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Examination of the Relationship Between Epistemic Curious and Teaching Motivation's in Physical Education and Sports Teachers

Aydın PEKEL[1], Vesile ŞAHİNER-GÜLER[2], Mehmet Behzat TURAN[3]

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ORIGINAL ARTICLE

[1]Marmara University, Faculty of Sport Science, İstanbul/Türkiye

[2]Erciyes University, Institute of Health Sciences Kayseri/Türkiye

[3]Erciyes University, Faculty of Sport Science , Kayseri/Türkiye

Corresponding Author:
Mehmet Behzat TURAN
behzatturan@erciyes.edu.tr

Abstract

The aim of the study is to determine the level of relationship between epistemic curiosity and teaching motivation in physical education and sports teachers. The sample group of the study consists of 143 physical education and sports teachers working in secondary schools in Kayseri. The demographic information form and epistemic curiosity scale developed by Litman and Spielberger (2003) and adapted to Turkish by Yazıcı (2020), were used in the study. At the same time, the "Teaching Motivation Scale" developed by Kauffman et al. (2011) and adapted to Turkish by Candan and Gencel (2015) was used as a data collection tool. As a result, while there is no difference in the values of interest, deprivation, and epistemic curiosity according to gender, there is a difference between the values of teaching motivation. There is no difference between the participants' interest, deprivation, epistemic curiosity total and teaching motivation values according to marital status. A difference was found between the interest values of the participants between the least senior group and the most senior group. There is no difference between the interest values of those with medium seniority and other groups. There is no difference between the participants in the variables of deprivation, epistemic curiosity total and teaching motivation according to the year of study. There is no difference between the variables of interest, deprivation, epistemic curiosity and teaching motivation according to regular sports activity. According to the results of our study, a low and positive relationship was found between epistemic curiosity and teaching motivation.

Keywords: Physical Education and Sports, Curiosity, Motivation, Epistemic Curiosity, Teaching Motivation.

Beden Eğitimi ve Spor Öğretmenlerinde Epistemik Merak ile Öğretim Motivasyonu Arasındaki İlişkinin İncelenmesi

Öz

Araştırmanın amacı, beden eğitimi ve spor öğretmenlerinde epistemik merak ile öğretim motivasyonu arasındaki ilişki düzeyini belirlemektir. Araştırmanın örneklem grubunu Kayseri ilindeki ortaokullarda görev yapan 143 beden eğitimi ve spor öğretmeni oluşturmaktadır. Araştırmada Litman ve Spielberger (2003) tarafından geliştirilen ve Yazıcı (2020) tarafından Türkçe'ye uyarlanan demografik bilgi formu ve epistemik merak ölçeği kullanılmıştır. Aynı zamanda veri toplama aracı olarak Kauffman vd. (2011) tarafından geliştirilen, Candan ve Gencel (2015) tarafından Türkçe'ye uyarlanan "Öğretme Motivasyonu Ölçeği" kullanılmıştır. Sonuç olarak ilgi, yoksunluk, epistemik merak toplam değerlerinde cinsiyete göre fark bulunmazken öğretme motivasyonu değerleri arasında fark vardır. Katılımcıların medeni durumlarına göre ilgi, yoksunluk, epistemik merak toplamı ve öğretme motivasyonu değerleri arasında fark yoktur. Katılımcıların ilgi değerleri arasında en az kıdemli grup ile en kıdemli grup arasında fark bulunmuştur. Orta kıdeme sahip olanların ilgi değerleri ile diğer gruplar arasında fark yoktur. Katılımcılar arasında yoksunluk, epistemik merak toplamı ve öğretim motivasyonu değişkenleri açısından öğrenim yılına göre farklılık yoktur. Düzenli spor aktivitesine göre ilgi, yoksunluk, epistemik merak ve öğretme motivasyonu değişkenleri arasında fark yoktur. Çalışmamızın sonuçlarına göre epistemik merak ile öğretme motivasyonu arasında düşük ve pozitif yönlü bir ilişki bulunmuştur.

Anahtar Kelimeler: Beden Eğitimi ve Spor, Merak, Motivasyon, Epistemik Merak, Öğretme Motivasyonu.

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Introduction

While the communication and information age we live in constantly increases the need for education, it also shows that only individuals with the characteristics required by the age can be educated in a contemporary education system (Şahin, 1999), with effective schools and effective teachers. The most important expectation is that teachers be productive, enthusiastic and have high motivation levels in fulfilling their responsibilities and duties in the teaching process. The reflection of teacher behavior on students increases the importance of the subject (Balcı, 1990). Considering their responsibility in imparting skills and knowledge to students, the motivation of teachers has become an important issue (Zalwango, 2014). One of the most important characteristics that teachers who are responsible for transferring knowledge to future generations must have is curiosity (Litman, 2005; Litman and Silvia, 2006). The mother of all sciences, as it is known, is curiosity (Dewey, 1910), and it is stated that the innate curiosity in humanity is the main driving force in the development of scientific discoveries and civilization (Görlitz, 1987). Kagan (1972) defined the concept of curiosity as a need to eliminate uncertainty (Kagan, 1972). Bruner (1966) emphasizes that curiosity is necessary for survival, and that this is not only necessary for humans, but also for all living species (Bruner, 1966). When curiosity is examined in more detail, it is seen that curiosity is an umbrella term that has various types depending on the approaches and consists of different components (Bahadır, 2023). James (1890) scientific and supernatural, John Dewey (1910) social, physical and intellectual, Berlyne (1954) epistemic and perceptual, Naylor (1981) state and continuous, Langevin (1971) vertical and horizontal, Spielberger (1994) cognitive and affective, Leslie (2014) examined the concept of curiosity under different subheadings, including diverting curiosity and epistemic curiosity.It has always been stated that curiosity and knowledge have a very close relationship. Epistemic curiosity was defined by Berlyne (1954) as the desire to acquire knowledge.Epistemic curiosity is defined as the motivation or "passion for knowledge" that motivates people to learn new ideas and eliminate existing knowledge deficiencies and to solve problems where knowledge is required (Loewenstein, 1994). It is the desire to reach the truth behind all scientific inquiry and research, defined as "appetite for knowledge" by philosopher Immanuel Kant (Livio, 2017). There are studies that reveal that the concept of epistemic curiosity should be examined in two dimensions: deprivation and interest (Katırcıoğlu, 2022). Exploratory behavior that occurs in order to achieve pleasure in learning is related to interest-type epistemic curiosity (Litman and Mussel, 2013). An important issue in terms of the learning process is how the learner directs his/her attention specifically to a concept, information or phenomenon in order to become ready to learn. Interest is an event, situation or phenomenon in which the outcome is important for the learner (Dewey, 1913). The deprivation type of epistemic curiosity is associated with the state of uneasiness that occurs when the

learner cannot provide integrity of knowledge. The type of deprivation of epistemic curiosity is stated as the desire to acquire new ideas in order to get rid of situations that cause a lack of knowledge (Litman, 2012).

Kashdan (2009), who considers curiosity as a discovery approach, states that the concept may be related to motivation. Motivation is the whole system of internal and external reasons that directs the individual's organism to action, shapes the power and speed of these actions, causes the actions to be directed towards the target, and causes the continuity in these actions (Akbaba, 2006). Motivation, as one of the elements of teacning and learning actions, is defined as the power that activates, sustains and directs the action towards a goal. The concept of motivation is a determinant in the formation of success and efficiency that initiates and sustains action (Yaşar, 2013). Trying to learn to escape punishment is given as an example of negative motivation, while trying to learn with the desire to succeed is stated as an example of positive motivation (Akbaba, 2006). Yazıcı (2009) stated that motivation is one of the variables that have an impact on teaching and that the motivation variable has external and internal dimensions within itself. In terms of teachers, teaching activity is the organization and realization of experiences that will provide valid learning, considering the external and internal conditions in the environment in which the person is located (Çöndü, 1999). Yenilmez, Balbağ and Turgut (2018) state that teacher candidates who choose the teaching profession should be motivated by the act of "teaching" when they start their teaching profession. One of the most important factors in creating a qualified educational environment is the teacher, and the teacher must be motivated in terms of teaching and learning (Çelik and Terzi, 2017). Just like motivation, teaching motivation can be divided into two groups: external and internal (Başdal, 2021). According to Deringöl (2019), conditions such as the working environment and salary that enable them to participate in vocational education as external motivation sources are stated as external motivations of teachers because they include factors that include the teacher or conditions other than the teacher. Intrinsic motivation is the motivation that involves the effort to reach deeper levels by starting and continuing an activity, depending primarily on the values, beliefs and perceptions of the teacher (Deringöl, 2019). Teaching motivation in teachers has many benefits for the teaching process and for themselves, such as teaching the lesson with enthusiasm, spending more time on their work, gaining satisfaction from their work, and increasing the quality of teaching (Akbaba, 2006). It has been stated that the ability to motivate students, which is one of the important duties of teachers, is directly linked to teachers' own motivation levels (Butler, 2007). In the study conducted by Büyükses (2010), it was stated that administrators' failure to appreciate the work of teachers, low respect for the profession, and inadequacies in equipment negatively affected the level of teacher motivation. Ryan and Deci (2000) stated that teachers' teaching motivation has an impact on achieving the goals of education.

İşigüzel (2013) examined the motivation levels of teacher candidates and stated that they were at a medium level.

Spielberger (1994), who frequently uses the word motivation to describe the concept of curiosity, defines curiosity as; he stated that it is the stimulus that is at the center of motivation. It seems that research on the concept of curiosity, which has a motivating effect on an individual's discovery and understanding of his or her environment, has mostly begun in the recent past (Pluck and Johnson, 2011). Berlyne (1960) and Berlyne (1963) stated that the concept of epistemic curiosity is related to both internal and external motivation. In their study, Koo and Choi (2010) explained that epistemic curiosity has a positive effect on motivation and the learner's intention to learn (Koo and Choi, 2010). The emotional power contained in the concept of curiosity directs the individual to ask questions under all circumstances. A curious individual will not be emotionally satisfied until he obtains the information he wants. Providing motivation in humans, who have a complex structure, is related to the emotional power of curiosity (Leslie, 2014). Regarding the issue of teaching motivation (Cochran-Smith and Zeichner, 2005; Thomson et al., 2012), the literature shows that pre-service teachers' beliefs and teaching motivations affect their future professional identities in teaching, their attitudes towards teaching, and classroom practices. Cultivating curiosity improves students' academic performance and learning by providing higher levels of intrinsic motivation (Keung et al., 2012). Paunonen and Ashton (2001) found a positive correlation between academic performance and higher levels of curiosity. When a person is curious about a subject, he/she must be internally and externally motivated in order to take action. An individual who is curious but unmotivated will only have a sense of curiosity because he does not gain the power to motivate himself (Altunışık, 2016).

Thomas Freidman stated in his book that the combination of motivation and curiosity is very important for success in education (Pluck, 2011). Since people enjoy learning when they are curious, using the learner's curiosity can improve that individual's academic motivation (Mahmutoğulları, 2015). Teachers are the most important factor in determining the quality and level of education that students receive (Unesco, 2006). Teachers are expected to ensure that their students learn in the highest quantity and quality (Balcı, 2011). This is only possible by ensuring the motivation of teachers. Since teacher motivation has a significant impact on student motivation, teacher motivation is an important issue for school principals and educational leaders (Jesus and Lens, 2005). Taylor and Ntoumanis (2007) stated that the link between students' motivation and teachers' motivation may occur when teacher motivation is seen by their students and translates into different behaviors. Kunter et al. (2011) stated that when teachers are highly motivated, they are more likely to foster an environment that encourages student participation, critical thinking, and active learning It is thought that increasing the motivation level of teachers, which is one of the most important factors in

education, can contribute to their scientific curiosity, and in this case, teachers' scientific curiosity is important in constantly updating the information they have learned to teach, and their motivation to teach is important in terms of the level of transferring the information they have learned to students. Considering that students take teachers as a role model, it is thought that teachers who are curious about knowledge and have high levels of motivation can motivate students while positively affecting their curiosity about knowledge. It is thought that epistemic curiosity can have important effects on the acquisition of knowledge to be taught, and teaching motivation can have important effects on learning the acquired knowledge in order to teach and continuing to update the knowledge, and these are concepts that need to be investigated. Since it is thought that the curiosity and motivation of teachers, which are important factors in education and training, will affect the scientific quality and efficiency in education, the aim of the research is to examine the relationship between the epistemic curiosity levels of physical education and sports teachers and their teaching motivation. It is thought that the research topic will contribute to science, as it is thought that both concepts will affect the level of teachers and therefore the educational efficiency of students and the level of qualified education in this direction, in order to make the necessary improvements in line with the determined relationship level.

Is there a relationship between the epistemic curiosity of physical education teachers and their teaching motivation? If so, at what level? Is the relationship positive or negative?

Method

Study Protocol and Sample Group

Simple random sampling method, one of the random sampling methods, was used to create the sample of the study. The sample of the research was created by physical education and sports teachers working in public secondary schools and private secondary schools affiliated with the Ministry of National Education in Kayseri in the 2023-2024 academic year. A total of 143 teachers, out of approximately 300 physical education teachers working in secondary schools in Kayseri, participated in the research voluntarily. In order to carry out the data collection process in the study, necessary permissions were obtained, relevant schools were visited, teachers were informed about the study and the necessary scales were applied.

Model of the Research

In this study, general screening model and relational screening model were used. The general screening model is a research model in which judgments can be made about the universe with a large number of elements through the selected sample group. The model in which the relationship between specified variables is determined by various statistical methods and possible results are predicted is the relational screening model (Tabachnik and Fidell, 2013). In this relational study, the relationship level of epistemic curiosity and teaching motivation in physical education and sports teachers working in secondary schools was examined, as well as whether these variables differ according to gender, marital status, working year and regular sports activity.

Collection of Data

In the study, the epistemic curiosity scale was used as the scale developed by Litman and Spielberger (2003) and adapted to Turkish by Yazıcı (2020). In addition, the "Teaching Motivation Scale", developed by Kauffman et al. (2011) and adapted into Turkish by Candan and Gencel (2015), was used as a data collection tool. There are data collection tools consisting of three parts in the research: In the first part, there is a personal information form created to describe the demographic information of the students, in the second part there is the Epistemic Curiosity Scale, and in the third part there is the Teaching Motivation Scale.

Demographic Information Form

It was used to obtain information about the participants' gender, marital status, educational status, school where they work, years of working in the profession, transition to the profession from another branch, and regular sports activity. It consists of 7 main items. (See Annex-1: Demographic Information Form).

Epistemic Curiosity Scale

The epistemic curiosity scale was developed by Litman and Spielberger (2003) has two subscales: interest and lack. In the original scale, the 1st, 3rd, 5th, 7th and 9th items are interest dimension questions, while the 2nd, 4th, 6th, 8th and 10th items are deprivation dimension questions. On a 4-point Likert-type scale, it was determined that the form adapted to Turkish by Yazıcı (2020) was consistent with its original form. (See Appendix-2: Epistemic Curiosity Scale).

Teaching Motivation Scale

The teaching motivation scale was developed by Kauffman et al. (2011) and measures extrinsic and intrinsic teaching motivations. The scale is a 6-point Likert type and has 12 items. The scale includes scoring as 1-strongly disagree, 2-disagree, 3-somewhat disagree, 4-somewhat agree, 5-agree, 6-strongly agree. The scale does not contain statements that need to be reverse coded or items

with negative wording. A minimum of 12 and a maximum of 72 points can be obtained from the scale. High scores obtained from the scale mean that teaching motivation also increases (Kauffman et al.,2011). (See Appendix 3: Teaching Motivation Scale).

Analysis of Data

The data used in the research were analyzed through the SPSS.25 program. The normality distributions of the obtained data were examined with the Kolmogorov Smirnov test, skewness coefficient and q-q, p-p pilot plots. Since the data showed parametric distribution, Independent Sample T test was used between 2 distributions, one-way analysis of variance LSD test was used for 3 and more. Since the distribution for the relationship between two scale scores is parametric, Pearson Correlation test was used.

Research Publication Ethics

Ethics committee approval for this study was received based on the decision form of Erciyes University Social and Human Sciences Ethics Committee dated 29.08.2023 and application number 319. "During the current research, we acted within the framework of the "Higher Education Institutions Scientific Research and Publication Ethics Directive".

Institutional Permit

Since the relevant research was conducted in secondary schools affiliated with the Ministry of National Education, in order to carry out the study; The necessary institutional permission was obtained from the Kayseri Governorship with the approval dated 11/10/2023 and numbered E-47882400-602.04.01-86731784.

Results

Table 1

Demographic Information of Participants.

		n	%
	Variable	143	100
Gender	Female	64	44.8
	Male	79	55.2
Marital Status	Single	44	30.8
	Married	99	69.2
Educational Status	License	119	83.2
	Master	24	16.8
School of Assignment	Public School	136	95.1
	Private School	7	4.9
Years of Work in the Proffession	0-7 years	41	28.7
	8-12 years	46	32.2

	13 years and above	56	39.2
Transition from Another Branch to Profession	Yes	17	11.9
	No	126	88.1
Regular Exercise Status	Yes	74	51.7
	No	69	48.3

Table 1 includes the frequency distributions of the demographic information of the teachers (gender, marital status, educational status, type of school, years of working in the profession, transition to the profession from another branch, and regular sports activity).

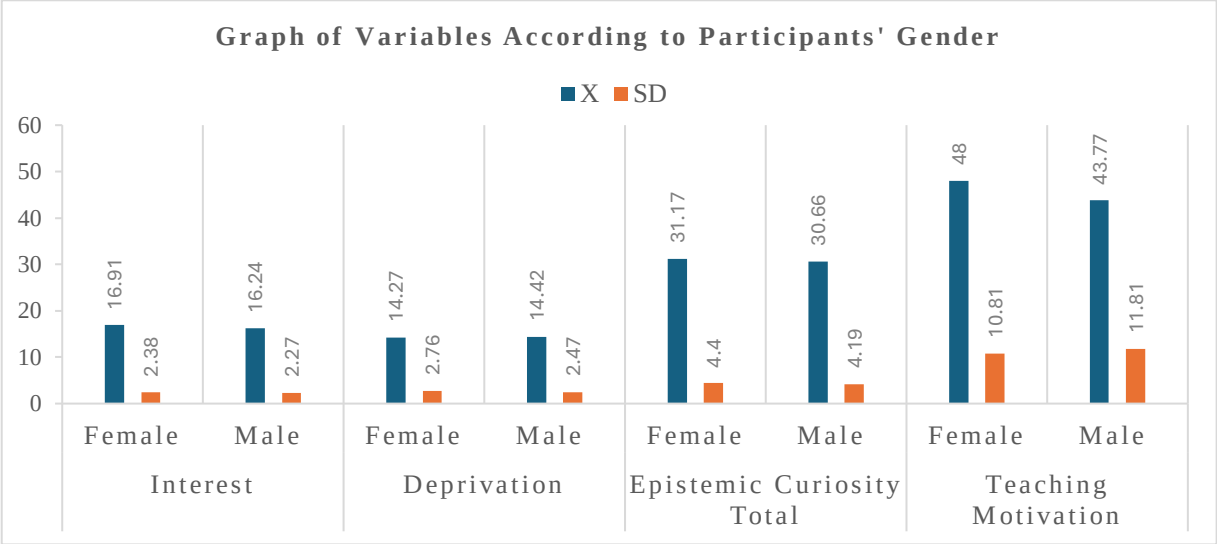

Figure 1. Graph of Variables According to the Gender of the Participants

Table 2

Comparison of Participants' Scores from Scales by Gender.

Variable	Group	n	X	SD	T test		
					t	df	p
Interest	Female	64	16,91	2,38	1,705	141	,090
	Male	79	16,24	2,27			
Deprivation	Female	64	14,27	2,76	-,347	141	,729
	Male	79	14,42	2,47			
Epistemic Curiosity Total	Female	64	31,17	4,40	,713	141	,477
	Male	79	30,66	4,19			
Teaching Motivation	Female	64	48,00	10,81	2,210	141	,029
	Male	79	43,77	11,81			

Table 2 shows the comparison of participants' interest, deprivation, epistemic curiosity total and teaching motivation data by gender. When the test data is examined; There was no difference between interest test values (t[141]=1.705; p>0.05), deprivation test values (t[141]= -.347; p>0.05),

and epistemic curiosity total test values (t[141]). = .713; p>0.05), but a significant difference was found between teaching motivation test values (t[141]= 2.210; p<0.05).

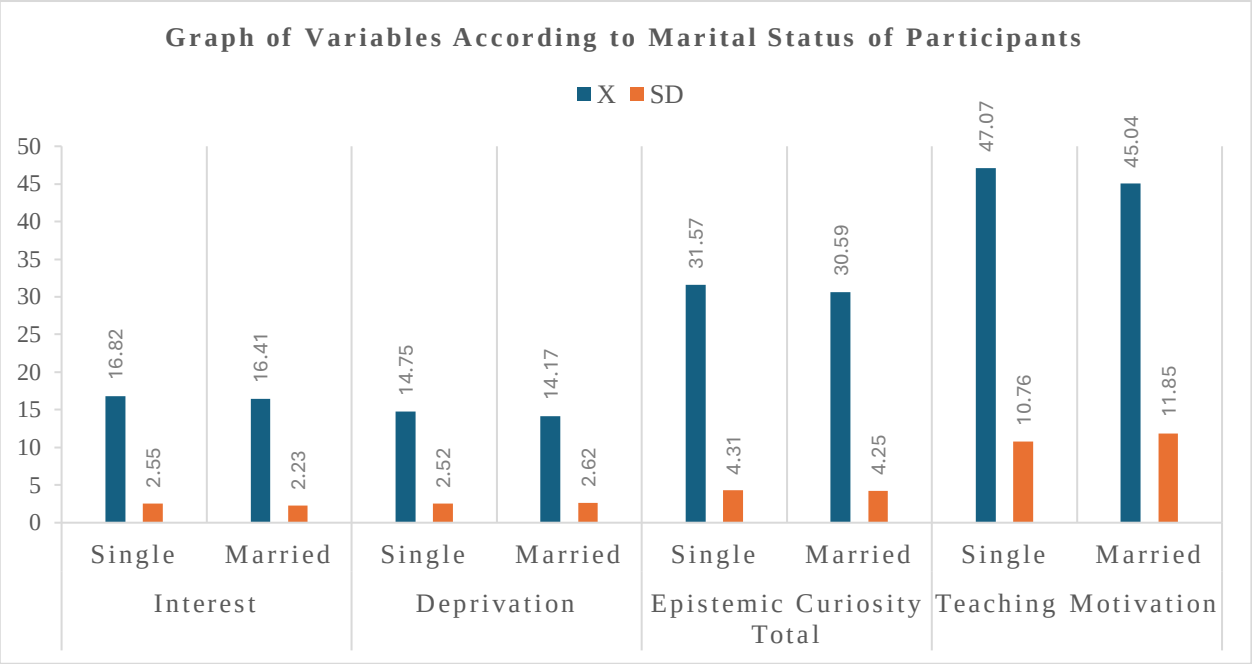

Figure 2. Graph of Variables According to Marital Status of Participants.

Table 3

Comparison of Participants' Scores from Scales According to Marital Status.

Variable	Group	n	X	SD	T test		
					t	df	p
Interest	Single	44	16,82	2,55	,954	141	,342
	Married	99	16,41	2,23			
Deprivation	Single	44	14,75	2,52	1,229	141	,221
	Married	99	14,17	2,62			
Epistemic Curiosity Total	Single	44	31,57	4,31	1,270	141	,206
	Married	99	30,59	4,25			
Teaching Motivation	Single	44	47,07	10,76	,971	141	,333
	Married	99	45,04	11,85			

Table 3 shows the comparison of the participants' interest, deprivation, epistemic curiosity total and teaching motivation data according to marital status. When the test data is examined; There was no difference in the interest test values (t[141]=.954; p>0.05), deprivation test values (t[141]=

1.229; p>0.05), epistemic curiosity total test values (t[141]= 1.270; p>0.05) and teaching motivation test values of single and married participants (t[141]= .971; p>0.05).

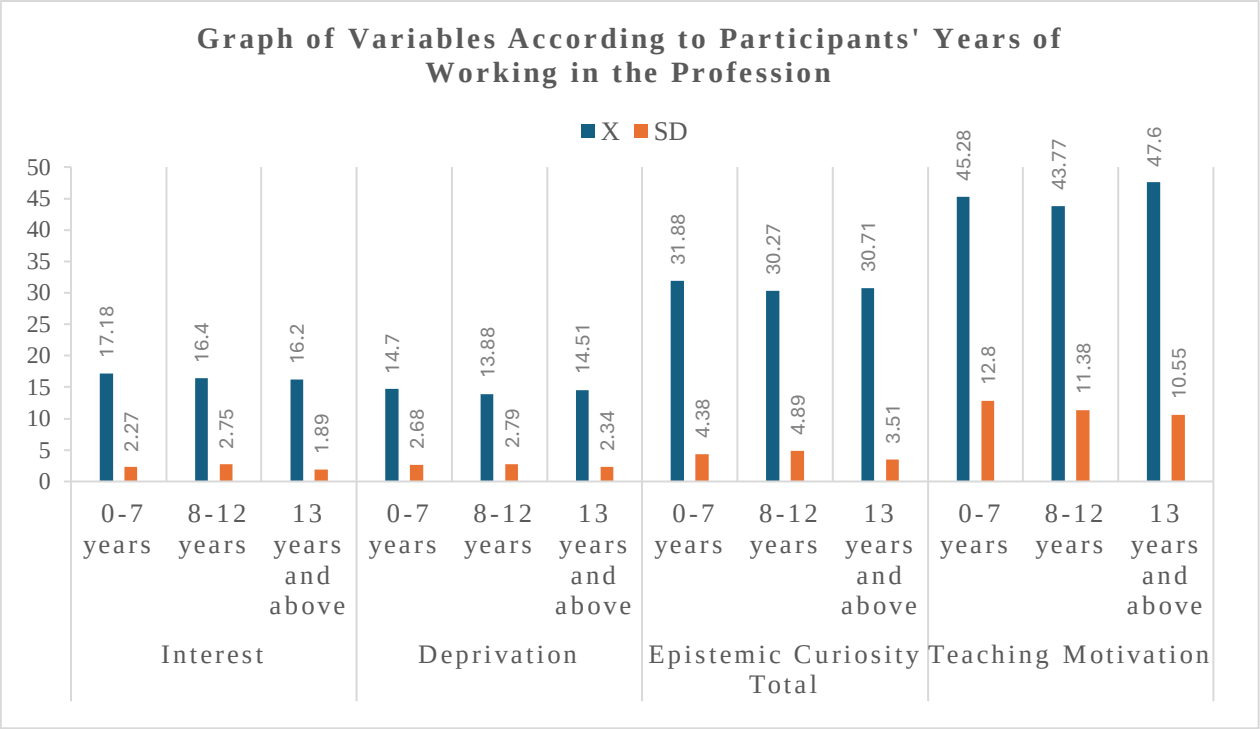

Figure 3. Graph of Variables According to Participants' Years of Working in the Profession.

Table 4

Comparison of the Scores Received by the Participants from the Scales According to the Years of Working in the Profession.

Variable	Group	X	SD	p	LSD
Interest	0-7 Years	17,18	2,27	,116	0-7 years-13 Years and above
	8-12 Years	16,40	2,75		
	13 Years and above	16,20	1,89		
Deprivation	0-7 Years	14,70	2,68	,284	-
	8-12 Years	13,88	2,79		
	13 Years and above	14,51	2,34		
Epistemic Curiosity Total	0-7 Years	31,88	4,38	,201	-
	8-12 Years	30,27	4,89		
	13 Years and above	30,71	3,51		
Teaching Motivation	0-7 Years	45,28	12,80	,237	-
	8-12 Years	43,77	11,38		
	13 Years and above	47,60	10,55		

Table 4 includes the LSD multiple comparison test, which was applied to determine which groups there were differences according to the participants' study year. When the comparison of

interest test values according to the study year is examined; When the comparison of interest test values according to the working year is examined; There is a difference (even if the p value is greater than .05) between the values of the participants with a study year between 0-7 years (x=17.18, SD=2.27) and the participants with a study year of 13 years or more (x=16.20, SD=1.89). The difference was determined as p>.05. There was no difference between the values of the participants with 0-7 years of study years (x=17.18, SD=2.27) and 8-12 years of experience (x=16.40, SD=2.75), p>.05. There was no difference between the values of those with 8-12 years of study years (x=16.40, SD=2.75) and those with 13 years or more (x=16.20, SD=1.89), p>.05.

When the comparison of deprivation test values according to working year is examined; There was no difference in the values of the participants whose working years were between 0-7 years (x=14.70, sd=2.68) and the participants whose working years were between 8-12 years (x=13.88, sd=2.79) p>.05. There was no difference between the values of those whose working years were between 0-7 years (x=14.70, sd=2.68) and those whose working years were 13 years and above (x=14.51, sd=2.34) p>.05. There was no difference in the participants with working years between 8-12 years (x=13.88, sd=2.79) and the participants with 13 years and above (x=14.51, sd=2.34) p>.05.

When the comparison of epistemic curiosity test values according to study year is examined; There was no difference in the values of those whose working years were between 0-7 years (x=31.88, sd=4.38) and those whose working years were between 8-12 years (x=30.27, sd=4.89). p>.05. There was no difference in the values of the participants with working years between 0-7 years (x=31.88, sd=4.38) and the participants with 13 years and above (x=30.71, sd=3.51) p>.05. There was no difference in the values of those whose working years were between 8-12 years (x=30.27, sd=4.89) and those whose working years were 13 years and above (x=30.71, sd=3.51), p>.05.

When the comparison of teaching motivation test values according to working year is examined; There was no difference in the values of those whose working years were between 0-7 years (x=45.28, sd=12.80) and those whose working years were between 8-12 years (x=43.77, sd=11.38) p>.05. There was no difference in the values of those with working years between 0-7 years (x=45.28, sd=12.80) and those with 13 years and above (x=47.60, 10.55), p>.05. There was no difference in the values of those whose working years were between 8-12 years (x=43.77, sd=11.38) and those whose working years were 13 years and above (x=47.60, sd=10.55) p>.05.

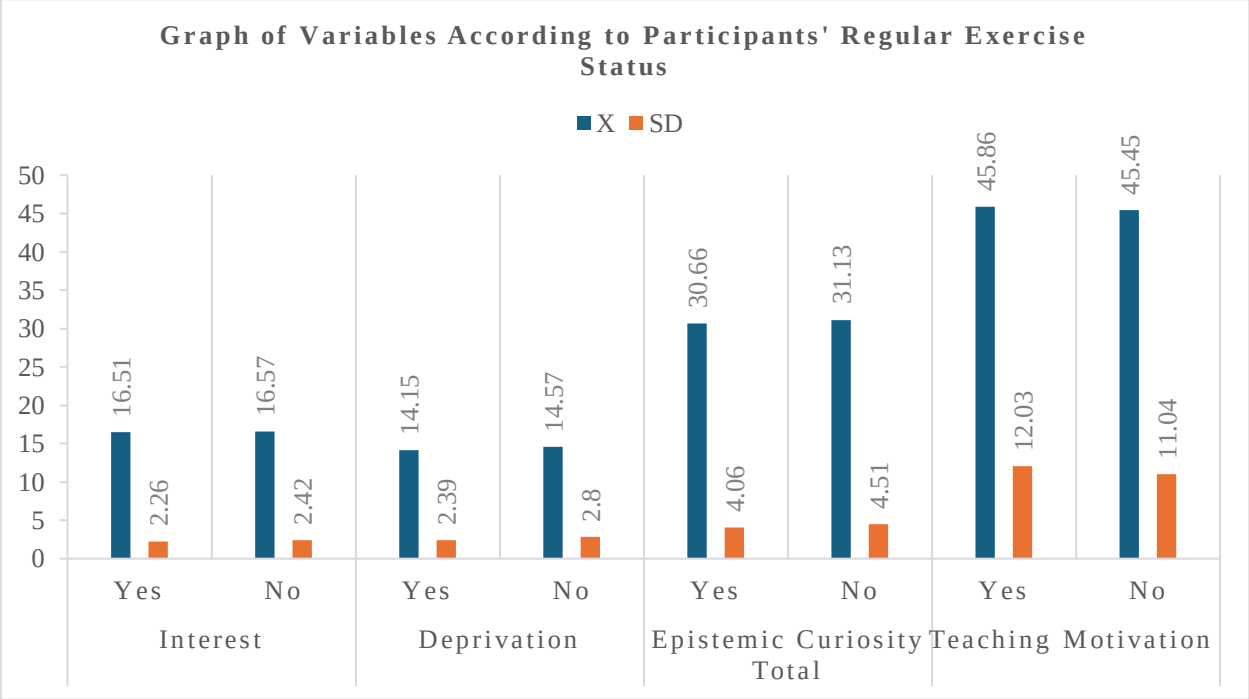

Figure 4. Graph of Variables According to Participants' Regular Exercise Status.

Table 5

Comparison of the Scores Received by the Participants from the Scales According to Their Regular Exercise Status.

Variable	Group	n	X	SD	T test		
					t	df	p
Interest	Yes	74	16,51	2,26			
	No	69	16,57	2,42	-,132	141	,895
Deprivation	Yes	74	14,15	2,39			
	No	69	14,57	2,80	-,957	141	,340
Epistemic Curiosity Total	Yes	74	30,66	4,06			
	No	69	31,13	4,51	-,653	141	,515
Teaching Motivation	Yes	74	45,86	12,03			
	No	69	45,45	11,04	,215	141	,830

Table 5 shows the comparison of the participants' interest, deprivation, total epistemic curiosity and teaching motivation data according to their regular sports activities. When the test results of those who do regular sports and those who do not are examined; There was no difference between interest test values (t[141]= -.132; p>0.05), deprivation test values (t[141]= -.957; p>0.05), epistemic curiosity total test values (t[141]= -.653; p>0.05), and teaching motivation test values (t[141]= .215; p>0.05).

Table 6

The Relationship Between Participants' Epistemic Curiosity Levels and Teaching Motivations According to the Scores They Received from the Scales.

		Epistemic Curiosity	**Teaching Motivation**
Epistemic Curiosity	Correlation	1	,206*
	P		,014
	n	143	143
Teaching Motivation	Correlation	,206*	1
	P	,014	
	n	143	143

* The correlation is significant at the 0.05 level.

Table 6 shows the results of the Pearson Correlation Analysis test, which was applied to determine the level of relationship between teachers' epistemic curiosity total test data and teaching motivation test data. According to the test results, between teachers' epistemic curiosity and motivation to teach; There was a low, positive and significant correlation ($r=.206$; $p<.05$).

Discussion and Conclusion

The findings and results of the study examining the relationship of epistemic curiosity and teaching motivation of physical education and sports teachers are stated in this section. The distribution of the demographic characteristics of the participants was examined. The interest dimension and deprivation dimension, which are the sub-dimensions of epistemic curiosity, epistemic curiosity total data and teaching motivation data were compared according to various demographic variables (gender, marital status, years of working in the profession and regular sports activity) obtained from the volunteer participants in the study.

When comparing the variables of interest between male and female by gender, no difference was found. This indicates that interest levels did not vary by gender in our study. Although there is no difference when the variables are compared by gender in figure 1, it is seen that the interest test average values of female participants are higher than male participants. When comparing the interest values of single participants and married participants according to marital status, no difference was detected between the variables. This indicates that interest levels in our study did not vary according to marital status. In figure 2, although there is no difference in the interest test values between single and married participants, it is seen that the values of single participants in the interest variable are higher than married participants. While there was no difference between the interest test values of the participants whose working years were between 0-7 years and those whose working years were

between 8-12 years, a difference was found between the values of the participants whose working years were between 0-7 years and those whose working years were 13 years and above. However, there was no difference between the values of the participants with working years between 8-12 years and those with 13 years and above. This shows that there is a difference between the interest dimension levels of participants with working years between 0-7 years and 13 and over, but there is no difference between participants with working years between 8-12 years. In figure 3, it is seen that the interest dimension is in the group with working years between 0-7 years (x=17.18, sd=2.26), while it is in the group with working years between 8-12 years (x=16.4, sd=2.75) and in the group with 13 years and above It was determined that (x = 16.2, sd = 1.89). According to these data, it is thought that as the test average values decrease as the year of study increases, there is a negative relationship between the year of study and the values of the interest subscale. There was no difference between the interest test values of those who do sports regularly and those who do not do sports regularly. Although there is no difference between the test values in figure 4, depending on whether they do regular sports, it is seen that the interest and test average values are higher in participants who do not do regular sports than in participants who do regular sports. This situation is thought to indicate that the variable of interest may not be related to regular exercise. It is thought that the decrease in individuals' interest values as the years of work increases may be due to the fact that teachers encounter more negative situations at school, such as the negative behaviors of students mentioned in the literature, as the years of work increase.

When comparing the deprivation variables of male and female by gender, no difference was found between them. figure 1 shows that the deprivation test mean value is higher in male participants. It is thought that male's high level of deprivation-type curiosity supports that their level of uneasiness until they reach information is higher than female. When comparing the deprivate test values of single participants and married participants according to marital status, no difference was detected between the variables. This indicates that the levels of deprivation in our study did not vary according to marital status. Although there is no difference between single and married participants in figure 2, it is seen that the average values of single participants in the deprivation variable are higher than married participants. There was no difference in the deprivation test values of those whose working years were between 0-7 years and those whose working years were between 8-12 years. There was no difference between the values of those whose working years were between 0-7 years and those whose working years were 13 years and above. There was no difference between the deprivation values of those whose working years were between 8-12 years and the values of participants whose working years were 13 years and above. Accordingly, it is thought that the working years of the participants in our study do not make a difference between the deprivation test values. figure 3 shows that the lowest average value in the deprivation variables of the participants is in the participants with working

years between 8-12 years. It is seen that the group with the highest deprivation values is those with working years between 0-7 years. There was no difference between the deprivation values of those who exercise regularly and those who do not exercise regularly. Accordingly, it is thought that there is no relationship between deprivation and regular exercise in our study. Although there is no difference between the test values in figure 4 depending on the status of doing regular sports, it is seen that the deprivation test average values are higher in participants who do not do regular sports than in participants who do regular sports. The fact that deprivation values are higher in those who do not do regular sports is thought to indicate that the relevant variables may not be related to regular sports.

When comparing the epistemic curiosity total variables of female and male according to gender, no difference was found. This indicates that epistemic curiosity levels did not vary according to gender in our study. Although there is no difference when the epistemic curiosity total values are compared by gender in figure 1, it is seen that the epistemic curiosity test average values of female participants are higher than male participants. When comparing the epistemic curiosity total test values of single participants and married participants according to marital status, no difference was detected between the variables. This indicates that epistemic curiosity levels did not vary according to marital status in our study. Although there is no difference between single and married participants in figure 2, it is seen that the average values of single participants in the total variable of epistemic curiosity are higher than those of married participants. There is no difference between the epistemic curiosity total test values of participants with working years between 0-7 years and the values of those with working years between 8-12 years. There was no difference between the values of participants with working years between 0-7 years and those with 13 years and above. There was no difference between the values of those with working years between 8-12 years and those with 13 years and above. Accordingly, it is thought that there is no relationship between the epistemic curiosity total test values and the year of study in the study. figure 3 shows that the lowest average value in the epistemic curiosity variables of the participants is in the participants with working years between 8-12 years. It is seen that the group with the highest total variable values of epistemic curiosity is those with working years between 0-7 years. There was no difference between the total epistemic curiosity values of those who do sports regularly and those who do not do sports regularly. Accordingly, it is thought that there is no relationship between the epistemic curiosity variable and regular exercise status in our study. Although there is no difference between the test values in figure 4, depending on whether they do sports regularly, it is seen that epistemic curiosity data is high in participants who do not do sports regularly. It is thought that the fact that epistemic curiosity values are higher in those who do not do sports regularly indicates that the relevant variable may not be related to doing sports regularly. In his research on adult students, Rossing (1978) found that there was no difference in the

epistemic curiosity levels of male and female students. Huang et al. (2010) stated in their study that the epistemic curiosity levels of men and women were at similar levels. The results of relevant research support our study. In Eren (2009) research on epistemic curiosity and success goals, he concluded that there is a relationship between epistemic curiosity and success goals. In the study conducted by Demirel and Coşkun (2009), in which they investigated the level of curiosity in university students, they found that the level of curiosity in the students was high. Engel (2013) stated that teachers' curiosity models curious-nurturing behaviors in their students.

When comparing the teaching motivation variables of male and female according to gender, difference was found between them. This indicates that teaching motivation levels vary by gender in our study. In figure 1, when the variables are compared according to gender, it is seen that the mean values of the teaching motivation test of women are higher than those of male participants. When comparing the teaching motivation test values of single participants and married participants according to marital status, difference was no detected between the variables. This indicates that teaching motivation levels in our study did not vary according to marital status. Although there is no difference between single and married participants in figure 2, it is seen that the average values of single participants in the teaching motivation variable are higher than married participants. There was no difference between the teaching motivation test values of those with working years between 0-7 years and the values of those with working years between 8-12 years. There was no difference between participants with working years between 0-7 years and participants with 13 years and above. There was no difference between the values of the participants whose age was between 8-12 years and those who were 13 years and above. Accordingly, it is thought that there is no relationship between the participants' years of study and their teaching motivation in our study. Figure 3 shows that the lowest average value in the teaching motivation variable of the participants is in the participants with working years between 8-12 years. In the study conducted by Memişoğlu and Kalay (2017), it was determined that teachers with 6-10 years of professional seniority had lower motivation levels than more senior teachers. There was no difference between the teaching motivation values of those who do sports regularly and those who do not do sports regularly. Accordingly, in our study, it is thought that there is no relationship between teaching motivation and regular sports activity. figure 4 shows that the teaching motivation test average values are higher in participants who do sports regularly. It is thought that the higher teaching motivation variable values in those who do sports regularly may be due to the fact that physical education includes physical activity and teachers who are physically active by doing regular sports are more motivated to teach with self-confidence. When the studies conducted by Gürgür and Akçamete (2012) and Şahin and Dursun (2009) were examined, it was stated that there was no difference according to the marital status of teachers. The literature is similar to our study. In a study conducted by Ayaydın and Tok (2015), it was determined that the

motivation of male classroom teachers was higher than the motivation of female classroom teachers in only one of the four sub-dimensions of the teacher motivation scale. It is thought that the reason why the relevant study has different results than our study may be due to the fact that the teachers are teachers of different branches. In the study conducted by Avcı (2019), in which they examined the teaching motivation data of physical education and sports teachers and other branch teachers in terms of gender, they stated that there was no statistically difference in the teachers' teaching motivation scores in both groups. Dündar et al. (2007) found in their research that intrinsic motivation does not differ according to gender. Relevant research supports our study. When the intrinsic motivation levels of teachers working in primary schools were examined in the study conducted by Ertürk (2013), it was concluded that the intrinsic motivation levels of the teachers were at a high level. In a study conducted with the participation of sixty-nine teachers, it was stated that students' lack of interest in the lesson and their negative behavior were factors that reduced the motivation level of teachers (Addison and Brundrett, 2008). Jang et al. (2012) found in the cross-cultural study that teachers' motivation helped them achieve higher levels of self-regulation and self-efficacy in their students, in addition to better academic performance.

When the relationship between the participants' epistemic curiosity and teaching motivation levels is examined; A low-level positive relationship was determined between epistemic curiosity levels and teaching motivations. This situation supports that there is a relationship between the epistemic curiosity levels of physical education and sports teachers and their teaching motivation. It is stated that teachers' participation in professional development courses organized according to needs positively affects their self-efficacy and motivation (Duraku et al., 2022). In a study conducted by Addison and Brundrett (2008), it was stated that willing, hard-working and successful students stimulate the teaching motivation of teachers. In a study conducted by Freed (2020), it was concluded that teacher motivation was increased through activities such as improving principals' feelings of competence in their schools, ensuring autonomy, and supporting teachers. Eyal and Roth (2011) examined the effect of principals' leadership styles on teachers' burnout and teaching motivation. The study was conducted on 122 primary school teachers and as a result, it was stated that the transformational leadership styles of the principals were negatively associated with burnout. Pelletier and Rocchi (2015) stated that research in the field of education generally focuses on students' motivation, and little attention is paid to the important role of teachers' motivation, how teachers experience their teaching roles, why they teach, and what effects this situation has on students' learning.

In conclusion; According to the scale data applied to physical education and sports teachers, no difference was found when the interest, deprivation and epistemic curiosity test data were

compared according to gender. However, there was a difference between the teaching motivation test data according to gender. No difference was found when comparing the relevant variables according to marital status. When comparing the relevant variables according to the years of working in the profession, a difference was detected in the interest dimension variable between the participants with working years between 0-7 years and those with working years of 13 years or more. However, no difference was found when comparing the deprivation, epistemic curiosity total and teaching motivation variables according to the year of study. No difference was found when comparing the test values of the variables (interest, deprivation, epistemic curiosity total and teaching motivation) according to the status of doing regular sports. In our study, in which the relationship level of teachers' epistemic curiosity levels and teaching motivations was examined, it was determined that there was a low-level and positive relationship between the variables. The low level of job satisfaction in teachers is one of the main factors that cause their attrition (Amorim Neto, 2013). Teacher motivation, especially at the school level, is critically tied to effective management. If the structures and systems set up to support and manage teachers are dysfunctional, it is likely that teachers' sense of professional responsibility and commitment will be lost (Mark, 2015). Knowing the needs of teachers in the place where they work and making some arrangements in this regard can enable them to fulfill their professional duties more willingly. Studies show that increasing the motivation level of teachers is beneficial for students as well as teachers (Bishay,1996). The relationship of epistemic curiosity and teaching motivation in physical education and sports teachers has been found and investigated, and the place and importance of epistemic curiosity and teaching motivation in education has been stated in the literature. As stated in the literature, teachers can reduce the time they spend on various problems they encounter while performing their profession and enable them to perform their duties with a more focused, positive approach and dedication. It is thought that making the necessary improvements in professional terms will be beneficial in that, in addition to improving teaching motivation, it can also positively affect the levels of epistemic curiosity, which is a related concept, and in this case, the quality and efficiency in education can be increased.

Suggestions

1.Factors that negatively affect teachers' scientific curiosity and motivation levels, or the arrangements they deem necessary to be positive, can be investigated.

2.The relevant scales can be applied to the group of teachers to be researched, and after improvements and arrangements that will positively increase their professional curiosity and motivation, the relevant scales can be re-applied to the same group and the relationship between the scale scores can be examined.

3. By examining the epistemic curiosity and teaching motivation of teachers teaching different age groups, the effect of the age group of the student profile on teachers' epistemic curiosity and teaching motivation can be examined.

4.Future studies can be carried out on physical education teachers working in different provinces and teaching levels and comparisons of the scale scores of studies between provinces can be made.

5. By examining both teachers' epistemic curiosity levels and teaching motivations, and the relevant teachers' students' motivations in terms of epistemic curiosity and learning, the relationship between teachers' score values and their students' score values can be examined, and the effect of teachers' epistemic curiosity and teaching motivation levels on students' curiosity and learning can be examined.

6. The relevant study can be applied to teacher groups from different branches and comparisons can be made between the scores of different branch teachers.

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All authors contributed equally at all stages of the research.

Conflict Statement

The authors do not declare any conflicts with the research.

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