# The Relationship Between School Principals' Perceived Transformational Leadership Behavior and Teachers' Motivation

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## Abstract

The current study aims to determine whether there is a relationship between transformational leadership and teachers' motivation and whether this relationship if any, differs significantly based on various demographic variables. Within the framework of this aim, two scales were applied to 418 teachers working at primary, middle, and high schools in Istanbul. The data collection tools used in the study are the "Multidimensional Work Motivational Scale" developed by Gagné et al. (2010), and the "Transformational Leadership Scale" developed by Brestrich (2000). During the analysis of the data collected through scales, mean, frequency, and descriptive values such as standard deviation were used as well as independent groups t-test, multivariate variance analysis (MANOVA), and canonical correlation analysis. The results showed that as teachers perceive their principals as transformational leaders, their motivation including their inner motivation decreases. Besides, teachers' perceptions of the transformational leadership skills of the principals change according to time of working in their current school, education levels and gender. It was also explored that the motivation status of female teachers was higher than male teachers.

**Keywords:** teachers' motivation, transformational leadership, Turkish context

## 1. Introduction

It is a fact that globalization has influenced all areas of communities from economy to politics. Many factors including political, cultural, technological, and economic factors have had an impact on the emergence of the globalization process (McBurnie, 2002). Now that there both elements leading to globalization and outcomes of globalization in different areas, it has to be noted that organizations that take on the role of surviving function of societies in a community have to deal with outcomes of globalization. These outcomes contribute to components of organizations' and societies' changes. No matter if these changes are temporary, communities cannot be indifferent to globalization, and it affects if they want to survive in the world. In this age of rapidly changing conditions, both societies and organizations have to adapt quickly to these changing conditions, even to manage change by taking part in the process of change. To cope with changing problems and conditions, leaders who want to succeed in such an environment have to show their entrepreneurial, deliberative, motivating, inspiring, guiding, and leading change characteristics, and to tackle the problems and guide the audience, which defines transformative leaders (Taşkıran, 2011). The characteristics of transformational leadership such as being brave, having the ability to cope with difficulties and anticipating change are needed to deal with the changes in the uncertain and turbulent environment of the globalizing world. Instead of creating employees who depend on them, transformative leaders aim to create innovative employees who can work independently, think critically, and thus be of significant benefit to the organization. Transformational leaders can take risks, and they are not afraid of doing it. They are aware that every mistake is an opportunity for their development. Transformational leaders have a transformative, reformist, and innovative personality (Tengilimoğlu, 2005). Transformational leadership is a leadership approach that functions towards achieving effective change in the organization. In this leadership approach, more than a leadership approach based on the management, supervision, and coordination of the organization's internal environment, a leadership that encourages, facilitates, and innovates learning is needed (Celik, 2003). In education institutions, which are also affected by globalization, transformational leadership is significant, as it motivates teachers to keep up with the new practices in worldwide education.

As for motivation, which is related to transformational leadership, there are many both internal and external elements influencing teachers' motivation. Latham (2012) touches on the significance of motivation in management. A great deal of importance has been given to motivation in especially modern management milieu, as it is fundamental to operate the organizations in the world of change (Simon, 1997). Motivation of teachers has been a globally alluring topic due to teachers' great potential to affect the teaching process, and accordingly the operation of education institutions. Davis and Wilson (2000) elucidated the relationship between leader empowering behaviors and teachers' motivation in public elementary schools located in eastern Washington. Finnigan (2010) searched principal leadership and teachers' motivation status at schools based on transformational leadership in Chicago. Yıldız (2019) examined the effects of internal and external motivation on teachers' motivation within the scope of Herzberg's Double Factor Theory. Also, Polat (2010) examined if there was a meaningful relationship between teacher perceptions of pre-school education principals about using principal power types and teachers' motivation. Ertürk and Aydın (2016), in their study with 735 teachers in Turkey, explored the status of teachers' organizational commitment and their motivation levels. Although there is an increasing craze for the studies on teachers' motivation and leadership, the number of studies on the relationship between transformational leadership and teachers' motivation directly is limited in the literature. That's why the current study aims to inspect the relationship between transformational leadership and teachers' motivation. It is expected that the results of the current study will be fruitful for education leaders and teachers in that it will render implications about teachers' motivation.

## 2. Literature Review

### 2.1 Transformational Leadership

Transformative leadership was conceptualized by Burns (1978). Through his study, he compared leadership approaches and determined the difference between leadership approaches, which are defined as actionable and transformative leadership. As a result of the study, the main difference between these two approaches is that the "transformative" leadership makes the transformations of both the leader or the manager and those who follow possible. This process leads leaders and followers to develop themselves individually and contribute to development in the organization. It gives leadership ability to those who follow and senior leadership ability to principals. It transforms by creating an environment where everyone is involved in the process, the leader and the followers can develop their natural powers. He defines transformational leadership as the process of seeking collaborative goals in line with the reciprocal links of motives based on achieving the desired change of leaders or managers and followers. Burns (1978) suggests that transformational leaders are motivating leaders to achieve goals, and that leadership cannot be considered separate from the needs of followers. Therefore, transformational leadership is not a model in which the leader uses force in the process of influence, but a model in which the leader and his followers show high motivation and moral behavior. Transformational leadership is surrounded by the ideas of inspiration and encouragement. Transformational leaders motivate workers by appreciating and engaging with employees individually to accomplish common goals, enabling team coordination (Masood et al., 2006). Besides, according to Bass (1990), the transformative leader is interested in the welfare of the organization before himself, understands the importance of the results of the work of the followers, and can meet their high-level needs. Moreover, transformational leaders motivate other workers not only with mental support but also with job support or suggestions (Moss et al., 2007). Therefore, employees in the transformational leadership understanding are rewarded with intrinsic motivation tools that are not based on material elements, based on personal value systems such as ensuring justice and order (Kunhert & Lewis, 1987).

The main purpose of transformational leadership is to achieve organizational transformation by adapting to the environment that changes rapidly (Celik, 2003). Transformational leaders are not just people who invite their followers to tackle old practices and introduce innovative alternatives. At the same time, they help to reveal the creativity, originality and initiative that will bring about change in the workplace as much as possible by removing the restrictions (Moss et al., 2007). Transformational leader focuses on the development of employees as well as following the aims of the group and organization. S/he reveals the talents and abilities of employees and increases their self-confidence, and aims to get more results than expected from themselves (Celep, 2004). Basically, transformational leaders enable employees to show more satisfaction, motivation, loyalty and high performance compared to other leadership behaviors (Keegan & Hartog, 2004). Transformational leaders have long-term goals and visions shared with their audience. Such leaders often use motivational tools to meet the high level needs of other workers (Budak & Budak, 2010). They increase the mood and motivation levels of the workers by using values such as justice, freedom and equality (Genç & Halis, 2006).

In previous studies, it was explored that there was a relationship between the education administrators' being transformational leaders and concepts such as organizational commitment, organizational culture, job satisfaction,

and organizational citizenship (Hamidifar, 2010; Mahdi et al., 2012). In a study conducted with 1315 teachers in Siirt, it was concluded that as school principals exhibited transformational leadership behaviors, teachers' organizational commitment increased (Okçu, 2011). Similarly, as a result of one study, a positively significant relationship was found between the transformational leadership styles of school principals and classroom teachers' organizational commitment (Kılınç, 2013). Akbolat, Işık, and Yılmaz (2013) investigated the effect of transformational leadership behavior on motivation and emotional commitment; and found that transformational leadership had a statistically significant effect on motivation and emotional commitment, and transformational leadership, motivation and emotional commitment positively affect each other. A positive relationship between transformational leadership characteristics and motivation has been also detected (Alghazo & Al-Anazi, 2016). Yücel-Batmaz and Gürer (2016) found that there was a moderate positive relationship between the employees' perceptions of transformative leadership and intrinsic motivation, and that transformative leadership perceptions had an impact on their intrinsic motivation. On the other hand, Aksel (2016) determined that there was a weak positive relationship between transformational leadership and teacher motivation even though teachers' motivation perceptions and school principals' level of transformational leadership behaviors were found high according to their perceptions of teachers. Yıldız (2019) also investigated the effects of school administrators 'transformational leadership behaviors on teachers' perceptions of individual innovation; and found that the inspirational motivation and intellectual stimulation sub-dimensions of transformational leadership were the variables that positively and significantly predict the level of innovation of teachers.

*2.2 Motivation*

Motivation, which is one of the most important factors that affect the individual, from the simplest biological needs to complex human behavior, guides the individual's attitudes and behaviors, activates the individual and gives energy to the individual to act. It is a general concept that covers desires, wishes, impulses, interests and needs (Erden, 2005; Adair, 2005; Cüceloğlu, 2007). On the other hand, the fact that educational organizations have great importance and the fact that the employees who will give momentum to these organizations are teachers have raised the issue of teacher motivation. According to one opinion, the teacher is the one whose vocation, in the shortest terms, is to teach knowledge. This very general description gives rise to a very broad concept of teaching, including philosophers and prophets. In this respect, the vital value of knowledge has caused people to have a deep respect for the teachers throughout history (Coşkun, 2009). However, in the globalized world, teachers are not the only ones who know. Accordingly, respect, which is gained thanks to knowledge based on the previous description, may not be the only motive of teachers. As a result, theories and studies to dwell on teacher motivation have gained importance recently. One of the most prominent approaches grounding teacher motivation on a theoretical frame is Herzberg's motivational-hygiene theory. Herzberg has attempted to put forward motivation in his motivational-hygiene theory, in which he suggests that work activities affect the nature of work and performance (Steers et al., 2004). According to Herzberg's theory of motivational-hygiene, motivating elements make workers feel better about their jobs, whereas various hygiene elements cause workers to feel sick about their jobs. Job-satisfied workers tend to ascribe their content about the jobs to internal elements. On the other hand, workers who are not contented with their jobs tend to more ascribe their dissatisfaction to external elements. Elements call motivators to motive and support the workers. Yet, hygiene factors lead to job discontent. These two elements are named as internal and external factors (Padmaja et al., 2013).

Teachers' motivation is affected by many factors inside or outside the school. Similarly, a study conducted on 404 teachers in Konya, found that the teachers' internal motivation was high, and their external motivation was moderate. According to the study, age and branch variables did not make any significant difference in the motivation of the teachers, while marital status, vocational seniority, and type of school studied variables differ significantly on motivation. The study found that the motivation of teachers who were married and worked in private schools was higher than that of other teachers (Urhan, 2018). Besides, negative or positive impacts of school principals on teacher motivation levels are not inevitable. Also, since motivation is important for high and continuous productivity and achieving the targeted goal with intense effort, the most important responsibility of the managers is to increase the motivation levels of the employees (Forsyth, 2006). Sarı (2019) examined the effect of perception management tactics used by school principals on organizational climate and teacher motivation, and found that principals' perception tactics negatively affected teachers' motivation. Sucu (2016) analyzed survey data from 305 teachers working in 305 Anatolian High School in his study, in which he examined the impact of instructional leadership behaviors on the motivation of teachers. The analysis found that teachers' motivations were moderate, while gender, branch, and seniority variables had no significant effect on motivation. As a result of the correlation study, it was concluded that the teacher's motivation was positive, moderate, and significantly influenced by the teacher's educational leadership behaviors. On the other hand, Blase (1990, cited in Polat, 2010)

stated that when school principals used force that violates personal, professional and organizational values, 71% of teachers were affected negatively. He stated that this prevented the school from reaching its educational aims. Canbaz (2019) investigated the relationship between the transformational leadership characteristics of school principals and teachers' commitment to the organization; found that there was a low level of positive relationship between transformational leadership and emotional commitment and attendance. As the number of studies analyzing transformational leadership of school principals and teachers' motivation is insufficient, this study is supposed to render a useful angle into the education field. Therefore, the current study provides an examination of the relationship between school principals' perceived transformational leadership behavior and teachers' motivation. As the number of studies analyzing transformational leadership of school principals and teachers' motivation is insufficient, this study is supposed to put forward a useful angle into the field in educational administration. The questions that the current study aims to answer are as follows:

1) Do teachers' perceptions of the transformational leadership characteristics of principals show a significant difference according to gender, age, occupation time, working time at school, level of education, and type of school worked?

2) Do the multidimensional work motivations of teachers show a significant difference according to gender, age, working time in the profession, working time in school, level of education, and type of school worked?

3) What are the relationships between teachers' perceptions of principals' transformational leadership characteristics and multidimensional work motivations?

## 3. Methodology

### 3.1 Research Design

In the current study, a correlational research design was used to put forward the degree and direction of the relationship between school principals' perceived transformational leadership behavior and teachers' motivation. Survey models aim to describe a situation that has existed in the past or still exists as it exists (Karasar, 2005). In the correlational models, the level and direction of changes between variables are tried to be determined (Fraenkel et al., 2011). Accordingly, the current study aims to determine the possible relationship between school principals' perceived transformational leadership behavior and teachers' motivation.

### 3.2 Research Participants

A total of 418 teachers working in various schools under the Ministry of National Education constitute the study group. The study group was determined by the convenience sampling technique. In this technique, accessible groups are selected for the research where comprehensive data can be obtained (Fraenkel et al., 2011). The following are descriptive statistics for the study group in Table 1.

Table 1. Descriptive statistics about the demographic characteristics of the participants

|  |  | f | % |
|---|---|---|---|
| Gender | Male | 193 | 46.2 |
|  | Female | 225 | 53.8 |
| Age | 30 years and younger | 71 | 17 |
|  | Between 31-40 years | 173 | 41.4 |
|  | Between 41-50 years | 127 | 30.4 |
|  | 51 years and older | 47 | 11.2 |
| Working time in the profession | Less than 5 years | 62 | 14.8 |
|  | Between 5-10 years | 97 | 23.2 |
|  | Between 11-15 years | 80 | 19.1 |
|  | 16 years and more | 179 | 42.8 |
| Working time at school | Less than 5 years | 259 | 62 |
|  | Between 5-10 years | 119 | 28.5 |
|  | Between 11-15 years | 17 | 4.1 |
|  | 16 years and more | 23 | 5.5 |
| Level of education | Associate's degree | 13 | 3.1 |
|  | Bachelor | 310 | 74.2 |
|  | Postgraduate | 95 | 22.7 |
| Type of school worked | Primary School | 141 | 33.7 |
|  | Middle School | 118 | 28.2 |
|  | High School | 159 | 38 |

As seen in Table 1, 46.2% of the participants are male and 53.8% are female. Teachers in the range of 31-40 years (41.4%) are the most intense group in terms of the participants' ages. Considering the teachers' working time in the profession, the most intense group consists of 16 years and above (42.8%) and less than 5 years (62%) in terms of working time at school. 74.2% of the teachers are graduates of bachelor and the distribution is close in terms of the type of school worked.

*3.3 Data Collection Tools*

In this research, "Personal Information Form", "Transformational Leader Scale" and "Multidimensional Work Motivation Scale" were used as data collection tools. "Personal Information Form" including the questions such as participants' gender, age, professional seniority, type of school they work, etc. was made by the researchers to collect data about the demographic characteristics of the participants.

"Multidimensional Work Motivational Scale" was used as the data collection tool for exploring teachers' motivation. The scale developed by Gagné et al. (2010) and adapted by Civilidağ and Şekercioğlu (2017) contains six subscales including identified regulation, non-motivation, external regulation-social, external regulation-material, introjected regulation and intrinsic motivation. The "Transformational Leadership Scale" developed by Brestrich (2000) was used to collect data about teachers' perceptions of transformational leadership. Cronbach Alpha internal consistency coefficient was calculated to test the reliability of the expressions in the scales used in the study. Cronbach Alpha internal consistency coefficient was calculated for each dimension of the Transformational Leadership Scale. It was determined as 0.93 for providing vision and inspiration; 0.90 for creating behavior models; 0.94 for commitment to group purposes; 0.90 for individual support; 0.91 for intellectual stimulation; and 0.86 for high-performance expectations. As for Multidimensional Work Motivation Scale, Cronbach Alpha internal consistency coefficient was calculated as 0.89 for identified regulation; 0.70 for external regulation-material; 0.80 for external motivation-social; 0.73 for non-motivation; 0.81 for introjected regulation; and 0.71 for intrinsic motivation. According to Nunnaly and Bernstein (1994), the reliability coefficient in the range of 0.70 - 0.80 is an indication that the scale is at a sufficient reliability level for use in research.

*3.4 Data Analysis*

SPSS 25 was used in the analysis of the data. Depending on the research questions, independent groups' t-test, multivariate variance analysis (MANOVA), and canonical correlation analysis were performed. In the canonical correlation analysis, the degree of relationship between more than one set of dependent variables, and one or more sets of independent variables are tried to be revealed (Tabachnick & Fidell, 2012). In this respect, the canonical correlation analysis enables the control of Type I error that can interfere with the measurement process (Stangor,

2011). In the research, the upper limit of the error share was taken as .05.

Normality assumption for independent groups' t-test; the kurtosis and skewness coefficients and histogram graphs were examined and compared. The kurtosis (between -.01 and 2.09) and skewness (between .18 and 1.54) coefficients between -3 and +3 indicate that the normality assumption is met (Kline, 2011). By using the Levene test, the homogeneity of variances for all subgroups was examined, and the analyses were made. "Cohen's d" and eta square ($\eta^2$) values were examined to determine the degree of influence of independent variables on dependent variables.

Basic assumptions for multivariate analysis were reviewed. Sample size, univariate and multivariate outliers, normality, linearity, homoscedasticity, multicollinearity and independence of errors assumptions were examined (Tabachnick & Fidell, 2012). A total of 20 univariate and multivariate outliers were determined in the data set, and deleted from the data set. Thus, the analysis continued with the remaining 398 data. For the canonical correlation analysis, the number of samples is 10 times larger than the number of variables (Tabachnick & Fidell, 2012). Considering that there are 12 variables, the number of samples is sufficient. Scatter plots were examined, and it was observed that the assumptions of normality, linearity and homoscedasticity were met. For the multicollinearity assumption, the correlation coefficient between the variables must be less than 10, and the VIF (Variance Inflation Factor) value must be less than 10 and the TV (Tolerance Value) must be greater than .10 (Field, 2009). The fact that the VIF values of the variables ranged between 1.36 and 5.92 and the TVs between .17 and .73 showed that the multicollinearity assumption was met. The calculation of the Durbin-Watson value as 1.97 also assumes the independence of the errors from each other.

## 4. Findings

*4.1 Findings of Whether Teachers' Perceptions of Transformational Leadership Characteristics of Principals Show a Significant Difference in Terms of Demographic Variables*

Independent groups' t-test was conducted to determine whether teachers' perceptions of the transformational leadership characteristics of the principals change according to gender. The results are presented in Table 2.

Table 2. Independent groups t-test results applied to the sub-dimensions of teachers' perceptions of the transformational leadership characteristics of teachers according to gender

| Transformational leadership sub-dimensions | Gender | n | M | SD | t | d |
|---|---|---|---|---|---|---|
| Providing vision and inspiration | Male | 193 | 10.22 | 3.82 | -.45 | |
| | Female | 225 | 10.38 | 3.33 | | |
| Creating behavior models | Male | 193 | 6.60 | 2.46 | -.72 | |
| | Female | 225 | 6.77 | 2.29 | | |
| Commitment to group purposes | Male | 193 | 10.18 | 3.87 | -.82 | |
| | Female | 225 | 10.48 | 3.47 | | |
| Individual support | Male | 193 | 10.36 | 3.68 | -1.02 | |
| | Female | 225 | 10.71 | 3.41 | | |
| Intellectual stimulation | Male | 193 | 6.29 | 2.29 | -2.17* | .21 |
| | Female | 225 | 6.76 | 2.17 | | |
| High-performance expectations | Male | 193 | 3.84 | 1.47 | 1.16 | |
| | Female | 225 | 3.68 | 1.43 | | |

*p < 0.05.

As shown in Table 2, there is a significant difference between teachers' perceptions of transformational leadership of principals by gender only in terms of intellectual stimulation perception (t (416) = -2.17, p < .05, d = .21). According to this, female teachers have a higher level of perception of principals as having intellectual stimulation than male teachers.

To determine whether teachers' perceptions of the transformational leadership characteristics of principals vary according to their working time in the profession, MANOVA was made. The results are given in Table 3.

Table 3. MANOVA results applied to the lower dimensions of teachers' perceptions of transformational leadership characteristics of principals according to working time in the profession

| Impact | Pillai's Trace | Hypothesis sd | Error sd | F | p |
|---|---|---|---|---|---|
| Working time in the profession | 0.31 | 18 | 1173 | .68 | .83 |

As can be seen in Table 3, teachers' perceptions of the transformational leadership characteristics of the teachers do not show a significant difference according to the working time in the profession (Pillai's Trace = 0.31, F (18, 1173) = .68, p > .05).

Independent groups' t-test was conducted to determine whether teachers' perceptions of the transformational leadership characteristics of principals change according to their working time at the current school. The results are presented in Table 4.

Table 4. Independent groups t-test results applied to the sub-dimensions of teachers' perceptions of transformational leadership characteristics of principals according to working time at the current school

| Transformational leadership sub-dimensions | Working time at the current school | n | M | SD | t | d |
|---|---|---|---|---|---|---|
| Providing vision and inspiration | Less than 5 years | 259 | 9.95 | 3.68 | -2.64** | .27 |
| | More than 5 years | 159 | 10.89 | 3.29 | | |
| Creating behavior models | Less than 5 years | 259 | 6.42 | 2.43 | -3.02** | .31 |
| | More than 5 years | 159 | 7.13 | 2.19 | | |
| Commitment to group purposes | Less than 5 years | 259 | 9.97 | 3.72 | -2.64** | .27 |
| | More than 5 years | 159 | 10.94 | 3.47 | | |
| Individual support | Less than 5 years | 259 | 10.29 | 3.63 | -1.94 | |
| | More than 5 years | 159 | 10.97 | 3.35 | | |
| Intellectual stimulation | Less than 5 years | 259 | 6.35 | 2.30 | -2.23* | .23 |
| | More than 5 years | 159 | 6.86 | 2.10 | | |
| High-performance expectations | Less than 5 years | 259 | 3.62 | 1.40 | -2.34* | .24 |
| | More than 5 years | 159 | 3.96 | 1.49 | | |

**p < 0.01, *p < 0.05.

Teachers' perceptions of transformational leadership characteristics of principals differ significantly according to working time at school in terms of other sub-dimensions except from the individual support sub-dimension (p> .05) (Table 4). According to the results, teachers working at their current school for 5 or more than 5 years have higher perception levels about principals as individuals who provide their vision and inspiration, create behavior models, have commitment to group purposes, arouse intellectual stimulation and keep high-performance expectations than teachers working at their current schools less than 5 years.

Independent groups' t-test was conducted to determine whether teachers' perceptions of transformational leadership characteristics of principals change according to their educational level. The results are presented in Table 5.

Table 5. Independent groups t-test results applied to the sub-dimensions of teachers' perceptions of the transformational leadership characteristics of principals according to their educational level

| Transformational leadership sub-dimensions | Level of Education | n | M | SD | t | d |
|---|---|---|---|---|---|---|
| Providing vision and inspiration | Graduate | 310 | 10.48 | 3.50 | 1.30 | |
| | Postgraduate | 95 | 9.94 | 3.90 | | |
| Creating behavior models | Graduate | 310 | 6.85 | 2.36 | 2.12* | .25 |
| | Postgraduate | 95 | 6.25 | 2.45 | | |
| Commitment to group purposes | Graduate | 310 | 10.50 | 3.56 | 1.09 | |
| | Postgraduate | 95 | 9.99 | 4.09 | | |
| Individual support | Graduate | 310 | 10.66 | 3.46 | .82 | |
| | Postgraduate | 95 | 10.30 | 3.94 | | |
| Intellectual stimulation | Graduate | 310 | 6.60 | 2.19 | .74 | |
| | Postgraduate | 95 | 6.40 | 2.49 | | |

| High-performance expectations | Graduate | 310 | 3.82 | 1.40 | 1.79 |
|---|---|---|---|---|---|
| | Postgraduate | 95 | 3.50 | 1.59 | |

*p < 0.05.

As can be seen in Table 5, there is a significant difference between the sub-dimensions of teachers' perceptions of the transformational leadership characteristics of principals according to their education levels only in terms of their perception of creating behavior models (t (416) = 2.12, p < .05, d = .25). Accordingly, teachers who have postgraduate diplomas have a higher level of perception of principals as individuals who form behavioral models than teachers who are graduates of bachelor.

*4.2 Findings as to Whether Teachers' Multidimensional Work Motivations Show a Significant Difference in Terms of Demographic Variables*

Independent groups' t-test was conducted to determine whether teachers' multi-dimensional job motivations vary by gender. The results are presented in Table 6.

Table 6. Independent groups' t-test results applied to multi-dimensional work motivation sub-dimensions of teachers by gender

| Multidimensional work motivation sub-dimensions | Gender | n | M | SD | t | d |
|---|---|---|---|---|---|---|
| Identified regulation | Male | 193 | 13.64 | 4.27 | -3.90** | .39 |
| | Female | 225 | 15.15 | 3.51 | | |
| External motivation-material | Male | 193 | 7.01 | 3.64 | .15 | |
| | Female | 225 | 6.96 | 3.35 | | |
| External motivation-social | Male | 193 | 6.77 | 3.56 | .77 | |
| | Female | 225 | 6.50 | 3.55 | | |
| Non-motivation | Male | 193 | 5.51 | 3.21 | 2.83* | .28 |
| | Female | 225 | 4.70 | 2.54 | | |
| Introjected regulation | Male | 193 | 13.60 | 4.18 | -2.88* | .29 |
| | Female | 225 | 14.70 | 3.50 | | |
| Intrinsic motivation | Male | 193 | 11.60 | 3.95 | -1.87 | |
| | Female | 225 | 12.31 | 3.81 | | |

**p < 0.001, *p < 0.05.

It is seen that identified regulation (t (416) = -3.90, p <.001, d = .39), non-motivation (t (416) = 2.83, p <.05, d = .28) and introjected regulation (t (416) = -2.88, p <.05, d = .29) from teachers' multi-dimensional work motivations are significantly differentiated by gender (Table 6). According to this result, female teachers' identified regulation and introjected regulation motivation are higher than male teachers, and female teachers are more motivated than male teachers.

MANOVA was conducted to determine whether the teachers' multi-dimensional work motivations change according to the time of work in the profession. The results are presented in Table 7.

Table 7. MANOVA results applied to sub-dimensions of multi-dimensional work motivation of teachers according to working time in the profession

| Impact | Pillai's Trace | Hypothesis sd | Error sd | F | p | $\eta^2$ |
|---|---|---|---|---|---|---|
| Working time in the profession | 0.94 | 18 | 1173 | 2.11 | .004 | .031 |

As can be seen in Table 7, multi-dimensional work motivations of teachers show a significant difference according to working time in the profession (Pillai's Trace = 0.31, F (18, 1173) = .68, p < .01, $\eta^2$ = .03). Univariate variance analysis (ANOVA) results following the multivariate variance analysis are given in Table 8.

Table 8. ANOVA results applied to sub-dimensions of multi-dimensional job motivation of teachers according to working time in the profession

| Dependent variable | KT | sd | KO | F | p | $\eta^2$ |
|---|---|---|---|---|---|---|
| Identified regulation | 108.08 | 3 | 36.03 | 2.40 | .068 | - |
| External regulation-material | 76.11 | 3 | 25.37 | 2.20 | .088 | - |
| External regulation-social | 127.03 | 3 | 42.34 | 3.42 | .017 | .025 |
| Non-motivation | 35.86 | 3 | 11.95 | 1.87 | .134 | - |
| Introjected motivation | 134.07 | 3 | 44.69 | 3.30 | .020 | .025 |
| Intrinsic motivation | 80.30 | 3 | 26.77 | 1.82 | .143 | - |

ANOVA results showed a significant difference in sub-dimensions external regulation-social (F (3, 394) = 3.42, p < .05, $\eta^2$ = .025) and introjected motivation (F (3, 394) = 3.30, p < .05, $\eta^2$ = .025) of teachers according to the time of working in the profession (Table 8). Hochberg's GT2 test was conducted to determine which groups differ. Accordingly, teachers with working time of less than five years have higher external regulation-social motivation than teachers with a working time of 5-10. However, it was found that teachers whose working time in the profession are less than 5 years have a higher level of introjected regulation motivation than teachers who have 16 years or more to work in the profession.

Independent groups' t-test was conducted to determine if teachers' multidimensional work motivations change based on their education levels. The results achieved are given in Table 9.

Table 9. Independent groups t-test results applied to sub-dimensions of multi-dimensional job motivation of teachers according to education levels

| Multidimensional work motivation sub-dimensions | Level of education | n | M | SD | t | d |
|---|---|---|---|---|---|---|
| Identified regulation | Graduate | 310 | 14.67 | 3.64 | 1.57 | |
| | Postgraduate | 95 | 13.85 | 4.66 | | |
| External regulation-material | Graduate | 310 | 6.79 | 3.35 | -1.67 | |
| | Postgraduate | 95 | 7.53 | 3.86 | | |
| External regulation-social | Graduate | 310 | 6.43 | 3.41 | -1.92 | |
| | Postgraduate | 95 | 7.27 | 3.84 | | |
| Non-motivation | Graduate | 310 | 4.88 | 2.80 | -2.20* | .27 |
| | Postgraduate | 95 | 5.67 | 3.14 | | |
| Introjected motivation | Graduate | 310 | 14.31 | 3.66 | .61 | |
| | Postgraduate | 95 | 14.01 | 4.37 | | |
| Intrinsic motivation | Graduate | 310 | 12.05 | 3.76 | .92 | |
| | Postgraduate | 95 | 11.63 | 4.14 | | |

*p < 0.05.

As can be seen in Table 9, there is a significant difference from the multi-dimensional work motivation sub-dimensions of teachers only in terms of non-motivation sub-dimension (t (416) = -2.20, p <.05, d = .27). Accordingly, the level of non-motivation of teachers who have postgraduate diplomas is higher than that of teachers who are graduates of bachelor's.

*4.3 Findings on the Relationship Between Teachers' Perceptions of Transformational Leadership Characteristics of Principals and Multidimensional Work Motivations*

To determine the relationship between teachers' perceptions of transformational leadership characteristics of principals and multi-dimensional work motivations, canonical correlation analysis was conducted. Before the canonical correlation analysis, bivariate correlations between variables were examined. As seen in Table 10, there are medium and high-level relationships between the variables in the first data set (transformational leadership characteristics), while the variables in the second data set (multidimensional work motivation) have low, medium and high-level relationships (there is no significant relationship between identified regulation and external regulation-material; between identified regulation and external regulation-social; between non-motivation and intrinsic motivation). When the relations between the first dataset and the second dataset were examined, it was determined that there was no significant relationship between the transformational leadership characteristics and the multidimensional work motivation's identified regulation, external regulation-material, and external

regulation-social sub-dimensions. It is seen that the highest relationship between transformational leadership characteristics and multidimensional business motivation subscales is between providing vision and inspiration and non-motivation dimensions ($r = .26$, $p < .01$).

Table 10. Correlation coefficients, mean and standard deviation values between variables

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Transformational leadership sub-dimensions** | | | | | | | | | | | | | | |
| 1-Providing vision and inspiration | 10.21 | 3.52 | .93ᵃ | | | | | | | | | | | |
| 2-Creating behavior models | 6.63 | 2.34 | .88** | .90ᵃ | | | | | | | | | | |
| 3-Commitment to group purposes | 10.29 | 3.63 | .87** | .85** | .94ᵃ | | | | | | | | | |
| 4-Individual support | 10.50 | 3.51 | .83** | .83** | .88** | .90ᵃ | | | | | | | | |
| 5-Intellectual stimulation | 6.47 | 2.18 | .79** | .82** | .84** | .88** | .91ᵃ | | | | | | | |
| 6-High performance expectations | 3.76 | 1.44 | .47** | .50** | .51** | .53** | .54** | .86ᵃ | | | | | | |
| **Multidimensional work motivation sub-dimensions** | | | | | | | | | | | | | | |
| 7-Identified regulation | 14.56 | 3.90 | .01 | .03 | -0.02 | .01 | .01 | -0.05 | .89ᵃ | | | | | |
| 8-External regulation- material | 6.96 | 3.41 | -0.02 | -0.06 | -0.03 | -0.06 | -0.07 | -0.08 | .02 | .70ᵃ | | | | |
| 9-External motivation- social | 6.57 | 3.55 | .04 | .01 | .04 | .01 | -0.01 | .03 | .05 | .49** | .80ᵃ | | | |
| 10-Non-motivation | 4.84 | 2.54 | .26** | .20** | .22** | .23** | .14** | .19** | -.24** | .27** | .34** | .73ᵃ | | |
| 11-Introjected regulation | 14.32 | 3.71 | -0.02 | .01 | -0.06 | -0.03 | .01 | -.10* | .83** | .12* | .10* | -.24** | .81ᵃ | |
| 12-Intrinsic motivation | 12.06 | 3.85 | -.14** | -.10* | -.14** | -.11* | -0.09 | -0.07 | .56** | .13** | .14** | -0.08 | .54** | .75ᵃ |

* $p < .05$, ** $p < .01$
ᵃ = Cronbach alpha coefficient

As a result of the canonical correlation analysis between the first and second variable sets, six canonical correlation coefficients were obtained. Whether the canonical models obtained are statistically significant was tested and the results are given in Table 11.

Table 11. Correlation coefficients of canonical variables, Wilks' Lambda and significance tests

| Roots | $r_c$ | $r_c^2$ | $\chi^2$ | sd | Wilk's λ | p | F |
|---|---|---|---|---|---|---|---|
| 1 | .37 | .14 | 1697.81 | 36 | .782 | .000 | 2.72 |
| 2 | .24 | .06 | 1439.14 | 25 | .905 | .036 | 1.57 |
| 3 | .18 | .03 | 1185.99 | 16 | .957 | .386 | 1.06 |
| 4 | .09 | .007 | 946.87 | 9 | .988 | .872 | .50 |
| 5 | .07 | .004 | 780.00 | 4 | .996 | .792 | .42 |
| 6 | .00 | .000 | 391.00 | 1 | 1.00 | .967 | .00 |

According to Table 11, only the first model (Wilk's λ = 0.782, F (36) = 2.72, p <.001) and the second model (Wilk's λ = 0.905, F (25) = 1.57, p <.05) were found significant. Tabachnick and Fidell (2012) stated that only statistically meaningful canonical functions should be interpreted in the canonical correlation analysis. Also, canonical correlation values less than .30 are not interpreted as the variance explained by variable pairs is below 10% (Capraro & Capraro, 2001). Therefore, the findings of the first canonical variable pair were interpreted, and the findings of the second canonical variable pair were not interpreted. When the first canonical variable pair is examined, it is seen that the correlation set has a value of .34. The square of this value indicates the common variance explained between dependent and independent variables. Accordingly, it was determined that the first canonical correlation set shared a 14% variance.

The standardized canonical coefficients and canonical load values calculated for the sub-factors of the variables set are given in Table 12. The standardized canonical coefficients show the effect amounts of the original variables in that set in the formation of the canonical variable in a set. Canonical charges mean the variance explained by the variables. This value indicates the average of the squares of the canonical loads of the variable in the related set.

Table 12. Standardized canonical correlation coefficients and canonical load values of the variables in the first and second sets

| Variable | $r_{c1}$ | |
|---|---|---|
| | Canonical Correlation Coefficients | Canonical Values |
| *The first set (Transformational leadership features)* | | |
| • Providing vision and inspiration | 1.01 | .87 |
| • Creating behavior models | -.32 | .69 |
| • Commitment to group purposes | .22 | .79 |
| • Individual support | .58 | .76 |
| • Intellectual stimulation | -.89 | .55 |
| • High performance expectations | .36 | .61 |
| • Explained variation (%) | .52 | |
| • Redundancy (%) | .07 | |
| *Second set (Multidimensional work motivation)* | | |
| • Identified regulation | .56 | -.15 |
| • External regulation-material | -.13 | .08 |
| • External regulation-social | .09 | .27 |
| • Non-motivation | .91 | .87 |
| • Introjected motivation | -.25 | -.28 |
| • Intrinsic motivation | -.51 | -.41 |
| • Explained variation (%) | .18 | |
| • Redundancy (%) | .03 | |

When Table 12 is analyzed, the contribution of the vision and inspiration variable in the formation of transformational leadership characteristics according to standardized canonical coefficients is positive and highest (1.01). Then, providing individual support (.58), keeping high-performance expectation (.36) and commitment to group goals (.22) positively contributed to the intellectual stimulation (-.89) and creating behavioral models (-.32) variables contribute negatively. The variable of non-motivation (.91) contributes positively to the formation of multi-dimensional work motivation and is the highest. After this variable, identified regulation (.56) and external regulation-social (.09) variables contribute positively, while internal motivation (-.51), internal projection (-.25) and external regulation-material (-.13) variables contribute negatively.

Tabachnick and Fidell (2012) state that if the load value is greater than .30 in terms of canonical load values, it is part of the set in which the relevant variable is included. In this context, in Table 12, since the canonical load values of all variables in the first set (transformational leadership characteristics) are greater than .30, they are considered as part of the first set. In the second set, it is understood that only non-motivation (.87) and intrinsic motivation (-.41) variables are part of the set.

The canonical loads and canonical correlations of canonical function between teachers' perceptions of transformational leadership characteristics and multidimensional work motivations are summarized in Figure 1.
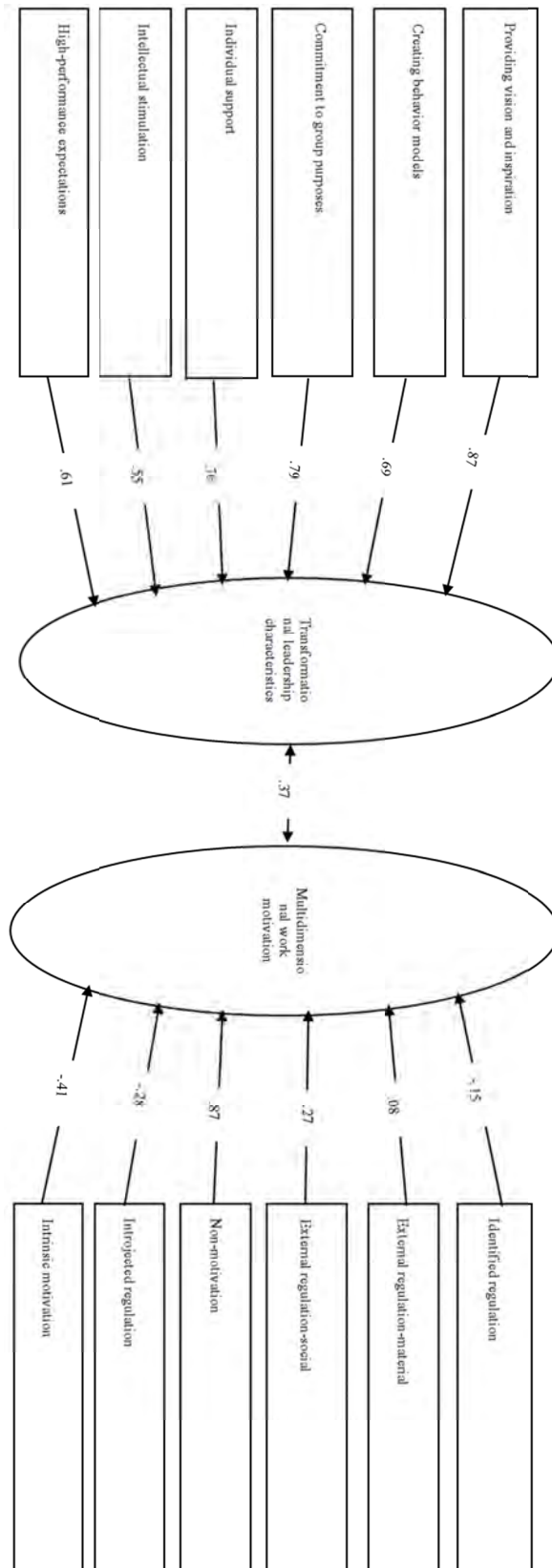
Figure 1. Canonical loads and canonical correlations regarding canonical function between teachers' perceptions of transformational

As can be understood from Figure 1, there are positive relationships between teachers' perceptions of the transformational leadership characteristics of principals and their non-motivation, and negative relationships with their intrinsic motivations. In other words, as teachers perceive them as individuals who provide vision and inspiration, create behavioral models, have commitment to group goals, provide individual support, arouse intellectual stimulation, and keep high-performance expectations, their motivation counting their inner motivation decreases. These perceptions of teachers' about transformational leadership characteristics of principals explain 14% of their multidimensional work motivations.

## 5. Discussion and Conclusion

In this study, principals' transformational leadership characteristics and teachers' multidimensional work motivation were discussed in terms of demographic variables. In this respect, some results were obtained as follows.

According to the results, female teachers tend to perceive principals as individuals who evoke intellectual stimulation more than male teachers. Similarly, Taş and Çetiner (2011) reached a significant difference in the evaluations of secondary school principals' transformational leadership behaviors by their gender. The female teachers' transformational leadership level was found higher than male teachers' (Taş & Çetiner, 2011). Eraslan (2003), also highlighted a significant difference in school principals' perceptions about transformational leadership features of teachers according to gender. Similarly, Kiriş and Aslan (2019), in their study, examined school principals in terms of transformational leadership behavior, and ended with a significant difference in teachers' perception of their principals according to gender.

In addition, teachers' perception of the transformational leadership aspects of the principals does not change depending on working time in the profession, whereas it changes depending on working time at their current schools. The teachers working at their current school where they have 5 or more years more tend to perceive principals as transformational leaders compared to the teachers working at the school where they have less than 5 years. Besides, teachers who are graduates of bachelor have higher levels of perception of principals as individuals who create behavior models than the teachers who have postgraduate diplomas. According to another result, teachers' perceptions of transformational leadership characteristics of principals do not change based on the type of school worked. The findings of the seniority variable are consistent with Eryilmaz (2006) and Taş and Cetiner's (2011) research findings. In both studies, teachers' perceptions of school principals did not vary meaningfully in transformational leadership behaviors according to the seniority variable. Kiriş (2016) also found that the perception of primary school principals by teachers according to the dimensions of their transformational leadership characteristics varies according to education status of the teachers.

According to another result, female teachers for identified regulation, introjected regulation and intrinsic motivations were higher than male teachers. Polat (2010) also reached that male teachers had lower intrinsic and external motivation levels than female ones. Multidimensional work motivations of teachers vary according to their working time in the profession and education level. The external regulation-social motivation of teachers with a working time of less than 5 years in the profession is higher than teachers with a working time of 5-10 years in the profession. On the contrary, it was found that the teachers whose working time in the profession is less than 5 years had a higher level of introjected regulation than the teachers whose working time in the profession is 16 years or more. Besides, it has been determined that teachers who have postgraduate diplomas have higher motivation levels than teachers who are graduates of bachelor's. However, Ertürk and Aydın (2016) did not find any significant difference in any perception in terms of education level variable.

Moreover, as teachers perceive principals as individuals who provide vision and inspiration, create behavioral models, have commitment to group purposes, supply individual support, arouse intellectual stimulation and keep high-performance expectations, their motivation including intrinsic motivation decreases. However, another study put forward a positive relationship between transformational leadership and teachers' work motivation (Abdullah et al., 2018). Also, Leithwood et al. (1999) suggested that teachers who have transformational principal behavior were more satisfied with their principal, more committed to their organization, and they more tended to notify that they spent the extra effort. Geijel et al. (2003) also reached that transformational leadership affected both commitment and whether they spent extra endeavor in the organization. Despite the anticipation that transformational leadership makes teachers engage in their occupation, there is not enough evidence for this (Leithwood & Jantzi, 2006). As Leithwood et al. (2008) reached evidence that principals contributed modestly to workers' competency and performance, in the current study, it has been reached that there is not a significant relationship between transformational leadership and teacher motivation. Similarly, Ergin and Kozan (2004) put forward that transformational steps in an organization do not meet the high-level requirements of workers in

Turkey. Eres (2011) also did not reach any meaningful relationship between the transformational leadership features of school principals and teacher motivation. Gallmeier (1992) claims that even though transformational leadership affects group efficacy, it does not have an important role in motivating teachers.

As a result, it must be stated that the school administration is of vital importance to motivate teachers. Also, in 21st century, what happens in China can be felt in Turkey deeply. That's why the importance of transformational leadership is inevitable especially in the education field to keep up with the current changes without being affected adversely. Yet, the results of the current study show that as teachers consider their principals as individuals transformational leaders, their motivation including inner motivation decreases. There are some other factors affecting this, too. Transformational leaders give teachers the responsibility to improve their characteristics and increase their success in terms of keeping up with changes in their social environment. Accordingly, teachers who have old habits can be shocked, and resist against changes permanently (Eren, 2016). Although transformational leadership has impacts on the fulfillment of organizational goals, it may be deprived of motivating teachers. As Eres (2011) stated, especially teachers who have already low motivation may not be influenced positively by transformative leaders. According to Gallmeier (1992), there is no definite evidence that a leadership style directly influences teacher motivation. Brestrich (2000) explored that state sector principals in particular (Ministry of National Education Principals) did not have this transformative feature. Accordingly, the fact that the teachers are not acquainted with this type of leadership in the schools where the study was conducted may make transitional leadership perceived as demanding by the teachers, which may decrease their motivation. Besides, transformational leadership practices can negatively affect the performance of the organization at the beginning because it is planned depending on the future. To conclude, the fact that transformational leaders try to motive teachers to foresee beyond their own interests, to lead them to be more creative and the fact that the transformational leaders tend to create an organizational culture based on innovation and transformation can threaten teachers' comfort zone, accordingly, their motivation diminishes.

## 6. Suggestions

### 6.1 Suggestions for Practitioners

It must be noted that there are many factors affecting teachers' motivation such as safety, salary, work conditions, health, relationships between workers, and management. However, meeting those factors does not guarantee teachers' motivation (Can et al., 2011). Education leaders should consider different variables both while assessing and trying to increase teachers' motivation. Also, they should remember the education field cannot be thought separate from its social context. Given that the current study that teachers' motivation does not increase with the increase in their principals' transformational leadership practices, it should not be forgotten that every education area has its dynamics and a teacher profile. Besides, it should be considered that teachers may react negatively towards transformational leaders at first because they may find their practices demanding. Accordingly, education leaders must be patient, collaborative, understanding, and encouraging. They should observe their working environment, teacher and student profile, and should arrange seminars, rewards systems accordingly.

### 6.2 Suggestions for Researchers

The current research can be extended with a case study conducted on the relationship between transformational leadership and teachers' motivation. It may be conducted in different contexts considering the features of the contexts. Also, empirical studies may be conducted by educating leaders on transformational leadership with control and experimental groups so that the effects of transformational leadership on teachers' motivation could be justified.

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