10. Emotional Exhaustion	-.178*	-.224**	.002	-.122	-.231**	-.501**	-.514**	-.362**	.808**	1		
11. Depersonalization	-.152	-.205*	.001	-.091	-.205*	-.284**	-.324**	-.178*	.640**	.534**	1	
12. Personal Accomplishment	.314**	.399**	.08	.099	.475**	.484**	.554**	.302**	.067	-.468**	-.332**	1

* Correlation is significant at the .05 level

** Correlation is significant at the .01 level

The result of the correlation analysis in this study showed that there was an insignificant r ($-.024, p > .05$) relationship between LMX and burnout. In addition, there was a moderately significant and positive r ($.610, p < .01$) relationship between LMX and job satisfaction. However, the findings reveal the existence of a low-level negative relationship between the variables of job satisfaction and burnout, r ($-.259, p < .01$).

Bootstrap Regression Analysis

In the analysis of the mediation model, the contemporary approach, which was put forward as a result of the criticisms brought to the Baron and Kenny method (traditional approach), was taken as a reference. Especially in the contemporary approach, it is recommended to test the indirect effect with the bootstrap technique, which produces stronger and more valid results than the Sobel test. Calculating the indirect effect values and making inferences from these values in mediation analyses is the focus of the contemporary approach. The indirect effect is found by multiplying “path a” with “path b”. The path a is the effect of the independent variable (X) on the mediating variable (M), and path b is the effect of the mediating variable (M) on the outcome variable (Y) (Gürbüz, 2019). In the bootstrap method, more reliable results are obtained by correcting the bias and skewness related to the distribution. The contemporary approach decides whether there is a mediating effect or an indirect effect (a.b) by looking at the values in the 95% confidence interval (CI) obtained as a result of

the bootstrap analysis. Accordingly, if the lower and upper confidence interval values corresponding to the indirect effect (a.b) value do not include the zero (0) value, the indirect effect is considered significant and it is understood that the mediation effect occurs (Gürbüz, 2019). Analyses were made using the Process macro developed by Hayes (2018). In the analysis, 5000 resampling options were preferred with the bootstrap technique.

In line with these assumptions, a regression analysis based on the bootstrap method was conducted to test whether the leader-member exchange had a mediating role in the effect of burnout levels and job satisfaction. The bootstrap method avoids primary errors due to inaccuracies in estimating confidence intervals observed in traditional approaches (MacKinnon et al., 2004). The regression analysis results conducted in this direction are shown in Table 4.

Table 4

The Mediating Role of Job Satisfaction in the Effect of Leader-Member Exchange on Burnout

	Result Variables			
	M (Job Satisfaction)		Y (Burnout)	
	β	SE	β	SE
X (Leader-Member Exchange) (c path)	-	-	-.0111	.0382
R^2	-	-	.0006	
X (Leader-Member Exchange) (a path)	.601***	.0632	-	-
R^2	.3721		-	-
X (Leader-Member Exchange) (c' path)	-	-	.1014*	.0460
M (Job Satisfaction) (b path)	-	-	-.1869***	.0466
R^2	-	-	.0962	
	$F(1; 153)=90.6782;$		$F(2; 152)=8.0925;$	
	$p<.001$		$p<.001$	

* $p<.05$; *** $p<.001$; SE: Standard Error, Unstandardized beta coefficients (β) are reported

The hypotheses constructed were tested within the scope of the mediation test. First, in testing the hypotheses, regression analysis findings showed that the effect of the independent variable leader-member exchange (X) on the mediating variable job satisfaction (M) (path a) was included. According to Table 4, the leader-member exchange effects job satisfaction significantly and positively ($\beta=.601$, 95% CI [.4769, .7266], $t=9.5225$, $p=.000<.001$). It is understood that it is less than .001 and that the CI values do not include 0 (zero). As a consequence, LMX explains approximately 37% ($R^2=.372$) of the variation in job satisfaction.

The combined effects of the mediator variable job satisfaction (M) (path b) and the leader-member exchange variable (X) (c' path) on the outcome variable burnout (Y) were tested. Accordingly, it was seen that the effect of job satisfaction, which is our mediator variable, on burnout (path b) was a statistically significant and negative effect ($\beta=-.1869$, 95% CI [-.2790, -.0949], $t=-4.0114$, $p=.000<.001$). When the LMX was included in the regression together with burnout, it was determined that the direct effect value was statistically significant and negative effect ($\beta=-.1014$, 95% CI [.0105, .1922], $t=2.2046$, $p=.029<.05$). Leader-member exchange and job satisfaction explain approximately 9.6% ($R^2=.0962$) of the change in burnout. As a result of the analysis test, which did not include the mediator variable job satisfaction (M), it was determined that the effect value of the leader-member exchange (X) on burnout (Y) (path c=total effect) was not statistically significant ($\beta=-.0111$, 95% CI [-.0866, .0643], $R^2=.0006$, $t=-.2918$, $p=.7708>.05$).

In the fourth stage, which was perhaps the most important and final stage of the analysis, the analysis was conducted to reveal the indirect effect of leader-member exchange on burnout through mediator variable job satisfaction, according to the confidence intervals obtained using the Bootstrap regression model. The results are shown in Table 5.

Table 5

The Indirect Effect of Job Satisfaction on the Leader-Member Exchange - Burnout Relationship

Mediating Variable	Indirect Bootstrap Effect (a.b)	BootLLCI	BootULCI
Job Satisfaction	-.1125	-.1784	-.0543

According to Table 5, the indirect effect (a.b) of the leader-member exchange on burnout was significant; therefore, it was determined that job satisfaction mediated the relationship between leader-member exchange and burnout ($\beta=-.1125$, 95% BCA CI [-.1784, -.0543]). The indirect effect value (-.1125) can be interpreted such that those with a high perception of leader-member exchange among the employees have a lower burnout level of -.1125 units than other employees.

The degree of the fully standardized effect size of the leader-member exchange on burnout is given in Table 6.

Table 6

The Fully Standardized Effect Size of Mediation (K^2)

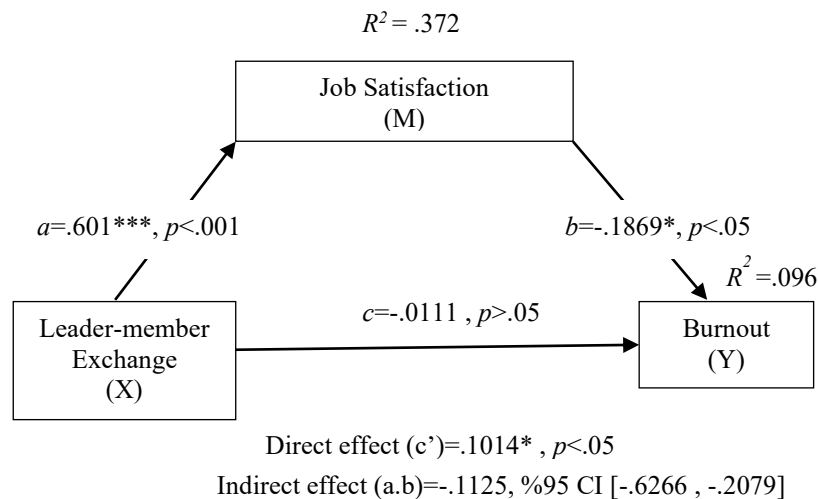
Mediating Variable	K^2	BootLLCI	BootULCI
Job Satisfaction	-.2381	-.3703	-.1181

According to Table 6, the confidence intervals in the effect size were significant since they did not include 0 (zero). The fully standardized effect size value was -.2381. Therefore, if the K^2 value is close to .01, it is interpreted as a low effect, if the K^2 value

is close to .09, it is considered as a medium effect, and if the K^2 value is close to .25, it is interpreted as a high effect (Gürbüz, 2019). According to these values, the mediation effect in the model we tested was close to the high value. In line with these results, the four hypotheses of the study were confirmed. The representation of the analysis results on the research model is presented in Figure 2.

Figure 2

Display of Analysis Results on Model



In this study, a regression analysis based on the bootstrap method was conducted to test the effect of the leader-member exchange on physical education teachers' burnout, and whether job satisfaction played a mediating role in this effect.

As a consequence of this research, it was determined that the leader-member exchange was a positive and significant effect on job satisfaction. In addition, as a result of the correlation analysis, it was determined that there was a moderately significant and positive relationship between leader-member exchange and job satisfaction at $r (.610)$. According to this result, physical education teachers with high job satisfaction levels have better relationships with their superiors. In other words, physical education teachers are in the in-group. Conversely, it can be said that teachers with low job satisfaction are in the out-group. Therefore, according to the social exchange theory, it can be said that employees with a high perception of organizational support have higher job satisfaction. This result is in line with the findings of previous studies. Gökalp et al. (2015) found that the leader-member exchange between the school principal and the teacher significantly predicted teachers' job satisfaction. Shaikh et al. (2019) found that leader-member exchange had a positive and significant effect on job satisfaction in a study they conducted on bank employees. Duyan and Yildiz (2018) determined that leader-member exchange affects job performance positively in their research on faculty members working in faculties of sports sciences. Moreover, other studies in the literature concluded that the leader-member exchange of the employees positively affects job satisfaction (Aslan, 2019; Eşitti & Kasap, 2020; Pan et al., 2021). Therefore, it is possible to say that physical education teachers' job satisfaction levels can increase positively by increasing the quality of the LMX.

According to the correlation analysis test between job satisfaction and burnout, a negative and weak relationship was determined between both variables, $r (-.259)$. In other words, as physical education teachers' job satisfaction levels increase, their burnout levels (physical and mental fatigue, restlessness, unhappiness, stress levels, etc.) will decrease. There are other studies in the literature that support our analysis results. Vousiopoulos et al. (2019) a negative relationship was found between job satisfaction and burnout, and it was further revealed that physical education teachers experienced higher job satisfaction and lower burnout than primary school teachers. Papatiridou et al. (2019) found that physical education teachers exhibited low burnout and high job satisfaction in a study investigating physical education teachers' job satisfaction and professional burnout. Teachers who are satisfied with their jobs can be more effective and successful in fulfilling their roles because they are happier and more willing to work (Nagar, 2012). The positive exchange between school administrators and teachers allows teachers to express themselves more decently and also supports them to take a more participatory attitude within the school (Akman, 2021). Therefore, improving teachers' job satisfaction can also have positive effects on students' social and emotional development (Capone & Petrillo, 2020).

According to the Bootstrap analysis result, it was determined that the indirect effect of leader-member exchange on burnout was significant, and therefore job satisfaction mediated the relationship between leader-member exchange and burnout ($\beta = -.1125$, 95% BCA CI [-.1789, -.0556]). As a result of the bootstrap analysis, corrected bias and accelerated confidence interval values (BCA CI) did not include 0 (zero). The fully standardized effect size (K^2) of the mediator effect was approximately -.2381, and it could be said that this value was an effect size close to a high value. Therefore, the hypotheses of the research were supported in light of these results. This result was also consistent with the findings of the study conducted by Akkoç and Çiftçi (2016). As a result of the research, it was found that job satisfaction played a mediating role in the effect of leader-member exchange on the burnout levels of employees. It was determined that the leader-member exchange was statistically significant effects on employees' job satisfaction and burnout levels, and when the education sector employees' perceptions of leader-member exchange increased, job satisfaction levels increased, and burnout levels decreased. Considering that the participants are physical education teachers, their constant physical activity with the students and the richness of their social lives may cause them not to experience burnout (Colakoglu & Yılmaz, 2014).

In line with these results, it can be said that increasing physical education teachers' leader-member exchange and improving their relationships with their superiors can be effective in increasing job satisfaction and reducing burnout. The development of bilateral relations established with the leaders (i.e., school administrators) of physical education teachers greatly affects their perceptions and attitudes towards both their organizations and their jobs. Providing high-quality communication between the leader (i.e., school administrators) and the member (i.e., teacher) will benefit both the employees and the organization. This encourages the quality of leader-member exchange to ensure the job satisfaction-performance of the employees and the formation of a general motivation process in the organization (Breevaart et al., 2015). Furthermore, it has been determined that school administrators

have a negative effect on the emotional exhaustion or burnout of teachers who have social support (Gonzales et al., 2020). Administrators can reduce the long-term and intense stress of the teachers by helping teachers in the educational activities of the school. This way, teachers can be prevented from having negative attitudes such as helplessness. In addition, this may be effective in preventing negative emotions such as occupational fatigue and reluctance to work. Reducing even one of the experienced negative emotions can help reduce other negative emotions. For such reasons, it is believed that establishing high-quality exchanges between school administrators and teachers is beneficial (Demir, 2019). As a final note, it should be reminded that the existing data in this study were collected only from physical education teachers, and therefore, it is not possible to make generalizations regarding the results. This result obtained from the study is important in terms of filling the gap in the literature. Considering the limited number of studies in the literature that deal with the variables of leader-member exchange, job satisfaction, and burnout together, and the positive outcomes of this study on physical education teachers, it can encourage school administrators to exhibit transformational leadership behavior towards their employees to increase both individual and organizational performance. Thus, it is thought that the quality of the relationship between leaders and subordinates can be improved more, the professional stress and burnout of their employees can be reduced, motivation, job satisfaction, and performance can be increased. A positive climate and an effective communication environment can be created or improved by periodically organizing leisure time activities (sports, nature walks, cultural etc.) with their employees in educational organizations. This study is limited to physical education teachers working in the state sector. Therefore, the results of this study cannot be generalized to all educational institutions due to both the sample size and the variety of teacher branches in educational institutions. Further research is needed to determine whether the results in this study are supported and similar with different samples. Researchers can examine the relationship between leader-member exchange, job satisfaction, and burnout in other educational institutions or different sectors by using similar methods in future research.

Conflicts of Interest

There are no conflicts of interest in this study.

Author Bio

Mehdi Duyan completed his bachelor's degree in sports management at the school of physical education and sports in 2006, his master's degree in physical education and sports at Mugla Sitki Kocman University in 2014, and his doctorate in physical education and sports at Mugla Sitki Kocman University in 2019. Between 2009 and 2016, he worked as a civil servant in the Agri, Hatay and Mugla provincial agencies of the General Directorate of Sports. Between 2016 and 2020, he worked as a lecturer at Bitlis Eren University school of physical education and sports. Since 2020, he has been working as Asst. Prof. Dr. in the department of physical education and sports teaching for Handicapped at Inonu University Faculty of Sports Sciences.

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