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Examining Students' Socio-Emotional Skills Profiles During the Early Post-COVID-19 Period and Their Relationships with Self-Directed Learning Self-Efficacy

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Research Article

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Keywords

Latent profile analysis, Self-determination theory, Self-directed learning, Self-directed learning self-efficacy, Socio-emotional skills

Abstract

This study, consistent with Self-Determination Theory, aims to determine students' socio-emotional skill profiles and the corresponding levels of self-efficacy for self-directed learning. For the analyses, data from 7206 Turkish students in the Program for International Student Assessment (PISA) 2022 were used to conduct a Latent Profile Analysis. The results revealed that the students in this study could be classified into five distinct profiles based on their socio-emotional skills. In particular, the profiles differed statistically significantly in self-efficacy for self-directed learning; in particular, the self-directed learning self-efficacy levels of those in the optimal need satisfaction profile were higher than those in the other profiles. Despite this, 64% of the participants have shown below-average confidence in self-directed learning. These findings not only enhance our understanding of students' socio-emotional development but also highlight the need for educational interventions that prioritize the holistic development of students' socio-emotional skills.

Öğrencilerin COVID-19 Sonrası Erken Dönemdeki Sosyo-Duygusal Beceri Profilleri ve Öz-Yönelimli Öğrenme Öz-Yeterliği ile İlişkileri

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Özet

Bu çalışma, öz-belirleme teorisi ile tutarlı olarak, öğrencilerin sosyo-duygusal beceri profillerini ve öz-yönelimli öğrenme için öz-yeterlik düzeylerini belirlemeyi amaçlamaktadır. Analizler için 7206 Türk öğrenciye ait 2022 Uluslararası Öğrenci Değerlendirme Programı (PISA) verisi kullanılarak Örtük Profil Analizi yapılmıştır. Sonuçlar, bu çalışmadaki öğrencilerin sosyo-duygusal becerileri açısından beş özel profilde sınıflandırılabileceğini ortaya koymuştur. Özellikle, profiller öz-yönelimli öğrenmeye yönelik öz-yeterlik açısından istatistiksel olarak anlamlı bir şekilde farklılaşmıştır; optimal ihtiyaç tatmini profilinde yer alanların öz-yönelimli öğrenme öz-yeterlik düzeyleri diğer profillere kıyasla daha yüksektir. Buna rağmen, katılımcıların %64'ünün öz-yönelimli öğrenme konusunda ortalamanın altında güvene sahip olduğu ortaya çıkmıştır. Bu bulgular, öğrencilerin sosyo-duygusal gelişimine ilişkin anlayışımızı geliştirmekle kalmayıp, aynı zamanda öğrencilerin sosyo-duygusal becerilerinin bütünsel gelişimine öncelik veren eğitim müdahalelerine duyulan acil ihtiyacı da vurgulamaktadır.

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1. Introduction

Socio-emotional skills are of considerable importance for human development and education (CASEL, 2020), and thus, a great deal of research has been conducted in recent years centered on these skills (e.g., Abrahams et al., 2019; Chen et al., 2024). Research has shown that socio-emotional skills are associated with academic achievement (Doctoroff et al., 2016), support out-of-school learning (Weissberg & Cascarino, 2013), and improve students' lives and well-being (Hawkins et al., 2008). These skills also support career development (Deming, 2017) and positively affect self-directed learning (Bae et al., 2024) and self-efficacy for self-directed learning (OECD, 2024b). However, COVID-19 (SARS-CoV-2) lockdowns and isolation measures appeared to negatively affect students' socio-emotional skills (Cerutti et al., 2024; OECD, 2021). The fact that settings that normally support social-emotional development (e.g., schools, cafes) were all closed down during that period inevitably led to decreased social interactions, co-operation, critical thinking, and creativity, as opposed to increased negative emotions such as anxiety, stress, and loneliness (Cerutti et al., 2024). With the emerging decline in positive socio-emotional skills and increase in negative socio-emotional skills, not only the students' academic achievement (Huang & Zeng, 2023) but also their self-efficacy in self-directed learning was damaged (Baars et al., 2017; OECD, 2024b). Such negative consequences of the pandemic show that in addition to improving students' cognitive skills, it is also necessary to improve their socio-emotional skills (Castro-Kemp et al., 2019; Collie et al., 2019; Gamboa et al., 2023; OECD, 2015; Thomson et al., 2017; Tze et al., 2022).

On the other hand, students tend to use socio-emotional skills as a whole rather than separately. With this in mind, it seems necessary to make more realistic comments about the function of students' socio-emotional skill profiles in predicting the positive outcomes emphasized in previous studies (Tze et al., 2022). Despite the importance of the issue, very few studies (Bae et al., 2024; Castro-Kemp et al., 2019; Chen et al., 2024; Collie et al., 2019; Gamboa et al., 2023; Tze et al., 2022) have actually emphasized the significance of identifying different subgroups of students after the COVID-19 pandemic. Research exploring the socio-emotional skills characteristics of these groups and the relationships between these characteristics and various variables remains very limited.

In particular, since there are very few studies that aim to conceptualize students' socio-emotional skills profiles (e.g., Gamboa et al., 2023) and to investigate the differences of these profiles in terms of both self-directed learning (e.g., Bae et al., 2024), the conceptual understanding of students' socio-emotional skills remains very limited. In this context, this study aims to define the students' socio-emotional skills profiles and determine the relationship between these profiles and self-efficacy for self-directed learning. Therefore, this investigation utilizes Self-Determination Theory (SDT) (Ryan & Deci, 2020), which emphasizes the importance of students' psychological needs such as autonomy, competence, and relatedness. As the results obtained can expand the existing conceptual understanding of the current issue, the present study will seek answers to the following questions:

How many different socio-emotional skills profiles do students have in terms of perseverance, curiosity, cooperation, empathy, assertiveness, stress resistance and emotional control?

Do self-directed learning self-efficacy scores differ in each socio-emotional skill profile?

1.1. Social-Emotional Skills

Socio-emotional skills are highly valued since they support students in different aspects and ensure harmony amongst individuals, schools, and the environment (Gamboa et al., 2023). Due to this importance, many researchers have analyzed these skills (Kankaraš & Suarez-Alvarez, 2019) and used expressions that may have similar meanings for these skills (Lippman et al., 2015). For example, Kankaraš and Suarez-Alvarez (2019) stated that such skills could manage individuals' emotions, thoughts, and behaviors. Soto et al. (2024) reported that considerable information could be obtained through such skills about how individuals would react to a particular situation. Given this, socio-emotional skills have turned out to play a critical role (Chernyshenko et al., 2018), while their absence is inevitable to negatively affect many areas of life, such as education, health, and the labor market (Kankaraš & Suarez-Alvarez, 2019). However, the fact that socio-emotional skills play such a critical role in individuals' lives has led to the emergence of many definitions of these skills (Berg et al., 2017). This variety of definitions has negatively influenced not only the conceptualization but also the understanding of socio-emotional skills (Walton et al., 2023). To overcome this drawback by facilitating the identification of differences in socio-emotional skills across emotions, thoughts, personality traits, and behaviors (Danner et al., 2021), the Big Five personality traits model was developed. This model was created to demonstrate that the said skills can actually be divided into five broad dimensions (John et al., 2008).

The Big Five personality traits model (John et al., 2008) represents personality traits coded in daily life (e.g. ambitious) in a simple and understandable way (John & De Fruyt, 2015). Apart from the clarity, the fact that the personality traits that make up the model can predict different outcomes in many areas of life such as psychology, health and labor market (Chernyshenko et al., 2018) have led to its use in many studies (e.g. Abrahams et al., 2019; Gamboa et al.,

2023). Another study suggesting that this model be used to conceptualize socio-emotional skills is the Study on Social and Emotional Skills (SSES) (Kankaraš & Suarez-Alvarez, 2019).

The SSES was implemented by the Organization for Economic Co-operation and Development (OECD) to understand the socio-emotional skills of 10- and 15-year-old students in order to be able to reveal how these skills differ among various student groups and to identify factors affecting students' skill development, including school and home settings (Kankaraš & Suarez-Alvarez, 2019). From that standpoint, to create the conceptual framework of the SSES, some researchers analyzed many theories and relevant studies in the field of socio-emotional skills (e.g., Primi et al., 2016), concluding that the Big Five personality traits model offered the most appropriate framework (John & De Fruyt, 2015). However, the fact that the Big Five personality traits model has generally dominated research on adults in personality psychology and provides a framework for understanding personality traits has prevented its use in educational settings (Chernyshenko et al., 2018; Kankaraš & Suarez-Alvarez, 2019). As a consequence, the SSES is not only based on the Big Five personality traits model but also extends it to include empirical results from educational and social domains (Chernyshenko et al., 2018; Kankaraš & Suarez-Alvarez, 2019; OECD, 2021; OECD, 2024c). For this reason, seven socio-emotional skills for open-mindedness (curiosity), task performance (perseverance), engaging with others (assertiveness), collaboration (cooperation and empathy) and emotional regulation (stress resistance and emotional control) dimensions contained within PISA 2022 in line with the SSES model were used in this study (OECD, 2024a).

1.2. Social-Emotional Skills and Self-Directed Learning Self-Efficacy

The isolation and bans that came with the COVID-19 pandemic shifted interactions among students and between students and teachers to an online context (Liu & Lin, 2024). Generally speaking, students who were not accustomed to new contexts were caught unprepared (Shal, 2024) and encountered problems that were not normally anticipated in face-to-face education but could arise during distance education (Demuyakor, 2020). Even though such problems affected both students' socio-emotional skills (Cerutti et al., 2024), they enabled students to take the initiative and be responsible for their own learning (self-directed learning) (Knowles, 1975; Liu & Lin, 2024).

Knowles considers self-directed learning as a process (Liu & Sullivan, 2021). Through self-directed learning, students identify the learning needs they lack. To overcome such deficiencies, they set learning goals and identify appropriate resources. Then, they choose and implement the method that best fits the available resources. At the end of the process, students are expected to evaluate their own learning efforts (Knowles, 1975). In this way, students can think in a solution-oriented manner in the face of a problem situation (Wond et al., 2021) and improve their self-regulation and time management skills (Jandigulov et al., 2023). Furthermore, these practices increase their academic achievement (Yang et al., 2021) and positively support their motivation (Robinson & Persky, 2020). Such results can be obtained only through students' confidence in self-directed learning approach. However, students are far from socio-emotional support from their peers in times of a global crisis such as the pandemic (Goh, et al., 2023; Teke & Çalışıcı, 2025). Those who lack the support end up experiencing stress (Park et al., 2023) and social anxiety and loneliness (Cerutti et al., 2024), and consequently, their social interactions are damaged (Liu & Lin, 2024) and their self-directed learning behaviour may be affected (Bae et al., 2024). Therefore, examining students' socio-emotional skill profiles and the differences in their self-directed learning self-efficacy within the framework of SDT is considered important for the interpretability of the findings.

1.3. Self-Determination Theory

SDT is a macro theory that explains different aspects of motivational actions and consists of six micro theories (e.g., organismic integration theory and basic psychological needs) (Ryan & Deci, 2019). This theory argues that these mini-theories interact with each other and that all six mini-theories can be applied to explain motivational behaviors (Ryan & Deci, 2019). Moreover, SDT argues that individuals need three basic psychological needs: autonomy, competence and relatedness (Luo et al., 2021; Ryan & Deci, 2000). Autonomy refers to the ability of an individual to take initiative in their behaviors and make their own decisions during the learning process. Competence is related to individuals feeling capable and effective, which tends to increase when they demonstrate resilience in the face of challenges. Relatedness refers to individuals' relationships with their social environment and their sense of attachment to the characters within that environment (Ryan & Deci, 2020). The presence of these three basic psychological needs is associated with high motivational behaviors, while damage to any of them can negatively affect motivational behaviors (e.g., self-directed learning self-efficacy) (Ryan et al., 2019).

1.4. The Current Study

Our knowledge about how students combine and use different socio-emotional skills and how the socio-emotional skill profiles influence these outcomes remains insufficient. Therefore, consistent with SDT, the Latent Profile Analysis (LPA) - a person-centered approach- was used in this study for the purpose of identifying different student subgroups and

exploring their socio-emotional skill characteristics (Lubke & Muthén, 2005). As can be seen in the relevant research review, there are very few studies that use LPA to explore students' socio-emotional skills (Bae et al., 2024; Castro-Kemp et al., 2019; Chen et al., 2024; Collie et al., 2019; Gamboa et al., 2023; Tze et al., 2022). Furthermore, a very limited number of studies have investigated the impact of students' socio-emotional skill profiles on self-directed learning outcomes (Bae et al., 2024). Since this study aims to develop a conceptual understanding of students' socio-emotional skills (SES) profiles, in consideration of their correlation with self-directed learning self-efficacy (SDL-SE), it is important to examine both the SES profiles and the differences that may emerge within their scope. In this regard, the seven socio-emotional skills included in PISA 2022 have been associated with the three basic psychological needs at the core of SDT: Task performance and open-mindedness skills with autonomy; collaboration and engagement with other skills with relatedness; and emotional regulation skills with competence.

The current study hypothesizes that the negative impacts of the pandemic may affect the socio-emotional skills that students use holistically and that different student profiles may emerge in this process due to the varying social and affective responses each student exhibits when facing adverse situations. Therefore, the current study hypothesizes the following:

Hypothesis 1: In the context of SDT, we expect at least three student profiles regarding socio-emotional skills: Low need satisfaction, moderate need satisfaction and high need satisfaction.

Hypothesis 2: We expect the self-directed learning self-efficacy of students with the identified profiles to differ: high need satisfaction > moderate need satisfaction > low need satisfaction.

2. Method

2.1. Research Design

This study used PISA 2022 data to perform LPA to define students' socio-emotional skill profiles and investigate their association with self-directed learning self-efficacy within the framework of Self-Determination Theory. Since no manipulation of variables was conducted during the research process and the study aimed to examine relationships between variables, the current study is a correlational research design (Fraenkel et al., 2012).

2.2. Participants

This study employed the Program for International Student Assessment (PISA) 2022 data. The participants of PISA 2022 were selected through a two-stage stratified sample design. Firstly, the schools were identified (a total of 196 schools: 56% Anatolian High Schools, 23% Vocational and Technical Anatolian High Schools, 10.2% Anatolian Imam Hatip High Schools, and 10.6% other high schools), and then the students (7206-49.3% female) were selected from those schools. The majority of the students (93.9%) were in Grade 10, 5.4% were in Grade 9 and 0.7% were in other grades (Grades 7, 8, 11 and 12) (MoNE, 2024). The students responded to the items both related to the SES and SDL-SE.

2.3. Data Collection Tools

The SES and SDL-SE variables used in this study are WLE (Weighted Likelihood Estimates) scores directly obtained from the PISA 2022 dataset. PISA employs Item Response Theory (IRT) models to construct these scales, and the resulting WLE scores are standardized to have an OECD average of 0 and a standard deviation of 1 (OECD, 2024a).

2.3.1. Social-Emotional Skills Variables

2.3.1.1 Task Performance-Perseverance. The perseverance index scale (α = 0.64) was measured with the students' degree of agreement in their responses to the ten items given (e.g., I finish what I start). The students' level of agreement with each item was assessed on a 5-point Likert scale (1= Strongly disagree, 2=Disagree, 3= Neither agree nor disagree, 4= Agree, 5= Strongly agree). For detailed information, please refer to Item No ST307 of the PISA 2022 Türkiye student survey.

2.3.1.2 Open-Mindedness-Curiosity. The curiosity index scale (α = 0.70) was measured with the students' degree of agreement in their responses to the ten items given (e.g., I like to ask questions). The students' level of agreement with each item was assessed on a 5-point Likert scale (1= Strongly disagree, 2=Disagree, 3= Neither agree nor disagree, 4= Agree, 5= Strongly agree). For detailed information, please refer to Item No ST301 of the PISA 2022 Türkiye student survey.

2.3.1.3 Collaboration-Cooperation and Empathy. The cooperation and empathy index scales (α = 0.61 - 0.67, respectively) were measured with the students' degree of agreement in their responses to the ten items given (e.g., I work well with other people - I understand what others want). The students' level of agreement with each item was assessed on a 5-point Likert scale (1= Strongly disagree, 2=Disagree, 3= Neither agree nor

disagree, 4= Agree, 5= Strongly agree). For detailed information, please refer to Items No ST343 and ST311 of the PISA 2022 Türkiye student survey.

2.3.1.4 Engagement with Others-Assertiveness. The assertiveness index scale (α = 0.63) was measured by the degree of agreement in students' responses to the ten items (e.g., I want to be in charge). The students' level of agreement with each item was assessed on a 5-point Likert scale (1= Strongly disagree, 2=Disagree, 3= Neither agree nor disagree, 4= Agree, 5= Strongly agree). For detailed information, please refer to Item No ST305 of the PISA 2022 Türkiye student survey.

2.3.1.5 Emotional Regulation-Stress Resistance and Emotional Control. The stress resistance and emotional control index scales (α = 0.65 - 0.65, respectively) were measured using students' degree of agreement with their responses to the ten items (e.g., I am able to work under pressure - I have unpredictable emotions). The students' level of agreement with each item was assessed on a 5-point Likert scale (1= Strongly disagree, 2=Disagree, 3= Neither agree nor disagree, 4= Agree, 5= Strongly agree). For detailed information, please refer to Items No ST345 and ST313 of the PISA 2022 Türkiye student survey.

2.3.2. Self-Directed Learning Self-Efficacy

In PISA 2022, the SDL-SE is based on students' reported confidence in their ability to manage their own learning in the event of any school closures (OECD, 2024b). The SDL-SE scale (α = 0.90) was measured by confidence rating on eight items (e.g. Completing schoolwork independently). The students' self-confidence regarding each of the relevant items was assessed on a 4-point Likert scale (1= Not at all confident, 2= Not very confident, 3= Confident, 4= Very confident). For detailed information, please refer to Item No ST355 of the PISA 2022 Türkiye student survey.

2.4. Statistical Analyses

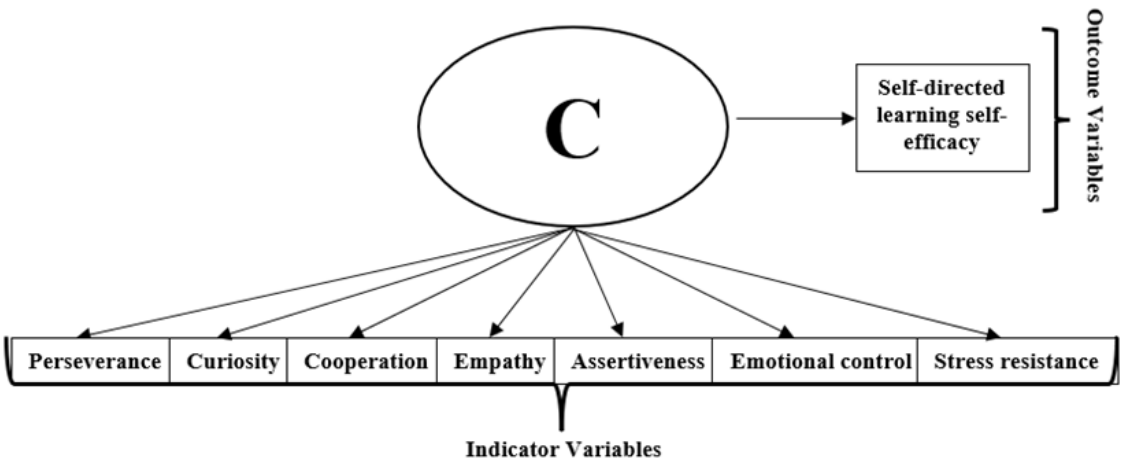
2.4.1. Latent Profile Analysis (LPA)

A manual ML three-step approach (Nylund-Gibson et al., 2019), which proved to achieve better results than the standard three-step approach (Asparouhov & Muthén, 2014), was employed in order to control the classification errors of the data regarding the hierarchical structure of PISA and the most probable class membership (Vermunt, 2010). Table 1 demonstrates the data analysis procedure and Figure 1 illustrates the LPA model with distal outcomes.

Table 1. Data Analysis Process

Procedure	*Steps*	*Actions*
Before Statistical Analyses	Preparing the data set for analyses.	The variables to be used for the analyses were taken from the PISA 2022 Türkiye data set. Descriptive statistics and correlation values of the variables were calculated.
	Control of missing data in the scales of variables.	The data set prepared in SPSS (version 25) was made ready for Mplus (version 7.0) (Muthen & Muthen, 2012). Missing values were treated with the full information maximum likelihood (FIML) method (Ferguson & Hull, 2019).
First step of the manual ML-three step approach	Conducting a latent profile analysis to determine the model that best fits the data.	Latent profile analysis was performed using robust standard errors (MLR) and maximum likelihood estimation using Mplus (version 7.0). The final student weight (W_FSTUWT) was used to avoid selection bias in determining the model that best fit the data.
	Evaluation of the fit and interpretability of the models identified as a result of the analyses.	Model fits were assessed on the basis of information criteria (Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC) and Sample-Adjusted BIC (SABIC) (Marsh et al., 2009; Nylund-Gibson et al., 2019)), as well as an entropy value, sample size and likelihood ratio statistical test methods (Lo, Mendell & Rubin (LMR-LRT) and Vuong-Lo-Mendell-Rubin (VLMR-LRT) ((Lo et al., 2001)). In order to determine the model providing the best fit to the data, it turned out that the information criteria should be lower, the entropy value should be close to 1 (values between 0.60-0.80 are considered appropriate (Nylund et al., 2007)), the sample size in each model should be above 5% (Hipp & Bauer, 2006), and the likelihood ratio statistical test methods should be significant (Nylund et al., 2007). In addition to these calculations, the models were evaluated in terms of both theory and interpretability.
Second step of the manual ML-three step approach	Calculation of probability of individuals' inclusion in each profile.	The probability (conditional probability) that individuals were classified in each profile was calculated (Nylund-Gibson et al., 2019).
Third step of the manual ML-three step approach	Analysing the relationships between the values calculated in the second step and the distal outcome.	SDL-SE scale scores were added to the model following certain steps: The values calculated in the second step were used for distal outcome (Nylund-Gibson et al., 2019).

Figure 1. LPA Model with Distal Outcome



3. Findings

Table 2 below presents descriptive statistics and correlation values of SES variables and of SDL-SE scores. There is a positive correlation between SDL-SE scores and all SES variables. On the other hand, the SES variables of perseverance, curiosity and co-operation are positively correlated with all SES variables, while there is a negative correlation between the variable of empathy and of stress resistance. In addition, no significant correlation is seen between emotional control variable and empathy and stress resistance variables.

Table 2. The Descriptive Statistics

Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1.Perseverance	-							
2.Curiosity	0.38**	-						
3.Cooperation	0.29**	0.31**	-					
4.Empathy	0.27**	0.37**	0.40**	-				
5.Assertiveness	0.31**	0.33**	0.19**	0.28**	-			
6.Stress resistance	0.18**	0.04**	0.04**	-0.07**	0.16**	-		
7.Emotional control	0.12**	0.03*	0.16**	-0.01	0.01	0.42**	-	
8.Self-directed learning self-efficacy	0.24**	0.23**	0.18**	0.13**	0.17**	0.10**	0.12**	-
Mean	0.16	0.33	0.08	0.17	0.27	-0.02	-0.14	-0.07
Std. Deviation	1.08	1.15	1.13	1.14	1.09	1.06	0.98	1.05

Note. **Correlation is significant at 0.01 level (p<.01); *Correlation is significant at 0.05 level (p<.05)

3.1. Social-emotional skills profiles

Table 3 below provides the model fit analyses performed to determine the model that best fits the data. The results show that there are significant declines in the AIC, BIC and SABIC information criteria with the increase in the number of profiles in the models and the entropy values are within the limits considered appropriate. In addition, both likelihood-ratio statistical test methods (VLMR-LRT and LMR-LRT) seem to have produced significant results. The analysis of the sample size of the models indicates that the model with the smallest sample size (4%) is the six-profile model. A sample size of less than 5% in the models may lead to misclassification (Hipp & Bauer, 2006). For this reason, both the interpretability of the models and the model fit analysis results are evaluated together in this study, as a result of which it is concluded that the model that provided the best fit with the data is the five-profile model.

Table 3. Latent Profile Analysis

Profiles	*AIC*	*BIC*	*SABIC*	*entropy*	*% smallest class*	*VLMR-LRT (p)*	*LMR-LRT (p)*
1	139614.27	139710.62	139666.14	-	-	-	-
2	125066.60	125266.19	125174.04	0.80	%34	<0.001	<0.001
3	122926.47	123229.31	123089.48	0.74	%17	<0.001	<0.001
4	121318.88	121724.96	121537.47	0.73	%10	<0.001	<0.001
5*	120066.29	120575.61	120340.45	0.74	%8	<0.001	<0.001
6	119459.51	120072.07	119789.24	0.73	%4	<0.001	<0.001

Note. n= 7206; p-value < .05 * Retained model for the social-emotional skills profiles

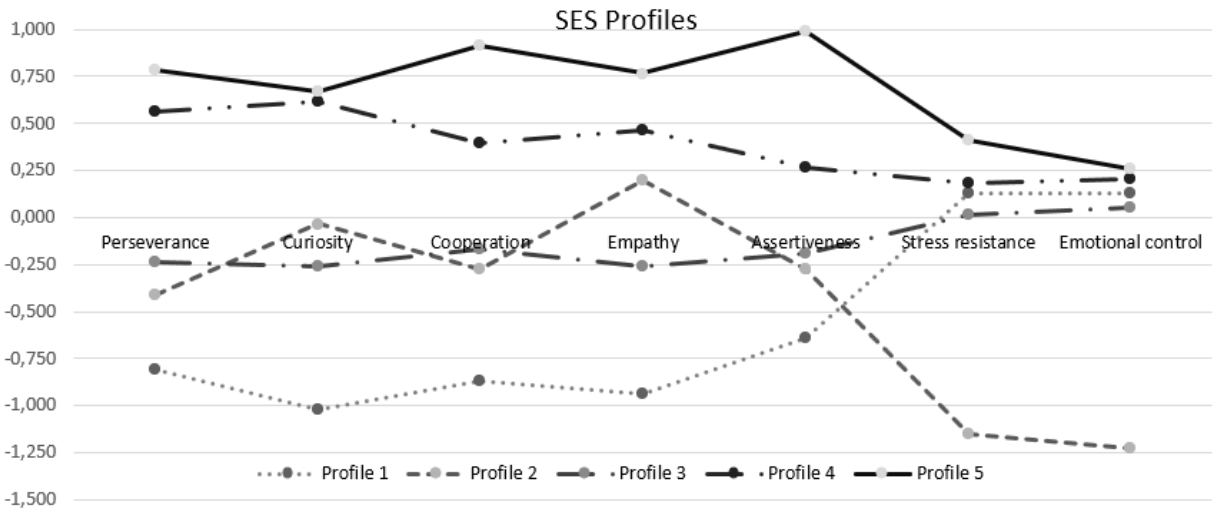
3.2. Naming the five-profile model

In the naming process of the five-profile model, the three basic psychological needs were taken into consideration: Task performance and open-mindedness skills were named as autonomy; collaboration and engagement with other skills as relatedness; and emotional regulation skills as competence. Table 4 provides the descriptive statistical values of each profile and Figure 2 illustrates the graphical representation of each SES variable within the profiles.

Table 4. Descriptive Statistical Values of Each Profile

Indicator Variables	*Profile 1 (n= 773-11%)*	*Profile 2 (n= 612-8%)*	*Profile 3 (n=3220-45%)*	*Profile 4 (n=1928-27%)*	*Profile 5 (n=673-9%)*
Perseverance	-0.81(0.05)	-0.41(0.05)	-0.24(0.03)	0.56(0.05)	0.78(0.08)
Curiosity	-1.02(0.07)	-0.04(0.07)	-0.26(0.02)	0.62(0.05)	0.67(0.09)
Cooperation	-0.87(0.05)	-0.27(0.07)	-0.17(0.02)	0.40(0.04)	0.92(0.10)
Empathy	-0.94(0.05)	0.20(0.17)	-0.26(0.03)	0.46(0.06)	0.77(0.11)
Assertiveness	-0.64(0.04)	-0.27(0.06)	-0.19(0.02)	0.27(0.03)	0.99(0.09)
Stress resistance	0.13(0.04)	-1.15(0.31)	0.02(0.02)	0.18(0.03)	0.41(0.15)
Emotional control	0.13(0.05)	-1.23(0.23)	0.05(0.02)	0.21(0.03)	0.26(0.12)

Figure 2. Graphical Representation of SES Variables in Relation to Profiles



The following skills, namely, task performance, open-mindedness, collaboration and engagement with others of 773 (11%) students in Profile 1 are very low, while emotional regulation skill is at a moderate level. Therefore, this profile is labeled as 'very low autonomy and relatedness, medium competence' (Limited Need Satisfaction-LNS).

Of the 612 students in Profile 2- the smallest sample (8%)-, task performance skill is low, their skills of open-mindedness, collaboration, and engagement with others are medium, and engagement with others skill is very low. Therefore, this profile is labeled as 'low autonomy, medium-level relatedness, and very low competence' (Weak Need Satisfaction-WNS).

Task performance, open-mindedness, collaboration, engagement with others, and emotional regulation skills of 3220 students in Profile 3, the largest sample (45%), are at a moderate level. Therefore, this profile is labeled as 'average autonomy, relatedness, competence' (Moderate Need Satisfaction-MNS).

Task performance and open-mindedness skills of 1928 (27%) students in Profile 4 are high, as well as collaboration and engagement with other skills, while emotional regulation skill is at a moderate level. Therefore, this profile is labeled as 'high autonomy and relatedness, medium competence' (Balanced Need Satisfaction-BNS).

Task performance, open-mindedness, collaboration and engagement with other skills of 673 (9%) students in profile 5 are very high, along with the emotional regulation skill being high. Therefore, this profile is labelled as 'very high autonomy and relatedness, high competence' (Optimal Need Satisfaction-ONS).

3.3. Social-Emotional Skills Profiles and Self-Directed Learning Self-Efficacy

Table 5 provides data regarding the similarities and differences of each SES profile in terms of SDL-SE.

Table 5. SES Profiles and SDL-SE

Distal Outcome	*LNS M(SE)*	*WNS M(SE)*	*MNS M(SE)*	*BNS M(SE)*	*ONS M(SE)*	*Comparison*
Self-directed learning self-efficacy	-0.59 (0.05)	-0.49 (0.06)	-0.16 (0.02)	0.12 (0.03)	1.88 (0.01)	5>4>3>2≈1
Profiles Comparisons	*Estimate(SE)*	*p*	*Profiles Comparisons*	*Estimate(SE)*	*p*	
Prf.1- Prf.2	-0.10(0.08)	0.20	Prf.2- Prf.4	-0.61(0.07)	<0.01	
Prf.1- Prf.3	-0.43(0.06)	<0.01	Prf.2- Prf.5	-2.37(0.06)	<0.01	
Prf.1- Prf.4	-0.71(0.06)	<0.01	Prf.3- Prf.4	-0.28(0.04)	<0.01	
Prf.1- Prf.5	-2.47(0.05)	<0.01	Prf.3- Prf.5	-2.04(0.02)	<0.01	
Prf.2- Prf.3	-0.33(0.06)	<0.01	Prf.4- Prf.5	-1.76(0.04)	<0.01	

Note. M: mean; SE: standard error; Prf 1-LNS (very low autonomy and relatedness, medium competence), Prf 2-WNS (low autonomy, medium relatedness, very low competence), Prf 3-MNS (average autonomy, relatedness, competence), Prf 4-BNS (high autonomy and relatedness, medium competence), Prf 5-ONS (very high autonomy and relatedness, high competence)

The results point to a statistical significance between the SDL-SE scores of the students in other profiles, except for those in Profile 1 and Profile 2. Consistent with SDT, the average SDL-SE scores of two of the identified profiles (BNS and ONS) are higher than those of all students, while the average SDL-SE scores of three profiles (LNS, WNS and MNS) remain below the average. On the other hand, the students with very high SES (ONS) show the highest SDL-SE, while those with low SES (LNS or WNS) show the lowest SDL-SE.

4. Discussion

Many changes have been made in education due to the COVID-19 pandemic, and the measures or steps taken in this process have affected the SES of students (Rodriguez-Monge et al., 2023). Despite such influence, research studies that aim to conceptualize students' SES profiles are very limited (Gamboa et al., 2023; Tze et al., 2022). Therefore, investigating students' SES is of considerable importance for implementing measures to address emotional or behavioral problems caused by the COVID-19 pandemic (Rodriguez-Monge et al., 2023). In this context, the findings

show the impact of the COVID-19 pandemic on students' social and affective skills, confirming that both parents and teachers have a significant responsibility during a pandemic.

Five different SES profiles were identified in the study, consistent with SDT, based on analyses of SES variables: Limited need satisfaction, weak need satisfaction, moderate need satisfaction, balanced need satisfaction, and optimal need satisfaction (H1).

The students in the first profile, LNS (11%), appeared to have moderate competence, although their autonomy and relatedness needs were relatively low. On the other hand, the students in the second profile, WNS, with the fewest number of students (8%), had low autonomy and very low competence, but moderate relatedness needs. These results show that the measures implemented during the pandemic (e.g., quarantine and distance education) have negatively affected at least one of the students' basic psychological needs. Therefore, the low need satisfaction group (H1), the LNS and WNS, can be considered a reflection of the negative effects of the pandemic on students' SES.

The third and the largest of the identified profiles, MNS (H1), (45%) had more or less average levels of autonomy, relatedness and competence needs. It can be said that the students in this group have satisfied their basic psychological needs to a certain extent by adapting to the measures implemented during the pandemic. However, it cannot be said that this satisfaction is fully realized. This result indicates that students adapted to the pandemic process but were unable to fully meet their basic psychological needs due to certain reasons (e.g., lack of support mechanisms).

The students in the fourth profile, BNS, (27%) had high autonomy and relatedness needs, their competence ended up being moderate. On the other hand, the students in the last profile, ONS, (9%) had very high levels of autonomy and relatedness, and high levels of competence needs. This result indicates that students in the high need satisfaction group (H1), the BNS and ONS, adapted to the measures implemented during the pandemic and were able to effectively manage their educational processes. Therefore, it can be said that students in this group have positively satisfied their three basic psychological needs.

The comparison of the results obtained from the identified SES profiles and from other profile-based studies (Castro-Kemp et al., 2019; Collie et al., 2019; Gamboa et al., 2023; Thomson et al., 2017; Tze et al., 2022) reveals the presence of some similarities and differences. For example, Gamboa et al. (2023) identified a profile similar to the LNS and WNS, Chen et al. (2024) and Tze et al. (2022) identified profiles similar to the MNS, Tze et al. (2022), Collie et al. (2019) and Thomson et al. (2017) identified profiles similar to BNS and ONS profiles in their studies. However, the differentiation of the variables used within the scope of SES may lead to the emergence of different number of SES profiles (e.g. Castro-Kemp et al., 2019; Thomson et al., 2017). In addition, the absence of a profile for the aggression skill emphasised by Collie et al. (2019) and Thomson et al. (2017) may be associated with the positive inclination in the items created by PISA within the scope of SES. As a result, it can be said that the negative consequences of the COVID-19 pandemic, such as isolation, increased anxiety and stress, and loss of time in the learning process, have had a detrimental impact on students' basic psychological needs.

It is obvious that the SES profiles of the students differ statistically in terms of SDL-SE (except for LNS and WNS profiles). The results, specifically, showed that students in BNS and ONS groups had higher SDL-SE levels compared to students in the LNS, WNS and MNS need satisfaction groups. Consistent with SDT, these results suggest that the students with higher levels of SES are more confident in their ability to self-regulate their learning processes (OECD, 2024b; Saleem et al., 2024). Still, 64% of the participants have turned out to have below-average confidence in self-directing their learning. The lockdowns and isolation measures brought about by the COVID-19 pandemic have necessitated the use of different methods in the teaching process (Videla et al., 2022). One of these methods is to combine online courses with a variety of digital resources (Lemmo & Maffia, 2021). In such processes, the awareness of a person's use of digital resources and the emotional states that may arise along with such use has become even more important (Bonk & Lee, 2017). This is mainly because the use of different digital resources affects students' SES levels (Longhi et al., 2024). Considering that SES shapes students' SDL behaviour (OECD, 2024b), the inclusion of different digital resources in this process is highly likely to have affected students' SDL behaviour (Ponton & Dondlinger, 2022). This result shows that the majority of students in Türkiye seem to have experienced problems in the use of digital resources during lockdown and isolation periods. However, the fact that there are very few studies showing the effects of SES on SDL (Zhoc et al., 2018) prevents the construct of a conceptual understanding.

4.1. Conclusion

The results of the present study show that a variety of profiles can be identified using different SESs, hence the importance of conceptualizing both SESs and SES profiles. Moreover, consistent with SDT, the results show that these profiles are differentially associated with self-directed learning. These findings not only enhance our understanding of students' socio-emotional development but also highlight the urgent need for educational interventions that prioritize

the holistic development of students' socio-emotional skills. It is observed that approximately 19% of the sample was negatively affected by the measures implemented during the pandemic, and 45% of them could not fully meet their basic psychological needs despite adapting to these measures. Investing in students' socio-emotional skills today will shape a future generation that is more self-directed, motivated, and emotionally resilient.

4.2. Limitations and Recommendations

The results of this study should be interpreted in line with some limitations, the first of which is regarding the SES variables used in the study. The SSES framework consists of five dimensions and three skills within each dimension (Kankaraš & Suarez-Alvarez, 2019). The current study presents the findings related to five dimensions (seven skills in total) measured in PISA. In order to achieve the generalizability of the results, it is important to conduct studies to include other skills that are not used in the study but are actually included in the SSES framework. The second limitation is the SES profiles identified within the scope of SES variables. The study identified SES profiles for the five dimensions of the SSES framework (Kankaraš & Suarez-Alvarez, 2019). While the results are consistent with existing LPA research (e.g., Thompson et al., 2017), the number of skills used affects the number of SES profiles that are likely to emerge (Collie et al., 2019; Gamboa et al., 2023; Thompson et al., 2017; Tze et al., 2022). For this reason, researchers should be encouraged to conduct similar analyses in the future, using a scale that measures each skill in the SSES framework. Overall, these limitations are valuable for the interpretability of the study, but PISA's large student population and extensive assessments during the pandemic are important for enabling similar global studies

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Geniş Özet

Giriş

Sosyo-duygusal beceriler, insan gelişimi ve eğitimi için önemlidir ve son yıllarda bu becerileri merkeze alan bir çok araştırma yapılmıştır (örn. Chen vd., 2024). Araştırmalar, sosyo-duygusal becerilerin okul dışı öğrenmeyi desteklediğini (Weissberg & Cascarino, 2013), öğrencilerin yaşam ve refah seviyelerini yükselttiğini (Hawkins vd., 2008), kariyer alanlarında olumlu gelişim sağladığını (Deming, 2017), öz-yönelimli öğrenmeyi (Bae vd., 2024) ve öz-yönelimli öğrenmeye ilişkin öz-yeterliği olumlu etkilediğini (OECD, 2024c) vurgulamaktadır. Ancak COVID-19 (SARS-Cov-2) vakasının yaşanması ile gelen karantinalar ve izolasyon önlemleri, öğrencilerin sosyo-duygusal becerileri üzerinde olumsuz bir etki bıraktı (Cerutti vd., 2024). Sosyal-duygusal gelişimi destekleyen ortamların (örn. okullar, kafeler) bu süreçte kapalı olması sosyal etkileşimin, işbirliğinin, eleştirel düşünme ve yaratıcılığın azalmasına; kaygı, stres, yalnızlık gibi olumsuz duyguların ise artmasına neden oldu (Cerutti vd., 2024). Olumlu sosyo-duygusal becerilerin azalması, olumsuz sosyo-duygusal becerilerin artması ile de öğrencilerin hem akademik başarıları (Huang ve Zeng, 2023) hem de öz-yönelimli öğrenme kapsamındaki öz-yeterlikleri zarar gördü (Baars vd., 2017; OECD, 2024c). Pandeminin bu olumsuz sonuçları, öğrencilerin bilişsel becerilerinin iyileştirilmesinin yanında sahip oldukları sosyo-duygusal becerilerin de geliştirilmesinin gerekli olduğunu gösterdi (Castro-Kemp vd., 2019; Tze vd., 2022). Konunun önemine rağmen, çok az sayıda çalışma (Bae vd., 2024; Castro-Kemp vd., 2019; Chen vd., 2024; Collie vd., 2019; Gamboa vd., 2023; Tze vd., 2022) COVID-19 salgını sonrasında farklı öğrenci alt gruplarının belirlenmesinin, bu grupların sosyo-duygusal beceri özelliklerinin araştırılmasının ve bu özelliklerin farklı değişkenlerle ilişkisinin belirlenmesinin önemini vurgulamıştır. Dahası, öğrencilerin sosyo-duygusal beceri profillerini kavramsallaştırmayı (örn. Gamboa vd., 2023) ve bu profillerin hem öz-yönelimli öğrenme açısından farklılıklarını araştırmayı (örn. Bae vd., 2024) amaçlayan çok az sayıda çalışma olduğundan, öğrencilerin sosyo-duygusal becerilerine ilişkin kavramsal anlayış oldukça sınırlı kalmaktadır.

Bu bağlamda, bu çalışma, öğrencilerin özerklik, yeterlilik ve ilişkililik gibi psikolojik ihtiyaçlarının önemini vurgulayan Öz-Belirleme Kuramını (ÖBK) (Ryan ve Deci, 2020) kullanarak öğrencilerin sosyo-duygusal beceri profillerini tanımlamayı ve bu profiller ile öz-yönelimli öğrenme için öz-yeterlilik arasındaki ilişkiyi belirlemeyi amaçlamaktadır.

Yöntem

Bu çalışmada PISA 2022 verileri kullanılarak öğrencilerin sosyo-duygusal beceri profillerini tanımlamak ve ÖBK çerçevesinde öz-yönelimli öğrenme öz-yeterliği ile ilişkilerini araştırmak için LPA gerçekleştirilmiştir. Araştırma sürecinde değişkenler üzerinde herhangi bir manipülasyon yapılmadığından ve değişkenler arasındaki ilişkilerin incelenmesi amaçlandığından, mevcut çalışma korelasyonel bir araştırma desenidir (Fraenkel vd., 2012). Çalışmanın örneklemini PISA 2022 uygulamasına katılan 7206 öğrenci (%49,3 kız) oluşturmaktadır. Çalışmada kullanılan değişkenlere ait ölçek değerleri, doğrudan PISA 2022 veri setinden alınmış ve OECD ortalaması 0, standart sapması 1 olacak şekilde standartlaştırmış WLE (Ağırlıklı Olabilirlik Tahminleri) puanlarıdır (OECD, 2024a). Verilerin analiz sürecinde, PISA'nın hiyerarşik yapısı ve en olası sınıf üyeliği (Vermunt, 2010) ile ilgili verilerin sınıflandırma hatalarını kontrol etmek için manuel ML üç aşamalı yaklaşım (Nylund-Gibson vd., 2019) kullanılmıştır. Bu yaklaşımın ilk adımında verilere en iyi uyan modeli belirlemek için bir örtük profil analizi yapılmıştır. Analiz sonucunda belirlenen modellerin uyumu ve yorumlanabilirliği değerlendirilmiştir. Yaklaşımın ikinci adımında öğrencilerin her bir profile dahil edilme olasılıkları hesaplanarak sınıflandırma hatasının önüne geçilmiştir. Son adımda ise ikinci adımda hesaplanan öğrencilerin her bir profile dahil edilme olasılıkları ile öz-yönelimli öğrenmeye ilişkin öz-yeterlikleri arasındaki ilişkiler analiz edilmiştir.

Bulgular

Değişkenler arası korelasyonlar incelendiğinde, öz-yönelimli öğrenmeye ilişkin öz-yeterlik puanları ile tüm sosyo-duygusal beceriler arasında pozitif bir korelasyon vardı. Öte yandan, azim, merak ve işbirliği değişkenleri tüm sosyo-duygusal beceriler ile pozitif korelasyon gösterirken, empati ve strese dayanıklılık değişkenleri arasında negatif korelasyon vardı. Ayrıca, duygusal kontrol değişkeni ile empati ve strese dayanıklılık değişkenleri arasında anlamlı bir korelasyon görülmemekteydi.

Öğrencilerin sosyo-duygusal beceri profillerini belirlerken verilere en iyi uyan modeli belirlemek için model uyum indeksleri (örn. AIC, BIC ve SABIC), entropi değeri, olabilirlik oranı istatistiksel test yöntemleri (VLMR-LRT ve LMR-LRT) ve örneklem büyüklüğü dikkate alındı. Sonuçlar, modellerdeki profil sayısının artmasıyla model uyum indekslerinde önemli düşüşler olduğunu ve entropi değerlerinin uygun görülen sınırlar içinde olduğunu gösterdi. Ayrıca, VLMR-LRT ve LMR-LRT yöntemlerinin anlamlı sonuçlar ürettiği görülmekteydi. Modellerin örneklem büyüklüğü analizi, en küçük örneklem büyüklüğüne (%4) sahip modelin altı profilli model olduğunu gösterdi. Modellerde örneklem büyüklüğünün %5'in altında olması yanlış sınıflandırmaya yol açmaktadır (Hipp ve Bauer, 2006). Dolayısıyla hem istatistiksel değerler

hem de profillerin yorumlanabilirliği birlikte değerlendirildiğinde verilere en iyi uyumu sağlayan modelin beş profilli model olduğu sonucuna varıldı.

Beş profilli modelin isimlendirme sürecinde üç temel psikolojik ihtiyaç göz önünde bulundurulmuştur: Görev performansı ve açık fikirlilik becerileri özerklik; işbirliği ve diğerleriyle etkileşim becerileri ilişkililik; duygusal düzenleme becerileri ise yetkinlik olarak adlandırılmıştır: Profil 1'deki 773 (%11) öğrencinin görev performansı, açık fikirlilik, işbirliği ve diğerleriyle etkileşim becerileri çok düşük, duygusal düzenleme becerisi ise orta düzeydedir. Bu nedenle, bu profil 'çok düşük özerklik ve ilişkililik, orta yeterlilik' (Sınırlı İhtiyaç Tatmini-SİT) olarak etiketlenmiştir. En küçük örneklem (%8) olan Profil 2'deki 612 öğrencinin görev performansı becerisi düşük, açık fikirlilik, işbirliği ve başkalarıyla etkileşim becerileri orta ve başkalarıyla etkileşim becerisi çok düşüktür. Bu nedenle, bu profil 'düşük özerklik, orta düzeyde ilişkililik ve çok düşük yeterlilik' (Zayıf İhtiyaç Tatmini-ZİT) olarak etiketlenmiştir. En büyük örneklem olan (%45) Profil 3'teki 3220 öğrencinin görev performansı, açık fikirlilik, işbirliği, başkalarıyla etkileşim ve duygusal düzenleme becerileri orta düzeydedir. Bu nedenle, bu profil 'ortalama özerklik, ilişkililik, yeterlilik' (Orta Düzey İhtiyaç Tatmini-ODİT) olarak etiketlenmiştir. Profil 4'teki 1928 (%27) öğrencinin görev performansı ve açık fikirlilik becerilerinin yanı sıra işbirliği ve diğerleriyle etkileşim becerileri de yüksektir; duygusal düzenleme becerisi ise orta düzeydedir. Bu nedenle, bu profil 'yüksek özerklik ve ilişkililik, orta yeterlilik' olarak etiketlenmiştir (Dengeli İhtiyaç Tatmini-DİT). Profil 5'teki 673 (%9) öğrencinin görev performansı, açık fikirlilik, işbirliği ve diğer becerilerle etkileşimi çok yüksektir ve duygusal düzenleme becerisi de yüksektir. Bu nedenle, bu profil 'çok yüksek özerklik ve ilişkililik, yüksek yeterlilik' (Optimal İhtiyaç Tatmini-OİT) olarak etiketlenmiştir.

Bu profillerin öz-yönelimli öğrenmeye ilişkin öz-yeterlik puanları arasındaki ilişkiler analiz edildiğinde sonuçlar, SİT ve ZİT hariç, diğer profillerdeki öğrencilerin öz-yönelimli öğrenmeye ilişkin öz-yeterlik puanları arasında istatistiksel bir anlamlılığa işaret etmektedir. ÖBK ile tutarlı olarak, belirlenen profillerden ikisinin (DİT ve OİT) ortalama öz-yönelimli öğrenmeye ilişkin öz-yeterlik puanları tüm öğrencilerin puanlarından daha yüksekken, üç profilin (SİT, ZİT ve ODİT) ortalama öz-yönelimli öğrenmeye ilişkin öz-yeterlik puanları ortalamanın altında kalmaktadır. Öte yandan, çok yüksek sosyo-duygusal becerilere sahip öğrenciler (OİT) en yüksek öz-yönelimli öğrenmeye ilişkin öz-yeterlik gösterirken, düşük sosyo-duygusal becerilere sahip öğrenciler (SİT veya ZİT) en düşük öz-yönelimli öğrenmeye ilişkin öz-yeterlik göstermektedir.

Sonuç, Öneri ve Tavsiyeler

COVID-19 pandemisi nedeniyle eğitimde birçok değişiklik yapıldı ve bu süreçte alınan önlemler veya adımlar öğrencilerin sosyo-duygusal becerilerini etkiledi (Rodriguez-Monge vd., 2023). Bu etkiye rağmen, öğrencilerin sosyo-duygusal beceri profillerini kavramsallaştırmayı amaçlayan araştırma çalışmaları oldukça sınırlıdır. Bu nedenle, COVID-19 pandemisinin neden olduğu duygusal veya davranışsal sorunları ortadan kaldırmak için çeşitli önlemler almak adına öğrencilerin bu becerilerini incelemek önemlidir. Bu bağlamda, bulgular COVID-19 pandemisinin öğrencilerin hem sosyal hem de duygusal becerileri üzerindeki etkisini göstermekte, pandemi durumunda hem ebeveynlerin hem de öğretmenlerin büyük bir sorumluluğa sahip olduğunu doğrulamaktadır.

Mevcut çalışmada ÖBK ile tutarlı olarak beş farklı sosyo-duygusal beceri profili belirlenmiştir: SİT, ZİT, ODİT, DİT ve OİT. İlk profil olan SİT'teki öğrencilerin yeterlilik düzeyleri orta seviyede görünürken, özerklik ve ilişkili olma ihtiyaçları oldukça düşüktü. İkinci profil olan ZİT'teki öğrencilerin özerklikleri ve yeterlilikleri çok düşüktü, ancak orta düzeyde ilişkili olma ihtiyaçları vardı. Bu sonuçlar, pandemi sırasında uygulanan önlemlerin (örn. karantina ve uzaktan eğitim) öğrencilerin temel psikolojik ihtiyaçlarından en az birini olumsuz etkilediğini göstermektedir. Üçüncü profil olan ODİT'teki öğrenciler aşağı yukarı ortalama düzeyde özerklik, ilişkili olma ve yeterlilik ihtiyaçlarına sahipti. Bu gruptaki öğrencilerin pandemi sırasında uygulanan önlemlere uyum sağlayarak temel psikolojik ihtiyaçlarını belirli ölçüde karşıladıkları söylenebilir. Ancak, bu doygunluğun tam olarak gerçekleştiği söylenemez. Bu sonuç, öğrencilerin pandemi sürecine uyum sağladıklarını ancak belirli nedenlerden dolayı (örn. destek mekanizmalarının eksikliği) temel psikolojik ihtiyaçlarını tam olarak karşılayamadıklarını göstermektedir. Dördüncü profil olan DİT'teki öğrenciler yüksek özerklik ve ilişkili olma ihtiyaçlarına sahipken, yeterlilikleri orta düzeydeydi. Son profil olan OİT'teki öğrenciler ise çok yüksek düzeyde özerklik ve ilişkili olma ve yüksek düzeyde yeterlilik ihtiyaçlarına sahipti. Bu sonuç, DİT ve OİT profillerinde yer alan öğrencilerin pandemi sırasında uygulanan önlemlere uyum sağladıklarını ve eğitim süreçlerini etkili bir şekilde yönetebildiklerini göstermektedir. Bu nedenle, bu gruptaki öğrencilerin üç temel psikolojik ihtiyaçlarını olumlu yönde karşıladıkları söylenebilir.

Öğrencilerin sosyo-duygusal beceri profilleri ile öz-yönelimli öğrenmeye ilişkin öz-yeterlik puanları arasında istatistiksel olarak farklılıklar bulunmaktadır. Sonuçlar, DİT ve OİT profillerinde yer alan öğrencilerin SİT, ZİT ve ODİT profillerinde yer alan öğrencilere kıyasla daha yüksek öz-yönelimli öğrenmeye ilişkin öz-yeterlik düzeylerine sahip olduğunu göstermiştir. ÖBK ile tutarlı olarak, bu sonuçlar daha yüksek sosyo-duygusal beceri düzeylerine sahip öğrencilerin öğrenme süreçlerini kendi kendilerine düzenleme yeteneklerine daha fazla güvendiklerini düşündürmektedir. Ancak,

örneklemin %64'ünün kendi öğrenmelerini yönlendirme konusunda ortalamanın altında bir güvene sahip olduğu ortaya çıkmıştır. Bu sonuç doğrultusunda, COVID-19 pandemisinin izolasyon, artan kaygı ve stres ve öğrenme sürecinde zaman kaybı gibi olumsuzluklarının öğrencilerin temel psikolojik ihtiyaçları üzerinde zararlı bir etki yarattığı söylenebilir.

Mevcut çalışmanın sonuçları, farklı sosyo-duygusal becerilerin kullanılarak çeşitli profillerin belirlenebileceğini ve bu nedenle hem sosyo-duygusal becerilerin hem de bu becerilere yönelik profillerin kavramsallaştırılmasının önemini göstermektedir. Dahası, ÖBK ile tutarlı olarak, sonuçlar bu profillerin kendi kendine yönetilen öğrenmeyle farklı şekillerde ilişkili olduğunu göstermektedir. Bu bulgular, öğrencilerin sosyo-duygusal gelişimine dair anlayışımızı geliştirmekle kalmayıp, aynı zamanda öğrencilerin sosyo-duygusal becerilerinin bütünsel gelişimine öncelik veren eğitimsel müdahalelere acil ihtiyacı da vurgulamaktadır. Çünkü, örneklemin yaklaşık %19'unun pandemi döneminde uygulanan önlemlerden olumsuz etkilendiği ve %45'inin ise bu önlemlere uyum sağlamalarına rağmen temel psikolojik ihtiyaçlarını tam olarak karşılayamadığı görülmektedir. Bugün öğrencilerin sosyo-duygusal becerilerine yatırım yapmak, daha kendi kendini yöneten, motive olmuş ve duygusal olarak dirençli bir gelecek nesli şekillendirecektir.

Yayın Etiği Beyanı

Bu çalışmada analiz edilen veri seti PISA 2022 uluslararası veri tabanında mevcuttur, https://www.oecd.org/en/data/datasets/pisa-2022-database.html. Dolayısıyla herhangi bir etik kurul izninin alınmasına gerek duyulmamaktadır.

Bu araştırmanın planlanmasından, uygulanmasına, verilerin toplanmasından verilerin analizine kadar olan tüm süreçte "Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi" kapsamında uyulması belirtilen tüm kurallara uyulmuştur. Yönergenin ikinci bölümü olan "Bilimsel Araştırma ve Yayın Etiğine Aykırı Eylemler" başlığı altında belirtilen eylemlerden hiçbiri gerçekleştirilmemiştir. Bu araştırmanın yazım sürecinde bilimsel, etik ve alıntı kurallarına uyulmuş; toplanan veriler üzerinde herhangi bir tahrifat yapılmamıştır. Bu çalışma herhangi başka bir akademik yayın ortamına değerlendirme için gönderilmemiştir.

Destek ve Teşekkür

PISA 2022 değerlendirmesine katılan Türk öğrencilere, değerli katkıları bu çalışmayı mümkün kıldığı için en içten teşekkürlerimi sunarım.

Çatışma Beyanı

Yazar, bu makalede rapor edilen çalışmayı etkileyebilecek bilinen herhangi bir rakip finansal çıkarları veya kişisel ilişkileri olmadığını beyan etmiştir.