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| Research Article / Araştırma Makalesi |

An Analysis of the Relationship between Disciplined Mind Characteristics and Entrepreneurial Tendencies of Primary School Fourth Grade Students*

İlkokul Dördüncü Sınıf Öğrencilerinin Disiplinli Zihin ve Girişimcilik Becerileri Arasındaki İlişkinin İncelenmesi

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Keywords
1.Disciplined mind
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Anahtar Kelimeler
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Abstract

Purpose: This study is to examine the relationship between disciplined mind characteristics and entrepreneurial tendencies of fourth grade primary school students.

*Design/Methodology/*Approach: The relational screening model was used as the method in the study. Data were collected using the Personal Information Form, "Disciplined Mind Scale", and "Entrepreneurship Tendencies Inventory". The research sample consisted of 576 fourth grade primary school students studying at state schools during the 2022-2023 school year.

Findings: As a result of simple and partial correlation analyses and simple linear regression analyses, a significant positive relationship was found between disciplined mind characteristics and entrepreneurial tendencies of fourth grade primary school students. In this significant relationship, it is necessary to work continuously to improve knowledge and skills. Gender, magazines read, TV programmes watched, computer games played, reading time, graduation status of parents, occupation status of parents are among the factors affecting the significant relationship.

Highlights: The study determined that the relationship between disciplined mind and entrepreneurial tendencies could be evaluated from primary school onwards, and that certain variables, including gender, family education level, and reading habits, had an effect on the situation.

Öz

Çalışmanın amacı: Bu çalışmanın amacı, ilkokul dördüncü sınıf öğrencilerinin disiplinli zihin özellikleri ile girişimcilik eğilimleri arasındaki ilişkiyi incelemektir.

Materyal ve Yöntem: Çalışmada yöntem olarak ilişkisel tarama modeli kullanılmıştır.Veriler, Kişisel Bilgi Formu, "Disiplinli Zihin Ölçeği" ve "Girişimcilik Eğilimleri Envanteri" kullanılarak toplanmıştır. Araştırma örneklemini, 2022–2023 eğitim-öğretim yılında Afyonkarahisar İl merkezindeki devlet okullarında öğrenim gören 576 dördüncü sınıf öğrencisi oluşturmuştur.

Bulgular: Basit ve kısmi korelasyon analizleri ve basit doğrusal regresyon analizleri ile yapılan değerlendirmeler sonucunda, ilkokul dördüncü sınıf öğrencilerinin disiplinli zihin özellikleri ile girişimcilik eğilimleri arasında pozitif yönde anlamlı bir ilişki ortaya çıkmıştır. Bu anlamlı ilişkide cinsiyet, okunan dergi türü, izlenen TV programı, oynanan bilgisayar oyunları, kitap okuma süresi, anne ve baba eğitimi ile mesleki durum değişkenlerinin etkide bulunduğu tespit edilmiştir.

Önemli Vurgular: İlkokuldan itibaren disiplinli zihin ve girişimcilik becerisinin birlikte değerlendirilebileceği, cinsiyet, aile eğitim durumu, kitap okuma alışkanlığı gibi birtakım değişkenlerin duruma etki ettiği tespit edilmiştir.

* This study is derived from the master's thesis conducted by the first author under the supervision of the second author.

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INTRODUCTION

Knowledge is related to space and connections between disciplines. It is accepted that there is a direct relationship between learning and knowledge. Because newly learned information is connected with the old ones by learners to have new knowledge. This new knowledge is processed and made sense (Yılmaz, 2009). Since individuals' thinking styles are not the same depending on their mental processes, studies on these differences have gained importance. In order to synthesize knowledge, it is necessary to learn with new and different methods (Başaran, 2004). This situation paved the way for the formation of mental models.

Gardner (2007) identified five mind models that will build the future: disciplined mind, synthetic mind, creative mind, respectful mind and ethical mind. Disciplined mind, which is discussed in the study, refers to mastering one or more disciplines. Disciplines provide the mind with structured approaches to thinking (Charles, 2008). Gardner, who accepts disciplines as a different phenomenon, also defines the discipline as thinking about the world in a certain way. A person can achieve discipline to the extent that he acquires habits that will enable him to make continuous and endless progress in mastering a skill, profession or field of knowledge. A disciplined mind is a structure that knows that it is necessary to constantly work to develop knowledge and skills (Gardner, 2007).

In today's world where globalization dominates, working efficiently and being highly productive are of great importance. Increasing technological developments have affected entrepreneurial activities (Aytaç and İlhan, 2007). This situation increases the need for entrepreneurial individuals who constantly update themselves and improve themselves in more than one discipline. Entrepreneurship is a process in which opportunities are sought to produce value and various resources are combined to benefit from these opportunities (Özdevecioğlu and Cingöz, 2009). The Ministry of National Education (MONE) changed its educational approach in 2005 and aims to provide students with entrepreneurship skills (MONE, 2018). In this sense, entrepreneurship is a skill that enables an individual to turn his/her feelings and thoughts into action, to develop a plan and program to achieve the desired goals, to manage the activities, to be creative and innovative, to take risks and to achieve the goal (Figel, 2007).

Entrepreneurship at the primary school level includes skills that can be developed in the school environment, such as generating different ideas, evaluating opportunities, making innovative acts, having a desire to succeed, being brave and taking risks in achieving goals, being determined and persistent, and carrying out various projects and activities (Yurtseven, 2020). An entrepreneurial individual must have a mental structure where he can use more than one method together in order to develop and master his tendencies. Therefore, the individual's disciplined mental characteristics and entrepreneurial tendencies should be reconciled at the primary school level. There are studies on these topics, but these studies have not been carried on a sample of primary school subjects. Ocak and İçel (2023) studied the relationship between disciplined mind characteristics and steam attitudes, Sarıkaya (2022) studied the relationship between disciplined mind characteristics and scientific process skills, and Can Aran (2014) and Yılmaz (2012) studied the relationship between disciplined mind characteristics and science education. The following studies analtsed the relationship between entrepreneurial tendencies and other factors such as multiple intelligences (Kurtdede Fidan and Argıç 2023), steam attitude (Sarı 2022), attitudes (Sarı and Katrancı 2021), Fetemm attitudes is (Konuş 2019), the effect in terms of gender (Akman 2019), emotional intelligence (Akpınar and Alkış (2019), basic motivation sources (Özçoban and Özkul 2019), demographic variables (Salik and Kaygın 2016), factors affecting tendency (Ulucan 2015), and socio-demographic characteristics (Türkmen and İşbilir 2014). This topic was examined by Doğan (2013) on a sample of university students. Gardner (2007) states that the formation of a disciplined mind begins before adolescence and continues throughout one's life. Therefore, the 4th grade of primary school is an ideal period for determining the disciplined mental characteristics of students. Given that entrepreneurship skills, which are affected by more than one discipline, are included in the educational programs, it is thought that a study that will evaluate both concepts together will contribute to the existing knowledge on these topics.

This study aims to examine whether or not there is a relationship between the disciplined mental characteristics and entrepreneurial tendencies of fourth grade primary school students in terms of various variables (Gender, parents' education level, parents' occupation, book reading time, type of magazines read, TV program watched, computer games). The research question of the study is as follows: "What is the relationship between the disciplined mental characteristics and entrepreneurial tendencies of fourth grade primary school students?" The sub-research questions aimed to be answered based on this question are:

1) What is the relationship between the disciplined mental characteristics and entrepreneurial tendencies of fourth grade primary school students?
2) What is the predictive factor in the relationship between disciplined mental characteristics and entrepreneurial tendencies of fourth grade primary school students?
3) What is the effect of the variables gender, father's education level, mother's education level, parents' occupation, daily book reading time, type of magazines read, TV programs watched and computer game played on the relationship between the disciplined mental characteristics and entrepreneurial tendencies of fourth grade primary school students?

METHOD/MATERIALS

This research is designed as a survey study which is part of the quantitative research methods. Quantitative research is defined as a positivist view that sees reality independently of the researcher and assumes that it will be observed and measured objectively (Büyüköztürk et. al., 2020; Hocaoğlu and Akkaş Baysal, 2019). Relational scanning, on the other hand, is a type of research that examines relationships and connections beyond describing situations or events (Büyüköztürk et. al., 2020). This type of research aims to determine whether or not there is a change between two or more variables and to what extent this change occurs (Karasar, 2005). The study examines whether or not there is a relationship between the disciplined mental characteristics and entrepreneurial tendencies of fourth grade primary school students and the variables of gender, parents' education level, parents' profession, book reading time, type of magazines read, TV programs watched, and computer games played.

Participants

This study targets the fourth grade students attending public schools in the central district of Afyonkarahisar during the 2022-2023 school year. The participants of the study were selected using the convenience sampling. In this type of sampling the researcher selects people who are easy to reach (Kılıç, 2013; Robson, 2017). The participants of the study were 576 fourth grade students. Of them, 280 were female and 296 male. Table 1 presents the demographical information about the participants.

Table 1. Demographical Information about the Participants

Demographical İnformation	Variables	n	%
Gender	Female	280	48.6
	Male	296	51.4
Magazines Mostly Read	Not Reading	346	60.1
	Bilim Çocuk	154	26.7
	TRT Çocuk	61	10.6
	Minik Çocuk	10	1.7
	Çamlıca Çocuk	5	0.9
Watched TV Shows	Cartoons	294	51
	TV series-movies	155	26.9
	Documentaries	61	10.6
	Sport	48	8.3
	Game programs	18	3.1
Computer Games Played	Not Playing	99	17.2
	Strategy	228	39.6
	Sport	83	14.4
	Target	74	12.8
	Competition	49	8.5
	Design	43	7.5
The Daily Time For Reading Books	Less than 1 Hour	331	57.5
	1-2 Hours	186	32.3
	3 Hours or more	59	10.2
Mother Education	Illiterate	7	1.2
	Primary School	128	22.2
	Secondary School	150	26
	High School	182	31.6
	University	100	17.4
	Graduate	9	1.6
Mother Occupation	Housewive	409	71
	Public	87	15.1
	Private Sector	40	6.9
	Self-Employed	40	6.9
Father Education	İlliterate	2	0.3
	Primary School	75	13
	Secondary School	117	20.3
	High School	226	39.2
	University	132	22.9
	Graduate	24	4.2
Father Occupation	Private Sector	169	29.3
	Public	126	21.9
	Worker	108	18.8
	Self-Employed	173	30

As can be seen in Table 1 the rate of female students is 48.6% and that of male students is 51.4%. The magazines mostly read by the participants are found as follows: *Bilim Çocuk* magazine (26.7%), *TRT Çocuk* magazine (10.6%), *Minik Çocuk* magazine

(1.7%), and *Çamlıca Çocuk* magazine (0.9%). On the other hand, 60.1% of the participants reported that they did not read any children's magazines. The most watched TV shows by the participants are as follows: cartoons (51%), TV series-movies (26.9%), documentaries (10.6%), sports programs (8.3%), game programs (3.1%). The computer games played by the participants are as follows: 39.6% strategy games, 14.4% sports games, 12.8% target games, 8.5% competition games, and 7.5% design games. On the other hand, 17.2% of the participants reported that they never played computer games. The daily time for reading books among the participants is as follows: the rate of students who read books for less than 1 hour was 57.5%, the rate of students who read books for 1 hour to 2 hours was 32.3%, and the rate of students who read books for 2 hours or more was 10.2%. As can be seen in Table 1 31.6% of the students' mothers are high school graduates, 26% are secondary school graduates, 22.2% are primary school graduates, 17.4% are university graduates, 1.6% are graduate graduates and 1.2 of them illiterate. It is found that 71% of the students' mothers were housewives, 15.1% were public employees, 6.9% were self-employed and 6.9% were private sector employees. It is found that 39.2% of the students' fathers were high school graduates, 22.9% university graduates, 20.3% secondary school graduates, 13% primary school graduates, 4.2% postgraduate graduates and 0.3% illiterate. It is seen that 30% of the students' fathers are self-employed, 29.3% are private sector employees, 21.9% are public employees and 18.8% are workers. It is seen that most of the parents are high school graduates. In terms of occupational status, it is seen that the majority of mothers (71%) are housewives and the majority of fathers (30%) are self-employed.

Data Collection Tool

The data of the study were collected using the "Personal Information Form" developed by the author, the "Disciplined Mind Scale" developed by Ocak and İçel (2020) and the "Entrepreneurial Tendencies Inventory" developed by Yurtseven and Ergün (2018). A permission to collect the data was obtained from Afyon Kocatepe University Scientific Research and Publication Ethics Committee.

To check the reliability of the data collection tools, a pilot study was conducted with a sample of 40 students attending a public primary school. As a result of the analysis of the findings from the pilot study the Cronbach Alpha reliability of the Disciplined Mind scale was found to be .80. The Cronbach Alpha reliability of the Entrepreneurial Tendencies Inventory was determined as .86. In in social sciences studies, the lower limit of reliability is accepted as .70 (Şencan, 2005).

The study was carried out in six schools. The school principals were informed about the implementation process.

Data Analysis

The data collected from the data collection tools were analysed using the statistical methods. The data obtained from the students were transferred to the computer. The demographical characteristics of the participants and their parents were analysed through the descriptive statistics using the arithmetic mean, standard deviation, percentage and frequency..

A normality test was performed to determine the distribution of the data (Miran, 2021). The skewness and kurtosis between -1.0 and +1.0 is considered to be a reflection of the normal distribution (Büyüköztürk, Çokluk & Köklü, 2011). The results showed that the data were normally distributed, since the Skewness-kurtosis values were found to be between -1.0 and +1.0. The skewness and kurtosis data of the scales are shown in Table 2.

Table 2. Skewness-Kurtosis Values of the Disciplined Mind Scale and Entrepreneurial

Variables	Article	N	$\bar{X}$	sd	Skewnes	Kurtosis	Kolmogorov-Smirnov
DMS Total	27	576	4.05	.018	-.364	-.089	.000
ETI Total	24	576	4.08	.023	-.613	-.043	.000

Tendencies Inventory

The linear relationship between two or more variables is called correlation. The amount of relationship between variables is calculated with a correlation technique called binary or simple correlation (Köklü et al., 2006). The simple correlation analysis was conducted to determine the relationship between the Disciplined Mind Scale scores and the Entrepreneurial Tendencies Inventory scores. Since the distribution was found to be normal in the study, the Pearson Correlation coefficients were examined. The simple linear regression analysis was conducted to determine the predictor in the relationship between the Disciplined Mind Scale and the Entrepreneurial Tendencies Inventory. The simple and partial correlation analyses were used to determine whether or not the relationship between Disciplined Mind Scale scores and Entrepreneurial Tendencies Inventory scores differed based on the variables. The score ranges of the answers given by the students are as follows: 4.21-5.00 "Always", 3.41-4.20 "Most of the time", 2.61-3.40 "Sometimes", 1.81-2.60 "Rarely", and 1.00-1.80 "Never". in Table 2.

FINDINGS

In this part, the statistical analyses and findings obtained from the Disciplined Mind Scale and Entrepreneurial Tendencies Inventory are discussed.

The Pearson correlation analysis was performed to determine the relationship between the disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students, and the results of the analysis are shown in Table 3.

Table 3. Pearson Correlation Analysis on the Relationship between Disciplined Mind Characteristics and Entrepreneurial Tendencies of Primary School Fourth Grade Students

Factors	1	2	3	4	5	6	7	8	9	10	11
Disciplined Mind Scale (1)	1	.664**	.625**	.567**	.560**	.427**	.777**	.607**	.687**	.691**	.466**
Entrepreneurial Tendencies Inventory (2)		1	.840**	.847**	.848**	.758**	.578**	.271**	.506**	.481**	.425**
Being Successful (3)			1	.665**	.600**	.493**	.524**	.288**	.534**	.365**	.488**
Problem Solving (4)				1	.612**	.497**	.495**	.270**	.389**	.397**	.356**
Innovation (5)					1	.555**	.483**	.207**	.424**	.454**	.302**
Self-Confidence (6)						1	.397**	.120**	.312**	.365**	.249**
Thinking Like a Scientist (7)							1	.210**	.469**	.491**	.256**
Establishing Interdisciplinary Connections (8)								1	.192**	.123**	.247**
Motivation to Live Disciplined (9)									1	.388**	.443**
Deep Learning (10)										1	.175**
Connecting to Daily Life (11)											1

Table 3 shows that there is a statistically significant correlation between the scores of the Disciplined Mind Scale (DMS) and the scores of the Entrepreneurial Tendencies Inventory (ETI) (r=.664**, p<.01). All subscales of these tools are significantly correlated (p<.01). It is found that the strongest correlation was between the "Being Successful" factor and the "Problem Solving" factor (r= .665**, p<.01), and the weakest correlation is found to be between the "Self-Confidence" factor and the "Establishing Interdisciplinary Connections" dimensions (*r*= .120**, *p*<.01).

A simple linear regression analysis was conducted to determine the predictor of the relationship between disciplined mind characteristics and entrepreneurial tendencies, and the results of the analysis are shown in Table 4.

Table 4. Results of Simple Linear Regression Analysis to Determine the Predictor of the Relationship Between the Disciplined Mind Scale and the Entrepreneurial Tendencies Inventory

	B	Std. Error	(ß)	T	p	R	R^2	F	p
(Constant)	.594	.165		3.600	.000	.664	.441	452.487	. 000*
DMS Average	.860	.040	.664	21.272	.000				

As can be seen in Table 4 there is a statistically significant correlation disciplined mind characteristics and entrepreneurial tendencies since the significance level is at p<.05. It has been observed that disciplined mental characteristics have a positive and moderately significant effect on entrepreneurial tendencies. R^2 value was found to be .441 (R=.664; R^2 = .441, P<.05). Therefore, disciplined mind characteristics explain 44.1% of the change in the entrepreneurial tendencies variable.

A partial correlation analysis was conducted to examine the relationship between the disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on gender, and the results of the analysis are given in Table 5.

Table 5. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on Gender

Gender		N	$\bar{X}$	Sd	R	p
Female	DMS	280	4.11	.404	.709**	.000
	ETI		4.12	.551		
Male	DMS	296	4.00	.452	.625**	.000
	ETI		4.04	.566		

Table 5 indicates that there is a statsitically significant correlation between female participants' the DMS scores and their ETI scores ($r_{partial}$= .709, p= .00). There is also a positive and medium-level significant correlation between male participants' the DMS scores and their ETI scores ($r_{partial}$= .625, p= .00).

A partial correlation analysis was conducted to examine the relationship between disciplined mind characteristics and entrepreneurial tendencies of the fourth grade primary school students based on their fathers' education level, and the results of the analysis are given in Table 6.

Table 6. Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on Father's Educational Level

Father Education		N	$\bar{X}$	Sd	R	p
Illiterate	DMS	2	4.14	.052		
	ETI		4.25	.648		
Primary School	DMS	75	4.00	.419	.613	.000
	ETI		4.03	.574		

Secondary School	DMS	117	3.97	.390	.605	.000
	ETI		3.99	.557		
High School	DMS	226	4.05	.426	.653	.000
	ETI		4.06	.567		
University	DMS	132	4.16	.466	.729	.000
	ETI		4.19	.527		
Graduate	DMS	24	4.04	.455	.742	.000
	ETI		4.16	.568		

As can be seen in Table 6 the correlation between the DMS scores and the ETI scores of the participants whose fathers were primary school graduates (r=.613, p<.01), secondary school graduates (r=.605, p<.01) and high school graduates (r=.653, p<.01) are found to be positively and moderately significant. The correlation between the DMS scores and the ETI scores of the participants whose fathers were university graduates (r=.729, p<.01) and postgraduate education graduates (r=.742, p<.01) was found to be positively and highly significant.

A partial correlation analysis was conducted to examine the relationship between disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on the mothers' education level, and the results of the analysis are given in Table 7.

Table 7. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on Mother's Educational Level

Mother Education		N	$\bar{X}$	Sd	R	p
Illiterate	DMS	7	3.88	.338	.812	.026
	ETI		3.79	.486		
Primary School	DMS	128	4.00	.405	.558	.000
	ETI		4.04	.521		
Secondary School	DMS	150	4.03	.420	.642	.000
	ETI		4.04	.539		
High School	DMS	74	4.05	.451	.707	.000
	ETI		3.05	.607		
University	DMS	100	4.18	.430	.672	.000
	ETI		4.25	.529		
Graduate	DMS	9	3.96	.495	.784	.012
	ETI		3.95	.542		

As can be seen in Table 7 the correlation between the DMS scores and the ETI scores of the participants whose mothers are primary school graduates (r=.558, p<.01), secondary school graduates (r=.642, p<.01), and university graduates (r=.672, p<.01) is positively and medium-level significant. The correlation between the DMS scores and the ETI scores of the participants whose mothers are illiterate (r=.812, p<.05), high school graduate (r=.707, p<.01), postgraduate education graduate (r=.784, p<.05) is found to be positive and highly significant.

A partial correlation analysis was conducted to examine the relationship between disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on the fathers' occupation, and the results of the analysis are given in Table 8.

Table 8. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on Fathers' Occupation

Father Occupation		N	$\bar{X}$	Sd	R	p
Self-Employed	DMS	173	4.03	.452	.697	.000
	ETI		4.05	.614		
Public	DMS	126	4.14	.449	.704	.000
	ETI		4.19	.515		
Private Sector	DMS	169	4.04	.394	.620	.000
	ETI		4.05	.552		
Worker	DMS	108	3.99	.424	.605	.000
	ETI		4.03	.519		

Table 8 shows that the correlation between the DMS scores and the ETI scores of the participants whose fathers are self-employed (r=.697, p<.01), employed in private sector (r=.620, p<.01), and workers (r=.605, p<.01) is found to be positively and medium-level significant. The correlation between the DMS scores and the ETI scores of the participants whose fathers are employed in public sector (r=.704, p<.01) is found to be positively and highly significant.

A partial correlation analysis was conducted to examine the relationship between disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on the mothers' occupation, and the results of the analysis are given in Table 9.

Table 9. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on Mothers' Occupation

Mother Occupation		N	$\bar{X}$	Sd	R	p
Housewive	DMS	409	4.04	.425	.657	.000
	ETI		4.06	.554		
Public	DMS	87	4.17	.437	.662	.000
	ETI		4.23	.526		
Private Sector	DMS	40	4.03	.398	.465	.002
	ETI		4.01	.527		
Self-Employed	DMS	40	3.95	.486	.797	.000
	ETI		3.96	.669		

Table 9 shows that the correlation between the DMS scores and the ETI scores of the participants whose mothers are housewives (r=.657, p<.01), are employed in public sector (r=.662, p<.01), and employed in private sector (r=.465, p<.01) are found to be postive and significant at medium level. The correlation between the DMS scores and the ETI scores of the participants whose mothers are self-employed is found to be positively and highly significant (r=.797, p<.01).

A partial correlation analysis was conducted to examine the relationship between disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on the participants' daily reading books, and the results of the analysis are given in Table 10.

Table 10. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on the participants' daily reading boks

Book reading time		N	$\bar{X}$	Sd	R	p
Less Than 1 Hour	DMS	331	3.99	.433	.625	.000
	ETI		4.03	.560		
1 Hour to 2 Hours	DMS	186	4.15	.391	.666	.000
	ETI		4.13	.542		
2 Hours or More	DMS	59	4.10	.491	.828	.000
	ETI		4.19	.593		

Table 10 shows that the correlation between the DMS scores and the ETI scores of the participants who read books 0-1 hour daily (r=.625, p<.01), and those who read books 1-2 hours daily (r=.666, p<.01) is found to be positive and significant at medium level. The correlation between the DMS scores and the ETI scores of the participants who read books more than 2 hours daily (r=.828, p<.01) is found to be positively and highly significant.

A partial correlation analysis was conducted to examine the relationship between disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on the types of magazines read by the participants, and the results of the analysis are given in Table 11.

Table 11. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on the types of magazines read by the participants

Magazines Mostly Read		N	$\bar{X}$	Sd	R	p
Not Reading	DMS	346	3.98	.428	.634	.000
	ETI		3.98	.576		
Bilim Çocuk	DMS	154	4.23	.396	.673	.000
	ETI		4.30	.475		
TRT Çocuk	DMS	61	4.02	.434	.618	.000
	ETI		4.12	.526		
Minik Çocuk	DMS	10	4.01	.403	.828	.003
	ETI		4.07	.533		
Çamlıca Çocuk	DMS	5	4.07	.256	.583	.302
	ETI		3.88	.378		

As can be seen in Table 11 the correlation between the DMS scores and the ETI scores of the participants who read Bilim Çocuk magazine (r=.673, p<.01), who read TRT Çocuk magazine (r=.618, p<.01) is found to be positive and significant at medium level. The correlation between the DMS scores and the ETI scores of the participants who read Minik Çocuk magazine (r=.828, p<.01) is found to be positively and highly significant is found to be positively and highly significant. The correlation between the

DMS scores and the ETI scores of the participants who do not read any magazine (r=.634, p<.01) is also found to be positive and significant at medium level.

A partial correlation analysis was conducted to examine the relationship between disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on the types of TV shows watched by the participants, and the results of the analysis are given in Table 12.

Table 12. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on the types of TV shows watched by the participants

Watched TV Shows		N	$\bar{X}$	Sd	R	p
Cartoons	DMS	294	4.05	.434	.652	.000
	ETI		4.08	.548		
TV series- movies	DMS	155	4.00	.429	.707	.000
	ETI		4.00	.602		
Documentaries	DMS	61	4.20	.363	.738	.000
	ETI		4.24	.463		
Sport	DMS	48	4.02	.480	.562	.000
	ETI		4.14	.513		
Game programs	DMS	18	4.05	.430	.532	.023
	ETI		4.05	.693		

Table 12 indicates that the correlation between the DMS scores and the ETI scores of the participants who watch cartoons (r=.652, p<.01), sports programmes (r=.562, p<.01), and who watch quiz programs (r=.532, p<.05) is found to be positive and significant at medium level. The correlation between the DMS scores and the ETI scores of the participants who watch documentary (r=.738, p<.01) and those who television series (r=.707, p<.01) is found to be positively and highly significant.

A partial correlation analysis was conducted to examine the relationship between disciplined mental characteristics and entrepreneurial tendencies of the fourth grade primary school students based on the types of computer games played by the participants, and the results of the analysis are given in Table 13.

Table 13. The Relationship Between Disciplined Mind Scale and Entrepreneurial Tendencies based on the types of computer games played by the participants

Computer Games		N	$\bar{X}$	Sd	R	p
Strategy Content	DMS	228	4.07	.453	.711	.000
	ETI		4.07	.580		
Not playing	DMS	99	4.10	.386	.665	.000
	ETI		4.10	.567		
Sports Content	DMS	83	4.02	.469	.565	.000
	ETI		4.15	.516		
Target Content	DMS	74	3.98	.409	.671	.000
	ETI		3.92	.580		
Race Content	DMS	49	4.04	.435	.738	.000
	ETI		4.04	.561		
Design Content	DMS	43	4.06	.383	.523	.000
	ETI		4.25	.406		

Indicates that the correlation between the DMS scores and the ETI scores of the participants who do not play computer games (r=.665, p<.01), those who play sports games (r=.565, p<.01), those who play target games (r=.671, p<.01), and those who play design games (r=.523, p<.01) is found to be positive and significant at medium level. The correlation between the DMS scores and the ETI scores of the participants who play strategy games (r=.711, p<.01) and those who play competitive games (r=.738, p<.01) is found to be positively and highly significant.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In this study it is found that there is a significant and positive relationship between Disciplined Mind Characteristics and Entrepreneurial Tendencies of the fourth grade primary school students. A positive and significant relationship was found between the dimensions and factors of both scales. The strongest correlation was found to be between the Achievement factor and the Problem Solving factor, while the weakest correlation was found to be between the Self-Confidence factor and the Making Interdisciplinary Connections dimension. In a similar study conducted by Argıç (2022) with the fourth grade primary

school students, the strongest correlation was found between being successful and problem solving factors. Considering that problem solving skills are among the skills required for a person to manage his life successfully, individuals must have the skill of solving the problems in order to live a life in which they can make their own decisions and live successfully (Çolpan Kuru, 2021).

It is found in the study that the disciplined mental characteristics of the fourth grade primary school students had a positive and moderately significant effect on their entrepreneurial tendencies. It is concluded that 44.1% of the change in their entrepreneurial tendencies was explained by their disciplined mind characteristics. In the study conducted by Argıç (2022), it is reported that multiple intelligence domains had a positive and moderately significant effect on the entrepreneurial tendencies of the students, and that the multiple intelligence domains explained 56.7% of the change in the entrepreneurial tendencies.

A positive and high level relationship was determined between female students' DSI scores and ETI scores. A positive and moderately significant relationship was determined between male students' DSI scores and ETI scores. It is understood that the relationship between the disciplined mental characteristics and entrepreneurial tendencies of female students is higher than that of male students. In the study conducted by Kurtdede Fidan and Argıç (2023), a significant difference was found in the entrepreneurship tendencies of the fourth grade primary school students in favor of girls. Argıç (2022) found a positive and high level relationship between multiple intelligences and entrepreneurial tendencies of both male and female students. In Yurtseven's (2020) study, the students' entrepreneurial tendencies did not show a significant difference according to the gender variable. In the study conducted by Sarıkaya (2022), a positive, low-level significant relationship was detected between the scientific process skills and disciplined mind characteristics of female students, and it was concluded that this relationship was not significant among male students.

In this study, a positive and moderate relationship was found between the DSI scores and ETI scores of the fourth grade primary school students whose fathers were primary school graduates, secondary school graduates and high school graduates. A positive and highly significant relationship was found between the DSI scores and ETI scores of those whose fathers had university or postgraduate degrees. Therefore, fathers' educational background has important effects on the relationship between students' disciplined mental characteristics and entrepreneurial tendencies. It seems that this relationship becomes more positive as the education level of the fathers increases. In his study, Sarıkaya (2022) found that fathers' educational background had a positive, but low-level significant effect on the relationship between students' scientific process skills and disciplined mind characteristics.

In this study, it is found that there was a positive and moderate relationship between the DSI scores and ETI scores of the fourth grade primary school students whose mothers were primary school graduates, secondary school graduates and university graduates. A positive and highly significant relationship was found between the DSI scores and ETI scores of the students whose mothers were illiterate or whose mothers were high school or graduate graduates. Therefore, the educational background of mothers affects the relationship between students' disciplined mental characteristics and their entrepreneurial skills. However, this effect is not statistically significant. A similar result was reported in the study conducted by Sarıkaya (2022). In the study, a positive, low-level significant relationship was detected between the scientific process skills and disciplined mind characteristics of the students whose mothers were primary school graduates, secondary school graduates and high school graduates, while no significant relationship was detected between the scientific process skills and disciplined mind characteristics of the students whose mothers were university or postgraduate graduates.

In this study, a positive and moderate relationship was found between the DSI scores and the ETI scores of the fourth grade primary school students whose fathers were self-employed, were private sector employees or were workers. A positive and highly significant relationship was determined between the DSI scores and ETI scores of the students whose fathers are public employees. Therefore, it seems that fathers' profession has a positive effect on the relationship between students' disciplined mental characteristics and their entrepreneurial skills. However, different professions have different effects on this relationship. İçel (2019) found a moderate positive relationship between the disciplined mental characteristics and STEM attitudes of the fourth grade primary school students based on fathers' profession.

In this study, a positive and moderate relationship was found between the DSI scores and ETI scores of the fourth grade primary school students whose mothers were housewives and those whose mothers were employed in the public or private sector. A positive and highly significant relationship was detected between the DSI scores and ETI scores of those whose mothers were self-employed. Therefore, mothers' profession creates a positive relationship between students' disciplined mental characteristics and their entrepreneurial skills. On the other hand, different professions have different effects on this relationship.

In this study, it is found that there was a positive and moderate relationship between the DSI scores and ETI scores of the fourth grade primary school students whose daily book reading time was between 0-1 hour and 1-2 hours. It is also found that the relationship between the DSI scores and ETI scores of the students who read books for more than 2 hours daily was positive and high. Therefore, daily book reading time positively affects the relationship between the students' DSI scores and ETI scores. It is seen that this effect reaches a higher level as the time spent reading books increases. In the study with the fourth grade primary school students, Sarı (2022) found that the students' entrepreneurship tendency differed significantly depending on the number of books they read in a month.

In this study, it is found that there was a positive and moderate relationship between the DSI scores and ETI scores of the students who did not read any magazines and students who read Bilim Çocuk and TRT Çocuk magazines. A positive and highly significant relationship was determined between the DSI scores and ETI scores of the fourth grade primary school students who read Minika Çocuk magazine. Therefore, reading magazines has an impact on the relationship between the DSI scores and ETI scores of the fourth grade primary school students. İçel (2019) found a moderate positive relationship between students' disciplined mind characteristics and the STEM attitudes, depending on their magazine subscription status. In the study conducted by Sarı (2022), it was found that regularly read children's magazines had clear effects on students' entrepreneurship tendency, and science-themed children's magazines made a significant contribution to the students' entrepreneurship tendency. However, it is noteworthy that there is a positive relationship between the DSI scores and ETI scores of the fourth grade primary school students who do not read magazines.

In this study, a positive and moderate relationship was found between the DSI scores and ETI scores of the fourth grade primary school students who watched television programs such as cartoons, sports and game shows. For those who watch documentaries and TV series and movies, this relationship is positive and at a high level. In the study by Sarıkaya (2022) it is found that there is a low-level positive relationship between the scientific process skills and disciplined mind characteristics of the students who watched TV for less than 2 hours per day. Therefore, it shows that the type of TV programs watched may have a positive relationship on students' DSI scores and ETI scores, and that documentaries and television series can make more contribution in this regard. However, television viewing time also needs to be taken into account.

The correlation between the DSI scores and ETI scores of the fourth grade primary school students who do not play computer games and those who play computer games with sports content, target content and design content are positive and moderate. A positive and highly significant relationship was found for those who played computer games with strategy content and competitive content. This shows that computer games with strategy content and competitive content can make a higher contribution between students' DSI scores and ETI scores.

The following recommendations are made depending on the results of the study:

In this study is limited to the findings from the fourth grade students in Afyonkarahisar province. The selection of participants from other parts of Turkey would allow to make generalizations.

The study was conducted using variables such as gender, magazine types, TV programs, computer games, parents' profession, and parents' education level. Future studies may look at the effects of other variables.

Considering the positive relationship between students' disciplined mind characteristics and entrepreneurial tendencies, in-class activities that develop disciplined mind characteristics and entrepreneurial tendencies can be developed.

Gaining the habit of reading books and magazines will positively affect the students' disciplined mind characteristics and entrepreneurial tendencies. Therefore, their acquisition of these habits can have a positive impact on their lives.

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Statements of publication ethics

We hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

Author contribution statements

B.P. and S.Y. conceived of the presented idea. B. P. developed the theory and performed the computations. B.P. and S.Y. verified the analyses. S.Y. supervised the findings of the study. All authors discussed the results and contributed to the final manuscript.

Ethics Committee Approval Information

Ethical approval for the study was granted by Afyon Kocatepe University Ethics Committee (25.11.2022/ 2022-338) and Afyon Directorate of National Education (02.01.2023/E-70813604-100-151695).

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