Developing Principals' Ethical Expectation Scale and Ethical Leadership Scale: Validty and Reliability Study

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Theoretical Framework

Ethics involves moral issues and choices and deals with the proper and improper behaviors displayed in the business environment. Organizational behaviors are affected by policies related to ethical codes, reward and punishments systems, and managers' leadership styles. The need to explore the phenomenon of ethical leadership in organizations has been prompted by the increasing societal concern regarding the unacceptability of organizational leaders being indifferent to moral responsibility, much less being engaged in unethical behaviors (Mendonca & Kanungo, 2007). Ethical standards have changed rapidly over the past decade or so, and the rate of change is increasing (Bellingham, 2003). Ethical leadership nowadays has become more important within the complexities of the world. The issues educational organizations face such as inequality, especially in terms of gender, socio-economic background, decision making, student assessment, and teachers' performance evaluation are some of the important topics related to ethical issues.

Globalization has caused serious ethical problems in various fields, education being one of these. The problems caused by globalization have also been witnessed by educational administrations and have caused various ethical dilemmas for scho-

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ol managers, teachers, students, and societies as a whole. These ethical dilemmas lay the burden on organizational managers to be ethical leaders. Humans themselves are the reason why schools exist that have been inspired to train individuals who adopt social roles and live in harmony with other members of society. Schools' human resources are the basic factor that define the future societal framework. When summarizing the basic philosophy of education as the process of changing individuals' behaviors toward a desired course by making accurate and ideal use of educational resources, the importance of having talented school managers with ethical leader profiles is understandable for being able to realize educational organizations' educational philosophy.

Being the school leader, principals are able to develop ethics codes. Browne (2020) suggested some steps for principals to follow in creating ethics codes: 1) Have principals write down a list of their beliefs about school leadership and more importantly have them explain why they have these beliefs. 2) Have them write a paragraph about why these ethical codes are necessary. 3) Have them write in detail how their beliefs would affect their behaviors and actions as school leader within the school environment. 4) Have them write out a handful of challenging situations in which a principal would be called upon to bring this code of ethics to life.

Justifying unethical behavior starts with four types of behaviors. The first is a misperception about the behavior that helps to remove unintended consequences and consider the behaviors to be good. The second is accepting behaviors that appear highly advantageous for organizations or individuals as actions that can be performed. The third is thinking that improper behaviors may go unnoticed by third parties. The fourth and final one is people assuming they will be supported by their organization even if they act unethically. The number of excuses exemplified for justifying nonethical behaviors can be increased, such as assuming that some ethical principles and norms can be ignored to facilitate certain processes for the benefit of society. Another example would ignoring individuals who behave unethically because they are trying to protect their own interests (Aydın, 2018).

Objectives and Research Questions

This study aims to develop valid and reliable scales regarding teachers' ethical expectations and principals' ethical leadership behavioral performance in the context of Turkey. Even though some scales have been developed on ethical leadership (Minaz, 2018; Uğurlu & Sincar, 2012; Yılmaz, 2006), no scales currently exist in the context of Turkey regarding teachers' ethical expectations. Hence, this study aims

to fill this gap. Another contribution from this study is the simultaneous validation of two scales containing the same items along with second-order confirmatory factor analyses with advanced statistics.

Methodology

Sample and Population

The population of the study is comprised of 10,240 teachers working at public schools located in Turkey's province of Sakarya. The schools are taken into consideration as clusters with teachers being selected using the simple random sampling technique for each school; 541 public teachers make up the sample of the study. Of the 541 participants, 320 (59.1%) are female, 221 (40.9%) are male, 141 (26.1%) are between the ages of 20 and 30, 237 (43.8%) are between the ages of 31 and 40, and 161 (29.8%) are between the ages of 41 and 50. Of the participants, 462 (85.4%) have an undergraduate degree and 79 (14.6%) have a post-graduate degree; 146 (27%) work at public elementary schools, 135 (25%) at middle schools, 138 (25.5%) at general academic high schools, and 138 (25.5%) at vocational high schools.

Measures and Data Analysis

The items included in both scales have been developed for the aim of this research based on the considerations of experts from the field of educational sciences with measurement expertise and of experienced teachers as well as a review of the related literature. The items included on the draft scale have been addressed by the experts from three faculties and 15 teachers; certain revisions were made by taking their opinions into account. The final versions of the scales to be administrated to teachers contain 52 items and are 5-point Likert-type scales. The instrument has three columns: the left column contains the Teachers' Ethical Expectations Scale with the answer options of never expected, rarely expected, sometimes expected, often expected and always expected; the middle column contains ethics-related items; and the right column contains the Principals' Ethical Leadership Behaviors Scale with the answer options of never display, rarely display, sometimes display, often display, and always display. The data have been analyzed using the KMO and Bartlett tests for examining the factorability and normal distribution of data. Exploratory factor analyses (EFAs) were conducted to examine the underlying dimensionality of the item set, then second-order confirmatory factor analysis (CFA) was used to verify the model created as a result of the EFAs. Cronbach's alphas have

been calculated for internal consistency, and corrected item-total correlations were used for item reliability. The significance of the difference between scores from the lower and upper 27-percentile groups for all the participants has additionally been analyzed, with the independent samples t-test being used for reliability.

Findings

Because the development and analyses of the two scales have been conducted separately for each scale, the results are presented under two different headings in the findings for each scale.

Teachers' Ethical Expectations Scale (TEES)

The EFA conducted for the Teachers' Ethical Expectations Scale shows it to have a single dimension explaining 55.7% of the total variance. Even though a satisfactory result has been found for TEES having a single dimension, varimax rotation has also been performed to enhance information about the explained variance. Four items were removed in the final step of EFA due to low factor loading values. The final EFA resulted in the following five dimensions: The first dimension of providing a democratic work atmosphere based on justice, equity, and dignity contains 19 items and explains 22.47% of the variance with an eigenvalue of 10.79, factor loading values between .72 and .48, and an alpha coefficient of .97. The second dimension of respecting privacy, objectivity, honesty, and trustworthiness contains 14 items and explains 19.47% of the variance with an eigenvalue of 9.54, factor loading values between .80 and .45, and an alpha coefficient of .96. The third dimension of providing a quality human-centered teaching atmosphere contains seven items and explains 11.59% of the variance with an eigenvalue of 5.57, factor loading values between .74 and .47, and an alpha coefficient of .90. The fourth dimension of avoiding relationships based on self-interest contains four items and explains 7.82% of the variance with an eigenvalue of 3.57, factor loading values between .65 and .50, and an alpha coefficient of .75. The fifth dimension of communication based on trust and professional sensibility also contains four items and explains 7.39% of the variance with an eigenvalue of 3.54, factor loading values between .73 and .47, and an alpha coefficient of .88. The EFA results reveal the TEES to explain 69.13% of the total variance and its Cronbach alpha of reliability to be calculated as .98.

CFA has been performed based on the EFA results. According to the CFA results, TEES' path schema can be summarized as follows: The factor loadings range

between .88 and .69 for the items from the first dimension, between .89 and .59 for the items from the second dimension, between .68 and .60 for the items from the third dimension; between .76 and .56 for the items from the fourth dimension, and between .82 and .79 for the items from the fifth dimension. The fit indexes for TEES are provided in Table 1.

Table 1. Fit Indexes of TESS									
X²	df	p	CFI	NFI	AGFI	IFI	GFI	SRMR	RMSEA
5891.33	1075	0.000	.98	.97	.66	.98	.69	.053	.091

As can be seen in Table 1, an χ2 / *df* = 5.48 is assumed to be bad, while *CFI*, *NFI*, and *IFI* values have great levels; the *SRMR* is at an acceptable while the *RMSEA* is at a low level. Standardized factor loadings, *t*-test results, and the R^2 analysis from the EFA regarding TESS having five dimensions can be summarized as follows: Items' factor loadings vary between .89 and .56; accordingly, the dimension can be said to have quite a high level of relationality with the items. The *t* values regarding the ability of the latent variables' items to describe the observed variables are statistically significant at the level of *p* < .001 and range between 22.63 and 10.77. Additionally, the r^2 values indicate how much of the explained variance in the observed variables stems from the latent variables; this has been calculated at reasonable levels varying between .79 and .31. Finally, after assessing TEES as having multiple dimensions, a comparison of *t*-test values regarding the lower and upper 27 percentiles' average scores was performed: The value is 21.49 for the first dimension, 17.07 for the second dimension, 12.89 for the third dimension, 14.74 for the fourth dimension, and 17.37 for the fifth dimension. The results from the TEES' scores dimensions with respect to t-test values are statistically significant (*p* < .001).

Principals' Ethical Leadership Behaviors Scale (PELBS)

The results from the EFA performed for the Principals' Ethical Leadership Behaviors Scale shows it to have a single dimension that explains 48.67% of the total variance in TESS scores. Although the results regarding PELBS having a single dimension are satisfactory, varimax rotation has been performed to enhance information about the explained variance. In the final step of the EFA, one item was removed due to its low factor loading value. The results from the final EFA show PELBS to have five dimensions, just like the TEES, and the results can be summarized as follows: The first dimension of respecting privacy, being objective, and being trustworthy contains 18 items and explains 18.63% of the variance with an

eigenvalue of 9.5, factor loading values between .84 and .44, and an alpha coefficient of .96. The second dimension of professional management ethics contains 13 items and explains 17.27% of the variance with an eigenvalue of 8.8, factor loading values between .74 and .49, and an alpha coefficient of .95. The third dimension of providing a work atmosphere based on democracy and trustworthiness contains 12 items and explains 16.08% of the variance with an eigenvalue of 8.2, factor loading values between .84 and .68, and an alpha coefficient of .95. The fourth dimension of performing as a role model contains five items and explains 6.3% of the variance with an eigenvalue of 6.3, factor loading values between .65 and .44, and an alpha coefficient of .81. The fifth dimension of considering common public interest while making decisions contains three items and explains 5.8% of the variance with an eigenvalue of 3.54, factor loading values between .65 and .47, and an alpha coefficient of .71. The EFA results reveal the PELBS to explain 64.03% of the total variance and to have a Cronbach alpha of reliability calculated as .98, which is quite similar to the results from TEES.

CFA has been performed based on the EFA results. According to the CFA results, the path schema for PELBS can be summarized as follows: factor loadings range between .85 and .58 for the items from the first dimension, between .81 and .60 for the items from the second dimension, between .84 and .70 for the items from the third dimension, between .75 and .58 for the items from the fourth dimension, and between .70 and .62 for the items from the fifth dimension. The fit indexes for PELBS are provided in Table 2.

Table 2. Fit Indexes of PELBS									
X^2	df	p	CFI	NFI	AGFI	IFI	GFI	SRMR	RMSEA
6057.58	1219	0.000	.98	.97	.67	.98	.69	.068	.086

As can be seen in Table 2, an $\chi2 / df$ of 4.97 is assumed to be low; *CFI, NFI*, and *IFI* values are at high levels, and *SRMR* is at an acceptable level, while *RMSEA* is at a low level. Standardized factor loadings, *t*-test, and r^2 analysis results from the EFA regarding PELBS having five dimensions can be summarized as follows: The items' factor loading values range between .85 and .58; accordingly the dimensions can be said to have quite a high level of relationality with the items. The *t* values regarding the ability of the latent variables' items to describe the observed variables are statistically significant at $p < .001$ and range between 19.51 and 11.40. Additionally, the r^2 values indicate how much of the explained variance in the observed variables stems from the latent variables and are at reasonable levels varying between .68 and .34. As a result, PELBS is considered to have multiple dimensions; next a

comparison of the *t*-test values was conducted regarding the lower and upper 27 percentiles' average scores. The value is 4.86 for the first dimension, 4.38 for the second dimension, 6.68 for the third dimension, 4.40 for the fourth dimension, and 3.90 for the fifth dimension. These results reveal lower *t* values compared to those from the TEES. The results from comparing PELBS' dimensions show the *t*-test values to be statistically significant ($p < .001$).

Discussion and Implications

This study has developed two valid and reliable scales about teachers' ethical expectation and principals' ethical leadership behaviors in the context of Turkey. As a result of the EFAs and CFAs, both scales have been found to be quite valid and reliable. Even though both scales have been analyzed multidimensionally to enhance the classification of scientific knowledge, the results of which show both to have five dimensions, the scales also function within a single dimension. Despite some scale development studies being found regarding principals' ethical leadership (Minaz, 2018; Uğurlu & Sincar, 2012; Yılmaz, 2006), the current study's scale differs in terms of including two sub-scales covering the same items and includes a second-order CFA; the Teachers' Ethical Expectations Scale is another contribution from this study. This study reveals teachers' ethical expectations to be able to be measured at quite high levels, with the same being applicable to principals' performing ethical leadership. Some studies (Akçekoce, Bilgin, 2016; Çimen & Karadağ, 2019; Küçüksüleymanoğlu & Çelik, 2014; Sağlam & Emirbey, 2017; Tabancalı & Çakıroğlu, 2017; Uranbey, 2018) carried on Turkish samples show cons sistency with the results from the current study in regard to principals displaying high levels of ethical leadership. Based on the results of the current study, the following suggestions have been proposed:

- The scales can be used to select principal or vice principal candidates before being interviewed by superintendents in order to examine and determine the candidates' ethical awareness.

- This study reveals principals to display ethical leadership behaviors at a high level. This may be interpreted positively for schools. Maintaining this positive behavior in principals is important.

- Teachers' positive perceptions about their ethical expectations and principals' ethical leadership for public schools as well as ethical climate and culture should be reflected onto improving students' academic achievement.

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