

## The relationship between commitment to teaching, teacher efficacy, marginalisation and isolation: A study on physical education teachers

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### Suggested Citation:

Ulaş, M., & Şenel, E., (2020). The relationship between commitment to teaching, teacher efficacy, marginalisation and isolation: A study on physical education teachers. *Cypriot Journal of Educational Science*. 15(6), 1439-1453. <https://doi.org/10.18844/cjes.v15i6.5217>

Received from August 20, 2020; revised from September 20, 2020; accepted from December 20, 2020.  
Selection and peer review under responsibility of Prof. Dr. Huseyin Uzunboylu, Higher Education Planning, Supervision, Accreditation and Coordination Board, Cyprus.  
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### Abstract

This study aimed to examine the relationship between commitment to teaching, teacher efficacy, physical education teachers' marginalisation and isolation. Four hundred and eight physical education and sports teachers voluntarily participated in the study. Klein et al.'s Unidimensional Target-Free Commitment Scale was used to assess physical education teachers' commitment to teaching by designing the items to measure commitment to teaching. Perceptions of marginalisation and isolation were evaluated by using the Physical Education-Marginalisation and Isolation Scale. The Ohio Teacher Efficacy Scale was used to determine the level of efficacy beliefs. According to the results, teachers' efficacy positively predicted commitment to teaching, while a high correlation was found between these factors. Teachers' efficacy and commitment to teaching are negatively associated with marginalisation and isolation. Consequently, this study revealed that teachers having a sense of efficacy become more committed to teaching. Correspondingly, this will result in a reduction in marginalisation and isolation.

**Keywords:** Teacher, efficacy, marginalisation, isolation, commitment.

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## 1. Introduction

Improving the quality of teaching for students depends on improving teachers' quality (Darling-Hammond, 1990; Darling-Hammond, Wise & Klein, 1999). Efforts to improve quality can also affect the level of demand and desired outcomes, as they can increase expectations from teachers. Teachers' performance success also depends on educators' satisfaction within the education system (Gaudreault & Woods, 2012). Physical education and sports teachers can feel marginalised and isolated for many reasons (Curtner-Smith, 2001; Giroux, 1981; Kougioumtzis, Patriksson & Strahlman 2011). The fact that physical education and sports teachers are exposed to demands other than their programmes, that the course is deemed unnecessary by their colleagues and that they are not valued as much as other branches constitute the definition of marginalisation (Laureano et al., 2014).

Physical education and sports teachers' communication problems with parents and the families being utterly unaware of the content of physical education lessons (Sheehy, 2011), teachers' burnout, lack of precautions and excessive workload (Adilogullari, Ulucan & Senel, 2014) cause teachers to feel marginalised; accordingly, these negative factors push them to feel isolated from their professional environment. Encountered problems, perspectives and attitudes of parents, officials and other teachers towards the physical education course can cause PE teachers to isolate themselves, feel different in a negative way and worthless (Senel, Yildiz, Ulas & Tamer, 2019). Richards, Gaudreault, Starck and Mays Woods (2018) stated that PE teachers experienced frustration, and struggled to legitimate their profession as a result of marginalisation.

The teaching profession requires a certain level of commitment. Despite the adverse effects of sociological and psychological factors, the effort to continue teaching is an indicator of a professional commitment. Coladarci (1992) defined a teacher's commitment as a 'psychological dedication to the teaching profession.' Tyree Jr (1996) stated that commitment to teaching is a multidimensional concept that includes two important factors, such as identification and involvement. Research (Chapman, 1983; Fresko, Kfir & Nasser, 1997) has revealed that teachers being committed to teaching have a high job satisfaction

The perception of competence can lead the individual to show his/her commitment to continuing his job resolutely in adverse situations. Bandura (1986) has defined self-efficacy as a decision on how well one can carry out the actions necessary to deal with possible problems. Self-efficacy affects a person's behaviour and the environment in which they interact and is influenced by actions and conditions (Schunk & Pajares, 2002). According to Bandura (1994), people who believe that they can gain control over threats do not bring to mind disturbing thought patterns.

Despite all the adverse conditions, physical education and sports teachers who feel sufficient, competent, talented and committed to teaching may have the capacity to teach with high performance. According to Bandura (1986, p. 395), 'People who see themselves as [capable or] efficacious set themselves challenges that enlist their interest and involvement in activities; they intensify their efforts when their performances fall short of their goals, make causal ascriptions for failures that support a success orientation, approach potentially threatening tasks non-anxiously, and experience little in the way of stress reactions in taxing situations. Such a self-assured endeavour produces accomplishments'.

Fresko et al. (1997) stated that teachers who have a sense of being able to affect their students get more satisfaction from their jobs and have a lesser tendency to quit, which is related to more effective performance. Research (Coladarci, 1992; Evans & Tribble, 1986) shows that teachers committed to teaching have a higher level of teachers' efficacy beliefs.

The feelings of marginalisation and isolation may become sources of significant problems that have detrimental effects on physical education teachers' performance. Teachers' efficacy beliefs and commitment to teaching may reduce these effects. Limited studies have examined the relationship between teacher efficacy beliefs and commitment to teaching, and none revealed the impacts of teacher efficacy and commitment to teaching on marginalisation and isolation.

### *1.1. Purpose*

This study aimed to examine the relationship between commitment to teaching, teacher efficacy, marginalisation and isolation of physical education and sports teachers. The indirect and direct effects of teachers' efficacy belief and commitment to teaching on the perception of marginalisation and isolation of PE teachers have been examined with a theoretical approach. The hypothesis is that teachers' efficacy and commitment to teaching will decrease the perception of physical education and sports teachers' marginalisation and isolation. This hypothesis has revealed the need to test two sub-hypotheses. The first sub-hypothesis is that 'teachers' efficacy beliefs reduce marginalisation via commitment to teaching,' while the second sub-hypothesis is that 'teachers' efficacy beliefs reduce isolation via commitment to teaching'.

## **2. Method**

### *2.1. Study sample*

Four hundred and eight physical education and sports teachers, who are actively involved in education and training activities at various levels (primary and secondary) of the Turkish education system, participated voluntarily. The mean age is  $37.88 \pm 8.02$  years and their working year (experience) in the profession is  $12.69 \pm 8.32$ . One hundred and seventeen teachers are women (28.7%) and 291 are men (71.3%). While 268 teachers stated that they did not receive postgraduate education (65.7%), 48 teachers reported to continue their graduate education (11.8%) and 74 teachers reported having a master's degree (18.1%). Eleven teachers stated that they continued their doctorate (2.7%) and seven teachers completed the doctorate (1.7%). The question of 'Do you think that physical education lessons receive enough value in Turkey' was asked to teachers. While 95.6% of the teachers answered 'no' ( $n = 390$ ), 4.4% answered 'yes' ( $n = 18$ ). Teachers were also asked, 'Do you think that physical education and sports teachers are qualitatively competent in Turkey' and 'Do you think that physical education and sports teachers quantitatively enough in Turkey' 74% of the teachers stated that physical education and sports teachers were not sufficient in terms of quality ( $n = 302$ ) and 77% were not sufficient in terms of quantity ( $n = 317$ ). 26% of the teachers stated that physical education and sports teachers were sufficient in quality ( $n = 106$ ) and 22.3% were numerically sufficient ( $n = 91$ ).

### *2.2. Measurements*

#### *2.2.1. Commitment to teaching*

Klein et al.'s Unidimensional Target-Free (KUT) Commitment Scale was used to assess PE teachers' commitment to teaching by designing the items to measure commitment to teaching. KUT is a scale consisting of four items that are one-dimensional and are used with 5 or 7 ratings. According to the commitment definition, the scale consists of four items developed by Klein, Molloy and Brinsfield (2012). While the first item expresses the general structural characteristic, the second refers to the dedication to the goal. The third one refers to the will or volition for commitment and the last item is related to the responsibility associated with the goal. Klein, Cooper, Molloy and Swanson (2014) tested the scale's structure in five different sample groups by collecting data from 2,487 participants from various environments, professions, organisations and industries. Cronbach's alpha coefficient of

the scale ranged from 0.86 to 0.97. Senel, Yildiz and Klein (2020a) translated the scale into Turkish and tested the validity and reliability. The alpha coefficient of the Turkish version was 0.92. In this study, the alpha internal consistency coefficient of the scale is 0.90. The scale has a one-dimensional structure consisting of four items. In this study, the items were rated between 1 and 7 to increase measurement accuracy.

Table 1. The equivalence of the KUT Scale in other studies and its use in this study

Senel et al. (2020a)	Senel, Yildiz, and Can (2020b)	Present study
How committed are you to [your/the/this] [target]?	How committed are you to your academic goals?	How committed are you to teach?
To what extent do you care about [your/the/this] [target]	To what extent do you care about your academic goals?	To what extent do you care about teaching?
How dedicated are you to [your/the/this] [target]?	How dedicated are you to your academic goals?	How dedicated are you to teach?
To what extent have you chosen to be committed [your/the/this] [target]?	To what extent have you chosen to be committed to your academic goals?	To what extent have you chosen to be committed to teaching?
a=0,92	a=0,94	a=0,90
$\chi^2=3,078$	$\chi^2=0,8$	$\chi^2=0,008$
df=1	df=1	df=1
TLI=0,989	TLI=1,0	TLI=1,0
CFI=0,998	CFI=1,0	CFI=1,0
RMSEA=0,078,	RMSEA=0,00	RMSEA=0,00
SRMR=0,008	SRMR=0,00	SRMR=0,00

TLI: Trucker-lewis index, CFI: Comperative fit index, RMSEA: Root mean square error of approximation SRMR: Standardized root mean square residual

### 2. 2. 2. Marginalisation and Isolation

The Physical Education-Marginalisation and Isolation Scale (PE-MAIS), developed by Gaudreault, Richards and Woods (2017) and translated into Turkish by Senel et al. (2019), was used to assess marginalisation and isolation perceptions. The scale has two sub-scales consisting of five items (marginalisation and isolation). The scale items are rated from 1 to 7. Gaudreault et al. (2017) stated that the internal consistency coefficient was 0.79 for marginalisation and 0.84 for isolation. Senel et al. (2019) found the internal consistency coefficient as 0.74 for marginalisation and 0.70 for isolation. In this study, the internal consistency coefficient was 0.73 for the marginalisation and 0.70 for the isolation. The CFA revealed good fit in this study ( $\chi^2 = 85.359$ ,  $df = 28$ ,  $\chi^2/df = 3.04$ , CFI = 0.95, TLI, 0.92, IFI = 0.95, RMSEA = 0.07, SRMR = 0.07).

### 2. 2. 3. Teachers' efficacy

The Ohio Teacher Competency Scale, developed by Tschannen-Moran and Woolfolk-Hoy (2001) and adapted to Turkish by Baloglu and Karadag (2008), was used to determine teachers' efficacy beliefs. Cronbach's alpha value of the scale was 0.90. Tschannen-Moran and Woolfolk-Hoy (2001) identified

three sub-scales: efficacy for instructional strategies, efficacy for classroom management and efficacy for student engagement. In the scale adapted to Turkish by Baloglu and Karadag (2008), five sub-scales were identified as guidance, behaviour management, motivation, teaching skill and measurement and evaluation. In this study, the internal consistency coefficient of the scale is 0.95. The internal consistency coefficients for guidance, behaviour management, motivation, teaching skill and assessment and evaluation sub-scales were 0.85, 0.77, 0.86, 0.79 and 0.78, respectively. The CFA revealed good fit in this study ( $\chi^2 = 613.891$ ,  $df = 239$ ,  $\chi^2/df = 2.56$ , CFI = 0.93, TLI = 0.93, IFI = 0.94, RMSEA = 0.06, SRMR = 0.04).

### 2. 3. Data collection

The research data were sent to 428 physical education and sports teachers. The participants were first asked whether they would like to participate in the research voluntarily. The form of the teachers who marked the 'No' option was terminated. Forms were sent to 427 teachers, wherein 19 teachers stated that they do not want to participate in the research and 408 teachers voluntarily filled the form. The researchers answered questions received from the teachers. Teachers were informed about the study and the ethical considerations and the researchers guaranteed to keep the responses confidential.

### 2. 4. Analysis

Skewness and Kurtosis values were calculated for the normal distribution of the data. The variables related to teachers' demographic knowledge were analysed by an independent t-test. The linear relationship between variables was analysed by Pearson's relationship test and linear regression test. The hypothesised models were analysed with the variable tool approach. For analysis, JASP®, AMOS® and SPSS® programmes were used.

## 3. Results

### 3.1. Findings related to demographical variables

Table 2. Means, standard deviations, skewness and kurtosis

Variables	$\bar{X} \pm \sigma$	Skew.	Kurt.
Marginalisation	3.16±1.29	.245	-.495
Isolation	3.35±0.96	.552	-.232
Commitment to teaching	6.31±0.80	-1.328	1.450
Guidance	6.02±0.73	-.976	.975
Behaviour management	6.07±0.74	-.962	.795
Motivation	6.10±0.70	-1.043	1.147
Teaching skills	5.96±0.68	-.613	.245
Measurement and evaluation	5.99±0.89	-1.020	1.189
Teacher efficacy	6.03±0.68	-.933	.879

*n=408, standard error of skewness=0,121, standard error of kurtosis=0,241*

Table 2 shows the means, standard deviation and normal distribution values. Skewness and Kurtosis values for all variables ranged between -1.5 and +1.5.

Table 3. Gender differences in terms of marginalisation, isolation, commitment to teaching and teacher efficacy beliefs

Variables	Female	Male	t	p	Cohen's d
	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$			
Marginalisation	3.14±1.26	3.16±1.31	-0.124	p>0,05	-0.014
Isolation	3.38±1.05	3.34±0.92	0.430	p>0,05	0.047
Commitment to teaching	6.29±.83	6.31±0.80	-0.279	p>0,05	-0.030
Guidance	5.96±0.75	6.04±0.73	-1.036	p>0,05	-0.113
Behaviour Management	5.96±0.72	6.12±0.75	-1.980	<b>p&lt;0,05*</b>	-0.217
Motivation	6.03±0.74	6.13±0.68	-1.287	p>0,05	-0.141
Teaching skills	5.89±0.69	5.98±0.68	-1.219	p>0,05	-0.133
Measurement and Evaluation	5.97±0.84	5.99±0.91	-0.226	p>0,05	-0.025
Teacher efficacy	5.96±0.68	6.05±0.69	-1.214	p>0,05	-0.133

*n<sub>female</sub>*=117, *n<sub>male</sub>*=291 \**p*<0,05

Table 3 presents the gender differences regarding study variables. The only difference between genders was in behaviour management ( $p < 0.05$ ,  $t = -1.980$ ), showing that male teachers reported higher scores than females, with a low effect size ( $d = -0.217$ ).

Table 4. Differences between Yes and No answers to value the perception question for physical education lessons in terms of study variables

Variables	Yes	No	t	p	Cohen's d
	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$			
Marginalisation	3.41±1.26	3.14±1.29	-0.836	p>0,05	-0.201
Isolation	3.55±0.94	3.34±0.96	-0.893	p>0,05	-0.215
Commitment to teaching	5.81±1.09	6.33±0.78	1.983	p<0,05 <sup>a</sup>	0.642
Guidance	5.39±1.13	6.05±0.70	2.421	<b>p&lt;0,05**a</b>	0.896
Behaviour management	5.76±0.94	6.09±0.73	1.810	p>0,05	0.436
Motivation	5.49±1.05	6.13±0.67	2.589	<b>p&lt;0,05**a</b>	0.936
Teaching skills	5.63±0.88	5.97±0.67	1.629	<b>p&lt;0,05**a</b>	0.500
Measurement and evaluation	5.41±1.25	6.01±0.86	2.012	<b>p&lt;0,05**a</b>	0.675
Teacher's efficacy	5.54±0.99	6.05±0.66	2.165	<b>p&lt;0,05**a</b>	0.752

*n<sub>no</sub>*=390, *n<sub>yes</sub>*=18 \**p*<0,05, <sup>a</sup> *Levene's test is significant* ( $p < .05$ )

Table 4 displays the differences between yes and no answers to value the perception question for physical education lessons in terms of study variables. Significant differences were found between teachers thinking that physical education lessons received enough value from others and those thinking the opposite regarding guidance ( $p < 0.05$ ,  $t = 2.421$ ,  $d = 0.896$ ), motivation ( $p < 0.05$ ,  $t = 2.589$ ,  $d = 0.936$ ), teaching skills ( $p < 0.05$ ,  $t = 1.629$ ,  $d = 0.500$ ) and measurement and evaluation ( $p < 0.05$ ,  $t = 2.012$ ,  $d = 0.675$ ), indicating lower scores in teacher's efficacy for those who respond with 'no' ( $p < 0.05$ ,  $t = 2.165$ ,  $d = 0.752$ ).

Table 5. Differences between Yes and No answers to the ‘quality perception’ question for PE teachers in terms of study variables

Variables	Yes		No		t	p	Cohen’s d
	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$			
Marginalisation	2.88±1.20	3.25±1.31	2.532	<b>p&lt;0,05*</b>		0.286	
Isolation	3.21±0.92	3.40±0.97	1.773	p>0,05		0.200	
Commitment to teaching	6.35±0.71	6.29±0.84	-0.621	p>0,05 <sup>a</sup>		-0.065	
Guidance	6.08±0.77	5.99±0.72	-1.057	p>0,05		-0.119	
Behaviour management	6.16±0.73	6.04±0.75	-1.390	p>0,05		-0.157	
Motivation	6.15±0.70	6.09±0.70	-0.793	p>0,05		-0.090	
Teaching skills	6.04±0.62	5.93±0.70	-1.395	p>0,05		-0.157	
Measurement and evaluation	6.04±0.87	5.97±0.90	-0.760	p>0,05		-0.086	
Teacher’s efficacy	6.09±0.68	6.00±0.69	-1.166	p>0,05		-0.132	

*n<sub>no</sub>*=302, *n<sub>yes</sub>*=106, <sup>a</sup> Levene’s test is significant (*p* < .05)

Table 5 shows the differences between yes and no answers to the ‘quality perception’ question for PE teachers in terms of study variables. According to the results, teachers who thought that PE teachers were enough for quality reported lower scores in marginalisation (*p* < 0.05, *t* = 2.532, *d* = 0.286).

Table 6. Differences between Yes and No answers to the ‘quantity perception’ question for PE teachers in terms of study variables

Variables	Yes		No		t	p	Cohen’s d
	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$			
Marginalisation	3.02±1.20	3.19±1.32	1.108	p>0,05		0.132	
Isolation	3.21±0.90	3.39±0.97	1.648	p>0,05		0.196	
Commitment to teaching	6.12±0.94	6.36±0.75	2.214	<b>p&lt;0,05*</b>		0.298	
Guidance	5.96±0.75	6.03±0.73	0.794	p>0,05		0.094	
Behaviour Management	6.01±0.83	6.09±0.71	0.825	p>0,05 <sup>a</sup>		0.107	
Motivation	6.01±0.77	6.13±0.67	1.512	p>0,05		0.180	
Teaching skills	5.88±0.70	5.98±0.68	1.257	p>0,05		0.149	
Measurement and evaluation	5.87±0.96	6.02±0.87	1.343	p>0,05		0.160	
Teacher’s efficacy	5.95±0.74	6.05±0.67	1.273	p>0,05		0.151	

*n<sub>no</sub>*=317, *n<sub>yes</sub>*=91, <sup>a</sup> Levene’s test is significant (*p* < .05)

Table 6 presents the differences between yes and no answers to the ‘quantity perception’ question for PE teachers in terms of study variables. Teachers who thought that PE teachers were quantitatively enough scored lower than others in terms of commitment to teaching (*p* < 0.05, *t* = 2.214, *d* = 0.298) with a low effect size.

The graphics and CI scores in Figure 1 show the correlational movement between study variables. It is observed that teachers with a high sense of efficacy have a high level of commitment to teaching. As the perception of teacher’s efficacy increases, the perception of marginalisation and isolation decreases. Similarly, as the commitment to teaching increases, the perceptions of marginalisation and isolation also decrease.

### 3.2. Relational findings

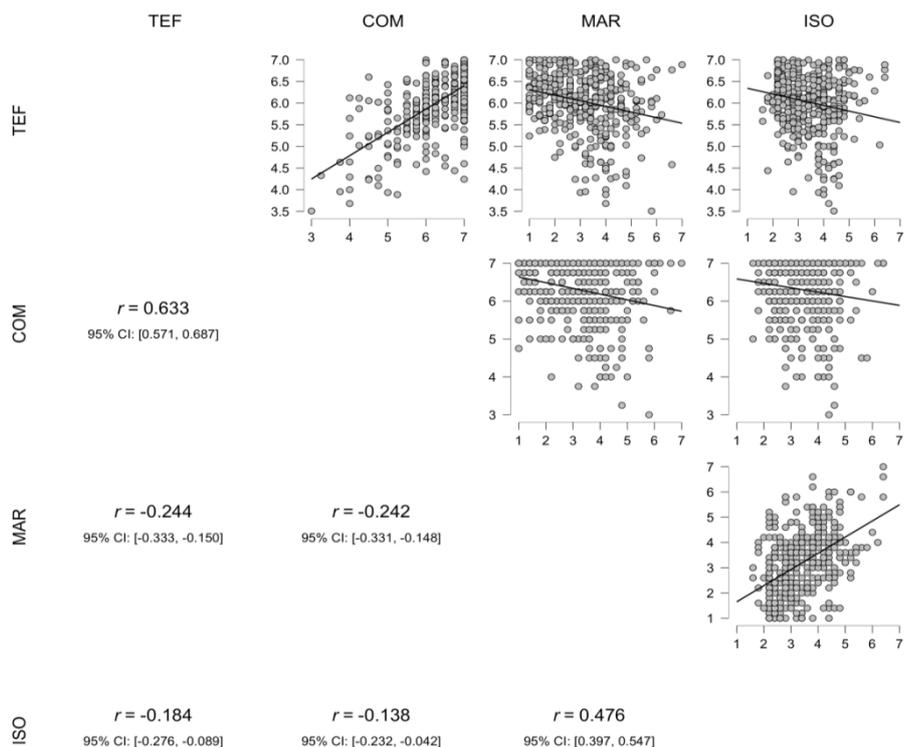


Figure 1. Graphical display for correlations between marginalisation, isolation, commitment to teaching and teacher's efficacy and confidence interval scores

Table 7. Correlation coefficients between study variables

	1	2	3	4	5	6	7	8
1. Marginalisation	1							
2. Isolation	.476**	1						
3. Commitment to teaching	-.242**	-.138**	1					
4. Guidance	-.231**	-.180**	.600**	1				
5. Behaviour management	-.251**	-.170**	.537**	.786**	1			
6. Motivation	-.223**	-.174**	.607**	.874**	.798**	1		
7. Teaching skills	-.240**	-.194**	.580**	.839**	.790**	.838**	1	
8. Measurement and evaluation	-.179**	-.133**	.571**	.779**	.692**	.813**	.761**	1
9. Teacher's efficacy	-.244**	-.184**	.633**	.933**	.885**	.943**	.919**	.895**

Table 7 shows the correlation between study variables. Marginalisation negatively correlated with guidance ( $r = -0.231$ ,  $p < 0.01$ ), behaviour management ( $r = -0.251$ ,  $p < 0.01$ ), motivation ( $r = -0.223$ ,  $p < 0.01$ ), teaching skills ( $r = -0.240$ ,  $p < 0.01$ ) and measurement and evaluation ( $r = -0.179$ ,  $p < 0.01$ ). Marginalisation negatively associated with commitment to teaching ( $r = -0.241$ ,  $p < 0.01$ ) and teacher's efficacy ( $r = -0.244$ ,  $p < 0.01$ ). Similarly, isolation negatively correlated with guidance ( $r = -0.180$ ,  $p < 0.01$ ), behaviour management ( $r = -0.170$ ,  $p < 0.01$ ), motivation ( $r = -0.174$ ,  $p < 0.01$ ), teaching skills ( $r = -0.194$ ,  $p < 0.01$ ) and measurement and evaluation ( $r = -0.133$ ,  $p < 0.01$ ). There were negative correlations between isolation, commitment to teaching ( $r = -0.138$ ,  $p < 0.01$ ) and teacher's efficacy ( $r = -0.184$ ,  $p < 0.01$ ). Commitment to teaching positively correlated with guidance ( $r = 0.600$ ,  $p < 0.01$ ), behaviour management ( $r = 0.537$ ,  $p < 0.01$ ), motivation ( $r = 0.607$ ,  $p < 0.01$ ), teaching skills ( $r = 0.580$ ,  $p < 0.01$ ) and measurement and evaluation ( $r = 0.571$ ,  $p < 0.01$ ). Guidance positively correlated with behaviour management ( $r = 0.786$ ,  $p < 0.01$ ), motivation ( $r = 0.874$ ,  $p < 0.01$ ), teaching skills ( $r = 0.839$ ,  $p < 0.01$ ) and measurement and evaluation ( $r = 0.779$ ,  $p < 0.01$ ). Behaviour management positively correlated with motivation ( $r = 0.798$ ,  $p < 0.01$ ), teaching skills ( $r = 0.790$ ,  $p < 0.01$ ) and measurement and evaluation ( $r = 0.692$ ,  $p < 0.01$ ). Motivation positively correlated with teaching skills ( $r = 0.838$ ,  $p < 0.01$ ) and measurement and evaluation ( $r = 0.813$ ,  $p < 0.01$ ). Teaching skills positively correlated with measurement and evaluation ( $r = 0.761$ ,  $p < 0.01$ ). Measurement and evaluation positively correlated with teacher's efficacy ( $r = 0.895$ ,  $p < 0.01$ ).

= 0.600,  $p < 0.01$ ), behaviour management ( $r = 0.537$ ,  $p < 0.01$ ), motivation ( $r = 0.607$ ,  $p < 0.01$ ), teaching skills ( $r = 0.571$ ,  $p < 0.01$ ) and measurement and evaluation ( $r = -0.179$ ,  $p < 0.01$ ). A positive correlation was found between commitment to teaching and teacher's efficacy ( $r = 0.633$ ,  $p < 0.01$ ).

Table 8. Commitment to Teaching and Teacher's Efficacy as Predictors of Marginalization

Predictor(s)	Dependent	Stand. $\beta$	t	p	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	p
Teacher's efficacy	Marginalisation	-.244	-5.064	.000	.059	.057	25.649	.000
Commitment to Teaching	Marginalisation	-.242	-5.026	.000	.059	.057	25.257	.000
Teacher's efficacy	Commitment to teaching	.633	16.457	.000	.400	.399	270.839	.000
Teacher's efficacy	Marginalisation	-.151	-2.446	.015	.072	.068	15.775	.000
Commitment to teaching		-.146	-2.369	.018				

Table 8 shows the prediction of marginalisation by commitment to teaching and teacher's efficacy. Teacher's efficacy negatively predicted marginalisation by 6% ( $R^2 = 0.059$ ,  $t = -5.064$ ,  $F = 25.649$ ,  $p < 0.001$ ); commitment to teaching negatively predicted marginalisation by 6% ( $R^2 = 0.059$ ,  $t = -5.026$ ,  $F = 25.257$ ,  $p < 0.001$ ); and teacher's efficacy predicted commitment to teaching by 40% ( $R^2 = 0.400$ ,  $t = 16.457$ ,  $F = 25.649$ ,  $p < 0.001$ ). These results reveal that commitment to teaching plays a partial mediator role between teacher's efficacy and marginalisation. When the predictive power of teacher's efficacy and commitment to teaching on marginalisation is examined, there is an increased effect of 7%.

Table 9. Commitment to teaching and teacher's efficacy as predictors of isolation

Predictor(s)	Dependent	Stand. $\beta$	t	p	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	p
Teacher's efficacy	Isolation	-.184	-3.773	.000	.034	.031	14.234	.000
Commitment to teaching	Isolation	-.138	-2.816	.005	.019	.017	7.928	.000
Teacher's efficacy	Commitment to teaching	.633	16.457	.000	.400	.399	270.839	.000
Teacher's efficacy	Isolation	-.161	-2.552	.011				
Commitment to teaching		-.037	-.581	.561	.035	.030	7.274	.001

Table 9 shows the prediction of isolation by commitment to teaching and teacher's efficacy. Teacher's efficacy negatively predicted isolation by 3% ( $R^2 = 0.034$ ,  $t = -3.773$ ,  $F = 14.234$ ,  $p < 0.001$ ) and commitment to teaching negatively predicted isolation by 2% ( $R^2 = 0.019$ ,  $t = -2,816$ ,  $F = 7.928$ ,  $p < 0.001$ ). When the predictive power of teacher's efficacy and commitment to teaching on isolation is examined, there is an increased effect of 3%; however, the predictive effect of commitment to teaching in this model is not statistically significant. Therefore, it is seen that teacher's efficacy and commitment to teaching have no effect on the perception of isolation.

### 3.3. Mediator variable analysis

The correlation and regression analysis proved a linear relationship between marginalisation and isolation, and teacher's efficacy and commitment to teaching. These results showed that the necessary conditions for mediator variable analysis were met. In addition, findings obtained from the

correlation and regression analysis results revealed that teacher’s efficacy and commitment to teaching did not affect isolation together, although there was a linear relationship between teacher’s efficacy, commitment to teaching and isolation. Based on this finding, it became evident that the following two hypotheses should be tested:

H1 = Commitment to teaching plays a mediator role in the relationship between marginalisation and teacher’s efficacy.

H2 = Commitment to teaching plays a mediator role in the relationship between isolation and teacher’s efficacy.

Hypotheses were analysed in structural equation modelling by selecting the maximum likelihood method.

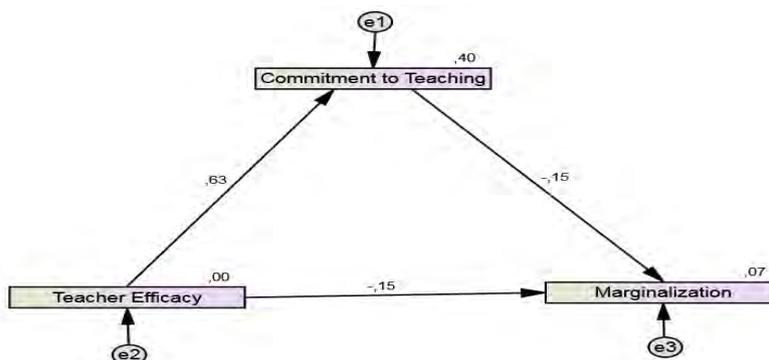


Figure 2. Testing commitment to teaching as a mediator variable between teacher efficacy and marginalisation

Figure 2 shows the hypothesis that commitment to teaching is a mediator variable between teacher’s efficacy and marginalisation, and the standardised estimates between factors. The parameter estimates are shown in Table 10.

Table 10. Parameter estimates, standard error and the p value of the mediation model 1

Independent	Dependent	Med./Mod.	Est.	S.E.	Std. Est.	p
TE	CT	-	0,743	0,045	0,633	0,000
TE	MAR	-	-0,284	0,116	-0,151	0,014
CT	MAR	-	-0,234	0,099	-0,146	0,018
TE	MAR	CT	Between - 0,041 and - 0,165	0,039	0,093	0,006

TE=Teacher’s efficacy, CT=Commitment to teaching, MAR=Marginalisation, S.E.=Standard error, Std. Est. = Standardised estimate, Med./Mod.= Mediator/Moderator, Est.=Estimate

TE had a positive and direct impact on CT ( $R = 0.633$ ,  $p < 0.001$ ) and a negative direct effect on MAR ( $R = -0.0151$ ,  $p < 0.01$ ), and CT had a negative and direct impact on MAR ( $R = -0.146$ ,  $p < 0.01$ ). It was determined that teacher’s efficacy affected marginalisation through commitment to teaching and the indirect effect value was found to be 0.039 ( $p < 0.01$ ). Therefore, H1 was accepted.

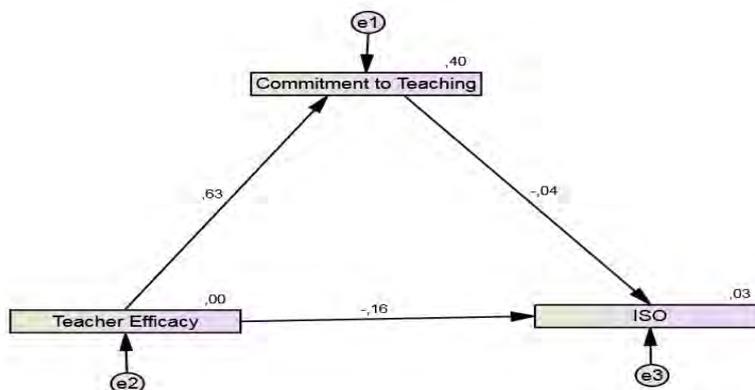


Figure 3 Testing commitment to teaching as a mediator variable between teacher’s efficacy and isolation

Figure 3 shows the hypothesis that commitment to teaching is a mediator variable between teacher’s efficacy and isolation, and the standardised estimates between factors. The parameter estimates are shown in Table 11.

Table 11. Parameter estimates, standard error and the p value of the mediation model 2

Independent	Dependent	Med./Mod.	Est.	S.E.	Std. Est.	p
TE	CT	-	0,743	0,045	0,633	0,000
TE	ISO	-	-0,225	0,088	-0,151	0,011
CT	ISO	-	-0,044	0,075	-0,037	0,560
TE	ISO	CT	Between 0,033 and -0,110	0,045	-0,023	0,502

TE=Teacher’s efficacy, CT=Commitment to teaching, ISO=Isolation, S.E.=Standard error, Std. Est. = Standardised estimate, Med./Mod.= Mediator/Moderator, Est.=Estimate

TE had a positive and direct effect on CT ( $R = 0.633$ ,  $p < 0.001$ ) and direct and negative impact on ISO ( $R = -0.0151$ ,  $p < 0.01$ ). The regression coefficient between CT and ISO was insignificant. It was observed that commitment to teaching was not a mediator variable between teacher efficacy and isolation. Thus, H2 was rejected.

#### 4. Discussion and conclusion

This study aimed to examine the relationship between commitment to teaching, teacher efficacy, marginalisation and isolation of physical education and sports teachers. The correlation and regression analysis showed linearity between teachers' efficacy belief, commitment to teaching, perceptions of marginalisation and isolation. Teacher efficacy highly correlated with the commitment to teaching, while it positively predicted commitment to teaching. Teacher efficacy negatively associated with marginalisation and isolation predicted these variables negatively. Similarly, commitment to teaching negatively predicted and correlated with both marginalisation and isolation. Teacher efficacy and commitment to teaching were stronger predictors of marginalisation when they were included in the regression model together than when they were analysed individually.

Based on these results, two sub-hypotheses were tested by creating mediation models. H1 is shown in Figure 2. According to the mediator variable analysis, all parameter estimates related to the model were significant. The correlation analysis showed a negative relationship between teacher efficacy and marginalisation, while regression analysis revealed that teacher efficacy decreased marginalisation perception. Model 1 demonstrated that commitment to teaching was a mediator variable between teacher efficacy and marginalisation. Therefore, H1 was accepted.

H2 is shown in Figure 3. The correlation analysis showed a negative relationship between teacher efficacy and isolation, while regression analysis revealed that teacher efficacy decreased the perception of isolation. Although model 2 had a linear relationship between isolation and commitment to teaching, it was revealed that commitment to teaching did not play a mediating role between teachers efficacy and isolation because the parameter estimation between commitment to teaching and isolation was not significant. Therefore, H2 was rejected. While linear regression analysis revealed that teacher efficacy and commitment to teaching could decrease the perception of isolation, the results obtained in model 2 showed that commitment to teaching has no mediating role in the relationship between these two variables.

Coladarci (1992) reported that general and personal efficacy perception positively predicted commitment to teaching. Rosenholtz and Simpson (1990) reported that performance efficacy positively predicted teachers' commitment. Ibrahim, Ghavifekr, Ling, Siraj and Azee (2014) reported that teachers' efficacy predicted teachers' commitment to the teaching profession. Fresko et al. (1997) found a positive correlation between teachers' professional images and teachers' commitment. Chesnut and Burley (2015) showed that, in a meta-analysis study, self-efficacy and commitment to the teaching profession were correlated in the studies that examined the relationships between efficacy and commitment. Evans and Tribble (1986) found a positive relationship between efficacy and commitment to teaching. Some research studies revealed that teachers' efficacy beliefs increased the commitment to the teaching profession (Chesnut & Cullen, 2014; Klassen & Chiu, 2011). Sosu, McWilliam and Gray (2008) reported that positive attitudes were associated with a commitment to environmental education.

Zientek (2007) supported the assertion that teacher preparation programmes, programme components, mentoring experiences and field-based experiences impacted teacher effectiveness in the classroom. Coladarci (1992) stated that teachers who have fewer students and work with a manager with leadership characteristics could have a higher commitment to teaching. According to Rosenholtz and Simpson (1990), support from a principle may enhance a teacher's sense of efficacy. Research studies reveal that teachers' efficacy increases academic success (Anderson, Greene & Loewen, 1988).

Managers' perspectives on physical education lessons and teachers may affect teachers' commitment to teaching and the profession. Some research studies have revealed that the leadership of the manager has an impact on commitment to teaching (Leithwood, Menzies & Jantzi, 1994; Singh & Billingsley, 1998; Yu, Leithwood & Jantzi, 2002). The organisational structure and characteristics of the work environment are other determinants of teachers' commitment to teaching (McLaughlin, Pfeifer, Swanson-Owens & Yee, 1986; Rosenholtz & Simpson, 1990). Teachers' working environments are teaching environments where organisational arrangements should be made in order to keep teachers committed to teaching within the organisation and achieving success (McLaughlin et al., 1986). In addition, in order to give the necessary value to physical education and sports lessons, the value of the content, the contribution of the teachers to the student performance, the achievements should be expressed regularly and transferred to parents and external stakeholders regarding physical education (Lux & McCullick, 2011). This research has shown that competent teachers will show a high level of commitment to teaching and, accordingly, their marginalised feelings and perceptions will decrease. A number of suggestions and implications in the field of education are given in the following subsection.

#### 4.1. Suggestions and implications in education

Physical education and sports teaching and lessons will not be a marginal lesson when physical education and sports teacher training programmes develop policies to train competent teachers in theory and practice. Organising seminars for parents and other branch teachers about the benefits of physical education and sports for academic success will reduce the perception of marginalisation and isolation. The presence of efficient and competent teachers will be just one step to change this perception; when the attitude towards the lesson, content and contributions changes, then talented and committed teachers' performances will increase significantly.

In future researches, qualitative studies can be conducted on what changes physical education and sports teachers' perceptions of efficacy, what factors are important in their commitment to teaching and what are the conditions affecting their marginalisation and isolation status. What the concepts stated in this way mean for teachers who play an active role in the teaching process will be examined in depth. In addition, relational research can be designed by dealing with other variables that affect the perception of physical education and sports teachers' marginalisation and isolation.

It is crucial for teachers, who are the most active education and training elements, to feel happy and peaceful at school and even outside the classroom. This happiness and peace will positively affect the teaching performance of the teacher. First of all, those who manage the education system and school administrations need to organise their teaching environments. Whether the teachers are satisfied with the school environment and whether they feel marginalised or isolated should be measured or observed at regular intervals. In the school environment, training, seminars and similar activities covering all subject teachers should be organised, and every teacher should be socialised in the school environment. The school management should also be able to offer teachers psychological support when needed.

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