An examination of Turkish physical education teachers’ interpersonal self-efficacy beliefs

Öncü E. ABCDE

Faculty of Sport Sciences, Department of Physical Education and Sport Teaching, Trabzon University, Trabzon, Turkey

Abstract

Purpose: This study was conducted for two purposes. The first purpose was to examine the psychometric properties of the Teacher Interpersonal Self-Efficacy Scale (TISES) for Turkish Physical Education (PE) teachers and the second was to analyze teachers’ interpersonal self-efficacy beliefs according to some demographic variables.

Material: The study was conducted on 360 Turkish PE teachers. Confirmatory factor analysis was applied in order to verify the factor structure of the scale. Pearson’s product-moment coefficients were used in order to assess the correlations between the factors. For determining the reliability of the scale Cronbach Alpha coefficient was calculated. Multivariate analysis of variance was used to determine differences between the scores acquired from the scale and some independent variables.

Results: The results confirm the 3-factor internal structure of the TISES. The results of the correlation analysis between the TISES subscales indicated significant and positive relationships. We also found acceptable values of the alpha coefficient, which confirms the TISES as a reliable instrument. Overall, all physical education teachers had positive self-efficacy beliefs on high levels. Whereas by gender significant difference was not found in self-efficacy beliefs, significant difference were found between teachers depending on years of experience and grade levels they taught.

Conclusions: The reexamination of the scale led to a new scale structure comprised of three factors with sixteen items. The TISES is a relatively short questionnaire that allows researchers to measure interpersonal self-efficacy beliefs of PE teachers. The experienced teachers and the teachers who were employed at the high schools had higher self-efficacy belief levels.

Keywords: teacher efficacy, classroom management, scale development, validity, reliability.

Introduction

A key component of a teacher’s beliefs and knowledge is self-efficacy [1] since a teacher’s self-perception is one of the essential factors determining his/her competence in the profession. Perceived teacher efficacy has been defined as “the extent to which the teacher believes he or she has the capacity to affect student performance” [2, p. 137] or as “teachers’ belief or conviction that they can influence how well students learn, even those (students) who may be difficult or unmotivated” [3]. In other words, a teacher’s efficacy belief is a part of the active role-playing process in which he/she arrives at “a judgment of his/her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated” [4].

The importance of self-efficacy for teachers has been the subject of serious academic research that has approached the issue from many different aspects. According to Brouwers and Tomic [5], for example, teachers who believed that they are competent to teach their students were considered to have strong self-efficacy beliefs in teaching, whereas teachers who doubted their ability in this respect were considered to have weak self-efficacy beliefs in teaching. It can be argued that teachers who have high teacher self-efficacy beliefs are more capable of using instructional strategies effectively, more capable of ensuring student participation and more successful in classroom management skills [6, 7]) and they use direct teaching less [8]. Teachers with high teacher self-efficacy make more efforts to overcome the problems they face, and they can maintain these efforts longer [9, 10]. Studies also demonstrate that differences exist between teachers with high and low self-efficacy beliefs in issues such as using new techniques and giving feedback to students with learning disabilities [4, 11]. Teacher self-efficacy belief (TSEB) also enables the teacher to be open to new ideas and to develop positive teaching attitudes [12, 13], and to take more responsibility in teaching [14].

Another argument is that perceived teaching self-sufficiency is positively associated with teachers’ job satisfaction [6, 15]. This was thoroughly presented in the study of Tschannen-Moran and Hoy [16], which showed that the satisfaction derived from classroom performance, is positively correlated with teaching self-efficacy belief. Klassen et al. also found a high correlation, in the study they carried out in five different countries, between teachers’ job satisfaction levels and teaching self-efficacy beliefs. Exploring the relationship between TSEB and job satisfaction may have implications for teachers’ job performance, and by extension, the academic achievement of students [17].

Other dimensions of self-efficacy extend beyond satisfaction, performance and academic achievement issues. Teacher self-efficacy is also positively related to perceptions of parental (e.g. home tutoring) involvement
these demands of the profession, a physical education for professional development [32]. In order to meet all holidays and special days, and coaching and officiating organizations for the ceremonies and parades of national school sports activities, taking part in the preparations and responsibilities such as conducting intra-school and inter-school sports activities, the teacher has to carry required mental, physical, social and emotional capacity adequate for professional competence. Taking all these points in regard, it is necessary to use efficacy scales specifically adapted to physical education teachers if a sound contribution to the research literature in this field is to be made. Therefore, the first purpose of this study was to examine the psychometric properties of Teacher Interpersonal Self-Efficacy Scale that was developed by Brouwers and Tomic [5] and adapted to Turkish by Çapri and Kan [33] for physical education teachers. The second purpose was to analyze teachers’ interpersonal self-efficacy beliefs according to gender, years of experience and grade levels they taught.

### Material and methods

This study utilized the survey method that is used most commonly in descriptive research models [34, 35]. In the survey method, samples consist of large groups, and each member of the group is asked about their opinions in order to find out their attitudes on a case, fact or a situation. Researchers try to describe the facts or situations as they are and in their respected conditions [36].

**Participants:**

This study included 360 voluntary participants from different regions of Turkey who worked as physical education teachers in the education institutions (public schools organized under the National Department of Education) at the time of data collection. The sample consisted of 80 female and 280 male teachers whose ages ranged between 23 and 55 and whose years of experience ranged between 1 and 34. The average age and year of experience of the participants were 35.29 years (SD = 6.65) and 10.67 years (SD = 6.81) respectively.

**Procedure:**

In this study, the Turkish adaptation of Teacher Interpersonal Self-Efficacy Scale (TISES) developed by Çapri and Kan [33] was used as the data collection instrument. The TISES developed by Brouwers and Tomic [5] that was developed to determine teachers’ interpersonal self-efficacy belief levels consisted of 24 items and 3 subscales. The distribution of items in Brouwers and Tomic’s subscales were listed as follows: perceived self-efficacy belief in classroom management (CM-14 items), perceived self-efficacy in eliciting support from colleagues subscale (ESFC-5 items), and perceived self-efficacy in eliciting support from principals subscale (ESFP-5 items). The Turkish version of the scale consists of 18 items and 3 subscales. The subscales carry the same titles as the original in the Turkish version but first subscale consists of 8 items instead of 14 original items of the TISES. The subscales were listed as follows: CM (e.g., I can manage my class very well), ESFC (e.g., I can always find colleagues with whom I can talk about problems at work), and ESFP (e.g., I am confident that if necessary I can ask principals for advice). All items were measured and sorted using a five-point Likert scale (1=completely disagree, 2=disagree, 3=undecided, 4=agree, 5=completely agree).

The data used in the study were collected online. The
hyperlink of the website that included the questionnaire was sent to the participants and websites of various social media platforms formed by physical education teachers via electronic mail with detailed information on the purpose of the study and the directions to fill out the questionnaire.

Statistical Analysis:

Before the data analysis, all of the questionnaire forms were checked and a number of them were omitted from the analysis as they were incorrectly filled out. The sample size was adequate for factor analysis as the sample size used in this study was above 300 [37, 38]. We calculated the descriptive statistics (mean, standard deviation, range, skewness and kurtosis) of the variables of the study with the intention of verifying to check if our data fell within the normalcy of the statistics that allows us to carry out the confirmatory factor analysis (CFA) or not. Kline [39] indicates that value of 3 for skewness and 10 for kurtosis is acceptable. We used the statistic program SPSS 20 for these calculations. CFA was employed to examine the construct validity using the maximum likelihood method with the program AMOS 18. To assess model fit, we used well-established indices such as chi-square/degree of freedom ($\chi^2/df$), root mean square error of approximation (RMSEA), root mean residual (RMR), standardized root mean residual (SRMR), comparative fit index (CFI), Tucker-Lewis index (TLI), incremental fit index (IFI), goodness of fit index (GFI), and normed fit index (NFI). For the $\chi^2/df$ values of less than 3 are considered adequate [39]. RMSEA and SRMR should be less than 0.08 [40, 41], whereas the RMR should be less than 0.05 [41, 42]. For the CFI, TLI, IFI, GFI, and NFI indices, values greater than 0.90 are considered acceptable and values greater than 0.95 indicate good fit to the data [41]. The cutoff value for factor loadings was 0.40. Kline [43] suggested that loading values equal to or greater than 0.60 as high loading values, whereas loadings under 0.40 were low [44]. In order to provide evidence for validity, Pearson’s product-moment coefficients were used in order to assess the correlations between the factors. Büyükoztürk [45], defined the situation in which the correlation coefficients ranged between 0.70 and 1.00 as high correlation. In same respect, when the correlation coefficients showed values between 0.30 and 0.70 it can be seen as average correlation, and low correlation occurs when the correlation coefficients are calculated between 0.00 and 0.30. Cronbach’s alphas were calculated for the subscales and total scale in order to evaluate their internal consistency [46]. Büyükoztürk [45] states that when Cronbach Alpha reliability coefficients are equal to or above 0.70, it is a sufficient condition for the reliability of a scale in general. Multivariate analysis of variance (MANOVA) was used to determine differences between the scores acquired from the scale and the independent variables. Before the MANOVA, we also calculated skewness and kurtosis values and examined Box’s M and Levene’s statistics for all dependent variables in order to determine if the data provided the assumptions of the multivariate statistics.

Results

Confirmatory factor analysis (CFA) was conducted to test the factorial validity of the TISES. Before performing the CFA, we assessed the suitability of the data for factor analysis. Table 1 contains the means, standard deviations, skewness, kurtosis, and ranges for the total TISES and the three subscales. The skewness and kurtosis values showed that the data was distributed within the area of normalcy for confirmatory factor analysis.

The results of the CFA indicated that all fit indices except from the NFI reached acceptable levels as follows: $\chi^2/df=2.48$, $GFI=0.91$, $NFI=0.88$, $CFI=0.93$, $IFI=0.93$, $TLI=0.91$, $RMR=0.03$, $SRMR=0.05$, $RMSEA=0.06$. To define the contribution of each of the items with their respective factors, we also analyzed the standardized regression loadings and squared multiple correlations. In Table 2, all items, except for two items, demonstrated acceptable standardized regression loadings and squared multiple correlations. The item with the highest regression loadings (0.82) is number 18 (I can get through to most difficult students) which is related to the CM factor. The items with the lowest regression loadings are number 6 (There are very few students that I cannot handle) related to the CM factor and number 2 (When necessary, I am able to bring up problems with principals) related to the ESFP factor. These items did not fit the structure of the scale. Therefore, these items were omitted from the scale and item number was reduced to 16. The results of the CFA of the 16 remaining items demonstrated an acceptable fit of the hypothetical factor model of the TISES ($\chi^2/df=2.44$, $GFI=0.92$, $NFI=0.91$, $CFI=0.95$, $IFI=0.95$, $TLI=0.93$, $RMR=0.03$, $SRMR=0.05$, $RMSEA=0.06$) with a three-factor structure.

After the CFA, our results confirmed the first factor (CM) as consisting of seven items whereas second (ESFC) and third (ESFP) factors yielded five and four items, respectively. Factor loading values of the items that belonged to the first factor ranged between 0.61 and 0.82. Same values differed between 0.55 and 0.75 for the items in the second factor, and between 0.68 and 0.78 for those

<table>
<thead>
<tr>
<th>Table 1. Descriptive statistics for the TISES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor</strong></td>
</tr>
<tr>
<td>Classroom Management (CM)</td>
</tr>
<tr>
<td>Eliciting Support from Colleagues (ESFC)</td>
</tr>
<tr>
<td>Eliciting Support from Principals (ESFP)</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
in the third factor. The latent variable of the CM factor explained between 0.38 and 0.67 of the variance, whereas the latent variable of the ESFC factor explained between 0.30 and 0.56 of the variance and the latent variable of the ESFP factor explained between 0.47 and 0.61 of the variance.

The correlations between each of the factors and Cronbach Alpha reliability coefficients for the subscales and total scale are depicted in Table 3. The correlation coefficients ranged between 0.49 and 0.89. Cronbach Alpha values were calculated as 0.88, 0.78, 0.83 and 0.90 for the subscales and total scale respectively.

Overall, all physical education teachers had positive self-efficacy beliefs on high levels as shown in Table 4 (M=4.30, SD=0.48). When the three components of the TISES were examined, the values were 4.25 (SD=0.53) for CM factor, 4.46 (SD=0.49) for ESFC factor and 4.20 (SD=0.70) for ESFP factor respectively (Table 4).

A multi-variate analysis of variance (MANOVA) was conducted to examine the effects of gender, years of experience and grade levels on teacher interpersonal self-efficacy beliefs. Table 4 shows the means and standard deviations for the subscales and the total scale by gender, years of experience and grade levels. Results from the MANOVA indicated that there was no significant main effect of gender [Wilks’ Lambda=0.97, F(3, 356)=0.51, p=0.675] for any of the subscales. There was a significant main effect of years of experience [Wilks’ Lambda =0.97, F(3, 356)=4.27, p=0.006, η²=0.035]. In tests between subject effects by years of experience, results showed a significant difference in the Classroom Management (CM) factor [F(1, 358)=5.95, p=0.015, η²=0.016]. The teachers who were employed at the high schools had higher self-efficacy scores (M=4.33, SD=0.46) than the teachers who were employed at the middle schools (M=4.19, SD=0.58).

### Table 2. Statistical characteristic of items used in the CFA for the TISES

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item Number</th>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>SRW</th>
<th>SMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td>1</td>
<td>I can keep defiant students involved in my lessons.</td>
<td>4.23</td>
<td>0.68</td>
<td>0.61</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>I am able to respond adequately to defiant students.</td>
<td>4.29</td>
<td>0.70</td>
<td>0.71</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>I can manage my class very well.</td>
<td>4.41</td>
<td>0.62</td>
<td>0.62</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>There are very few students that I cannot handle.</td>
<td>3.96</td>
<td>1.26</td>
<td>0.03</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>I can keep a few problem students from ruining an entire class.</td>
<td>4.28</td>
<td>0.69</td>
<td>0.71</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>If students stop working, I can put them back on track.</td>
<td>4.29</td>
<td>0.67</td>
<td>0.75</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>If a student disrupts the lesson, I am able to redirect him quickly.</td>
<td>4.18</td>
<td>0.71</td>
<td>0.78</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>I can get through to most difficult students.</td>
<td>4.08</td>
<td>0.81</td>
<td>0.82</td>
<td>0.67</td>
</tr>
<tr>
<td>ESFC</td>
<td>4</td>
<td>I am able to approach my colleagues if I want to talk about problems at work.</td>
<td>4.48</td>
<td>0.69</td>
<td>0.59</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>When it is necessary, I am able to ask a colleague for assistance.</td>
<td>4.58</td>
<td>0.56</td>
<td>0.67</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>I can always find colleagues with whom I can talk about problems at work.</td>
<td>4.31</td>
<td>0.81</td>
<td>0.55</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>If I feel confronted by a problem with which my colleagues can help me, I am able to approach them about this.</td>
<td>4.46</td>
<td>0.65</td>
<td>0.75</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>I am confident that, if necessary, I can ask my colleagues for advice.</td>
<td>4.46</td>
<td>0.63</td>
<td>0.75</td>
<td>0.56</td>
</tr>
<tr>
<td>ESFP</td>
<td>2</td>
<td>When necessary, I am able to bring up problems with principals.</td>
<td>4.18</td>
<td>0.93</td>
<td>0.37</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>I am confident that if necessary I can ask principals for advice.</td>
<td>4.27</td>
<td>0.83</td>
<td>0.68</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>When it is necessary, I am able to get principals to support me.</td>
<td>4.18</td>
<td>0.87</td>
<td>0.73</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>I am able to approach principals if I want to talk about problems at work.</td>
<td>4.25</td>
<td>0.87</td>
<td>0.76</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>I am confident that, if necessary, I can get principals to help me.</td>
<td>4.11</td>
<td>0.90</td>
<td>0.78</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Note: M = mean; SD = standard deviation; SRW = standardized regression weight; SMC = squared multiple correlation.
This study was conducted to adapt the TISES, which was originally developed in order to measure interpersonal self-efficacy belief levels of the teachers, to PE teachers and analyze the PE teachers’ interpersonal self-efficacy beliefs according to gender, years of experience and grade levels they taught. To ascertain the factor structure of this scale, CFA was administered. The results of the CFA for 16 items showed relative improvement in some fit indices that had low values in 18 items such as NFI (0.88). Factor loadings of the items that belonged to the subfactors, ranged between 0.55 and 0.82. Same values differed between 0.59 and 0.81 in Çapri and Kan’s (2006) [33] study, and between 0.36 and 0.96 in Garcia-Ros, Fuentes and Fernandez’s [47] study and between 0.52 and 0.90 in Moura and Costa’s [48] study and between 0.49 and 0.90 in Brouwers and Tomic’s [5] study. The results of the correlation analysis showed that the subscales were moderately related to each other, and all were highly correlated with the total TISES score. In our study, the correlation coefficients among the subfactors were calculated between 0.49 and 0.65. These values are in parallel with the results of Çapri and Kan’s [33] and Garcia-Ros, Fuentes and Fernandez’s [47] and Moura and Costa’s [48] studies that arrived at correlation values between 0.45-0.54 and 0.49-0.54 respectively. In Brouwers and Tomic’s [5] study, the correlations coefficients were calculated between 0.32 and 0.57. The analyses that were made to determine the reliability level of the scale indicated that the scale had a high reliability level. Cronbach Alpha values for the subscales were calculated between 0.78 and 0.83 in this study. These values ranged between 0.89 and 0.91 in Çapri and Kan’s [33] study, and between 0.92 and 0.94 in Garcia-Ros, Fuentes and Fernandez’s [47] study and between 0.91 and 0.93 in Moura and Costa’s [48] study. Brouwers and Tomic [5] reported that the reliability coefficients for the TISES subscales were above 0.90 in their study.

Overall, descriptive statistics showed that the PE teachers’ scores from total TISES and its subscales were on fairly high levels. In other words, the participants had positive interpersonal self-efficacy beliefs. These findings were consistent with the results of some studies which were made in Turkey [49, 50]. In contrast with these results, it was reported that the teachers had moderately self-efficacy beliefs in some studies which were made abroad [5, 51]. However, the reason for this disparity may be related to culture. The results of some studies in the literature revealed that the culture, where the teachers lived in, affected their teacher self-efficacy beliefs [52, 53].

In regards to the influence of gender on self-efficacy levels, our study found that there was no significant difference between the self-efficacy levels of male and female PE teachers. Similar findings were reported in some studies which were conducted on teachers and pre-service teachers [54, 55]. Mouton et al also found no significant difference by gender in their study, which was conducted on 119 PE teachers in order to determine the relationship between emotional intelligence and self-efficacy [56].

The results of our study revealed that the experienced PE teachers had higher self-efficacy belief levels. The results supported the findings of other studies [57, 58]. Mouton et al, however, found no significant relationships between ages, years of physical education teaching and self-efficacy beliefs of the teachers [56]. The reason for this difference may be related to sample characteristics. Whereas the mean age and years of teaching experience

### Table 3. Correlations among the TISES revised

<table>
<thead>
<tr>
<th>Factor</th>
<th>CM</th>
<th>ESFC</th>
<th>ESFP</th>
<th>Total</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Management (CM)</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td>0.88</td>
</tr>
<tr>
<td>Eliciting Support from Colleagues (ESFC)</td>
<td>0.50*</td>
<td>1.00</td>
<td></td>
<td></td>
<td>0.78</td>
</tr>
<tr>
<td>Eliciting Support from Principals (ESFP)</td>
<td>0.49*</td>
<td>0.65*</td>
<td>1.00</td>
<td></td>
<td>0.83</td>
</tr>
<tr>
<td>Total</td>
<td>0.78*</td>
<td>0.84*</td>
<td>0.89*</td>
<td>1.00</td>
<td>0.90</td>
</tr>
</tbody>
</table>

*p<0.01

### Table 4. Descriptive statistics for the TISES revised

<table>
<thead>
<tr>
<th>Factor</th>
<th>Total (n=360)</th>
<th>Female (n=80)</th>
<th>Male (n=280)</th>
<th>0-10 years (n=198)</th>
<th>11-34 years (n=162)</th>
<th>Middle School (n=194)</th>
<th>High School (n=166)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Classroom Management (CM)</td>
<td>4.25</td>
<td>0.53</td>
<td>4.25</td>
<td>0.45</td>
<td>4.26</td>
<td>0.55</td>
<td>4.18</td>
</tr>
<tr>
<td>Eliciting Support from Colleagues (ESFC)</td>
<td>4.46</td>
<td>0.49</td>
<td>4.51</td>
<td>0.41</td>
<td>4.44</td>
<td>0.52</td>
<td>4.46</td>
</tr>
<tr>
<td>Eliciting Support from Principals (ESFP)</td>
<td>4.20</td>
<td>0.70</td>
<td>4.24</td>
<td>0.63</td>
<td>4.19</td>
<td>0.72</td>
<td>4.20</td>
</tr>
<tr>
<td>Total</td>
<td>4.30</td>
<td>0.48</td>
<td>4.33</td>
<td>0.40</td>
<td>4.30</td>
<td>0.50</td>
<td>4.28</td>
</tr>
</tbody>
</table>

(CM=Classroom Management; ESFC=Eliciting Support from Colleagues; ESFP=Eliciting Support from Principals)
of the participants in this study were 35.29 and 10.67 respectively, the same values in Mouton et al’s [56] study were 42.1 and 18.2. The literature confirms that self-efficacy belief increases by time and experience [9]. Bandura [23, 59] expressed the view that the formation of a person’s self-efficacy belief could only be realized with that person going through the direct life experiences, which constituted one of the most important informative sources of Bandura’s related theory. Moreover, Bandura [10] argued that experiences were one of the most important factors that affected the self-efficacy beliefs and that the positive experiences contributed to the development of self-efficacy belief.

According to the findings of our study, on the classroom management subdimension the TISES scores of the participants pointed to significant difference based on the grade levels the PE teachers taught at. In other sub-dimensions, however, although the mean scores of the teachers taught at the high school level are high, it did not point to a significant difference. In respect to the classroom management subdimension, the PE teachers who were employed at the high schools had higher self-efficacy scores than the PE teachers who were employed at the middle schools. The studies that subjected the effect of this variable on self-efficacy are pretty limited in the literature. Among these studies, the study conducted by Akkoyunlu and Kurbanoğlu [60] and Özgün [61] obtained similar findings that our study arrived at. In an effort to interpret the above mentioned phenomenon, the effect of ages and experience levels of the middle school and high school PE teacher on self-efficacy were analysed. We found that the average year of experience for the high school PE teachers was 12.27, whereas the same score was 9.30 for the middle school PE teachers. Based on these findings and in tandem with the results about experience mentioned above, it can be stated that such a result might be affected by years spent on teaching.

Conclusions

In this study, the validity and reliability of the Teacher Interpersonal Self-Efficacy Scale was tested for PE teachers. The reexamination of the scale led to a new scale structure comprised of three factors with sixteen items. The results obtained after validity and reliability analyses confirmed that the restructured scale can be applied on the PE teachers. The distribution of items in the subscales were listed as follows: perceived self-efficacy belief in classroom management (CM-7 items), perceived self-efficacy in eliciting support from colleagues subscale (ESFC-5 items), and perceived self-efficacy in eliciting support from principals subscale (ESFP-4 items). The scale includes a brief questionnaire that is easy to apply and evaluate. Overall, all PE teachers had positive self-efficacy beliefs on high levels. Whereas a significant difference was not found in self-efficacy beliefs by gender, significant differences were found between teachers depending on their experience and grade levels they taught. The experienced teachers had higher self-efficacy belief levels. Additionally, the teachers who were employed at the high schools had higher self-efficacy beliefs than the teachers who were employed at the middle schools. While this study had its limitations in terms of its sample characteristics and target sample, this can be overcome with the administration of the scale on different and larger samples. Future studies that will use different and larger samples can further contribute to the validity and reliability of the scale. Further studies should also include qualitative tools such as interviews, which may help provide further understanding about the issue.

Conflicts of Interest

The authors declare no conflict of interest.

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**Information about the author:**

Öncü E.; [http://orcid.org/0000-0002-7932-5558; eoncu@ktu.edu.tr; Faculty of Sport Sciences, Department of Physical Education and Sport Teaching; 61300 Akcaabat-Trabzon, Turkey.](http://orcid.org/0000-0002-7932-5558)

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