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The Effect of Perceptions of Professional Competence of Preschool Teachers on Their Professional Burnout During the COVID-19 Pandemic

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Abstract: The aim of the research was to examine the effect of preschool teachers' perception of professional competence on their professional burnout in Türkiye. A total of 157 teachers composed the study group. In this research, The Burnout Measure, Short Version, Teacher Professional Competence Scale and Personal Information Form prepared by the researchers were used as data collection tools. According to the regression results, the sub-dimensions of teachers' professional competence, managing teaching and learning processes, and personal and professional development negatively affected the level of professional burnout. The findings indicate that teachers with a bachelor's or postgraduate degree were less burned out compared to those who graduated from high school or associate's degree programs. Teachers who graduated from a preschool education departments were less burned out compared to those from child development or other departments. Teachers working in public schools were more burned out compared to those working in private schools. Teachers aged 31 and above scored higher in the sub-dimension of planning education and educating. Additionally, it was observed that teachers working in private schools perceived higher competency levels in overall professional competence as well as in the sub-dimensions of subject matter knowledge, pedagogical content knowledge, legislative knowledge, managing teaching and learning processes, and assessment and evaluation compared to teachers working in public schools. As a result, undergraduate and graduate preschool teachers in Türkiye usually work in public schools. These teachers may have higher expectations from themselves. Not being able to meet their expectations during the pandemic may have caused these teachers to feel more burnout. In this case, it would be appropriate to provide these teachers with appropriate environments and adequate psychological support.

Keywords: teacher qualification; job stress; early childhood education; resilience; teacher support systems; teacher wellbeing

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1. Introduction

Teachers have an important role in society, as they meet individuals' learning needs and educate individuals who will meet the needs of the community. To equip students with the knowledge and awareness they can benefit from, teachers must possess these qualities to serve as role models for children or have the skills to impart their knowledge and abilities to students. The qualifications that both students and teachers should possess vary according to the needs of countries around the world.

1.1. Teacher Qualification and Qualification Standards of the World and Türkiye

These teachers work with 3–6 age groups. There are private kindergartens and public kindergartens in Türkiye. In public kindergartens, teachers with a 4-year bachelor's degree are employed as permanent teachers. In public and private kindergartens, there are also contracted teachers. Contracted teachers are not required to have a 4-year bachelor's degree. Contracted teachers can work as post-graduates, 4-year undergraduates, 2-year associate's degree, or assistant teachers, as child development graduates from vocational high schools. Four-year undergraduate child development graduates, on the other hand, can be appointed to public schools as teachers by taking formation courses. While tenured teachers are permanently employed under state security, contracted teachers work for fixed periods of time and often with lower social benefits. Staff teachers generally receive higher salaries than contract teachers, while salaries for teachers working in the private sector can vary and are generally lower. In large cities, such as Istanbul, the high class sizes in some schools may make it difficult for teachers to allocate enough time to individual students. Preschool education in Türkiye was not within the scope of compulsory education at the time of data collection. The professional competence areas of teachers have been determined by the Ministry of National Education (MEB 2017). Although it is thought that teachers in the public sector may be more competent since they can work in public schools by passing the public personnel selection exam, there is no study that expresses the competence rates of teachers.

Teacher competence refers to the ability to effectively guide the learning process, which includes designing learning strategies and understanding student needs (Cahyanti et al. 2024).

In Türkiye, the qualifications determined for students to become competent individuals both domestically and internationally are outlined in the Turkish Qualifications Framework (TQF) (Ministry of National Education in Türkiye MEB 2018), while the qualifications that teachers should possess are specified in the General Competencies for the Teaching Profession. The general competencies for the teaching profession are primarily organized under three headings: professional knowledge, professional skills, and attitudes and values. Professional knowledge includes subject matter knowledge, pedagogical knowledge, and knowledge of legislation related to duties, rights, and responsibilities. Professional skills encompass the ability to convey subject matter knowledge to students, planning education and educating, creating learning environments, managing the teaching and learning processes, and assessment and evaluation skills. Attitudes and values are categorized into national, spiritual, and universal values, approach to students, communication and collaboration, and personal and professional development. With the advancement of technology, it is essential to keep up with developments and to adjust these competencies to be in line with the times. The General Directorate of Teacher Training and Development cited the contributions of developments both directly and indirectly to education in Türkiye and abroad as the reason for the revision of teacher competencies in 2017. In this way, teachers can educate students in accordance with the characteristics of the current era, evaluate them accordingly, and thus contribute to maintaining the value of teachers in society. Therefore, teachers, who influence all segments of society through their students, should possess high levels of competence, as they are entrusted with shaping the future of societies. Achieving these competencies is possible with teachers possessing the desired qualifications. However, in Türkiye, there are parents who change their residence, make donations to schools, or sign promissory notes to ensure their child has a good teacher. This situation is an indicator of how rare qualified teachers are in Türkiye (Alipaşa 2009). Disseminating the desired qualifications to all teachers is crucial as it increases the number of individuals these teachers impact and, consequently, enhances the development level of Türkiye.

In Australia, the standards expected of teachers are defined as professional knowledge, professional practice, and professional engagement (Yavuz et al. 2015). In Germany, teachers are primarily expected to be proficient in educational sciences, subject areas, and subject teaching (Uygun et al. 2011), while in Türkiye, they are expected to have subject knowledge, the ability to teach and educate regarding this knowledge and general cultural knowledge (Yetim and Göktaş 2004).

1.2. Research on Teacher Competencies in Türkiye

In Türkiye, there are several studies on teachers' perceptions of competencies in the teaching profession, what they may need to achieve the desired qualifications, and what these qualifications may be related to (Ayra and Kösterelioğlu 2015; Bağ 2015; Başbay and Bektaş 2010; Çuhadar et al. 2013; Dağlıoğlu 2010). Ayra and Kösterelioğlu (2015) found in their study that teachers with a high tendency for lifelong learning have higher professional self-efficacy. Bağ (2015) showed in his study that school principals believe that in-service education in communication, drama, classroom management, and child development is necessary for preschool teachers. Başbay and Bektaş (2010) emphasized the importance of educating teachers who are sensitive to and understanding of multiculturalism, stating that multiculturalism should not be perceived as a problem. In their study, Çuhadar et al. (2013) found that teacher candidates' level of techno-pedagogical education proficiency was high when integrating technology with pedagogical competencies in learning teaching processes. Demirel (2007; as cited in Dağlıoğlu 2010) mentioned eight characteristics that an effective teacher should have. These are reliability, sincerity, cooperation, support, enthusiasm, high expectations for achievement, flexibility, and being knowledgeable. The perception of teachers regarding their own competence and professional adequacy may be related not only to their existing knowledge base but also to their current psychological state. Salanova et al. (2002; as cited in Bolat 2011) and Durán et al. (2006; as cited in Bolat 2011) found in their study that individuals with high levels of burnout have low perceptions of both general self-efficacy and professional self-efficacy.

1.3. Burnout

The concept of burnout was first used by Greene (1961; as cited in Bolat 2011) and was later defined by German psychologist Freudenberger. In his definition, Freudenberger described burnout as a state of energy and power loss experienced by individuals as a result of wear and tear, failures, and unmet expectations in their lives (Göktepe 2016). Maslach, considered the father of burnout syndrome, divided burnout into three subcategories (Maslach et al. 2001). These subcategories are emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion is observed as fatigue, weakness, and a state of being worn out. People experiencing depersonalization lose their excitement towards their goals and exhibit indifference (Sarıkaya 2007).

1.4. Studies Revealing the Causes of Burnout

Research shows a positive relationship between emotional exhaustion and depersonalization (Sarıkaya 2007). A decrease in personal accomplishment occurs when individuals who are physically and emotionally exhausted cannot meet the demands of their workplaces. Consequently, a decline in their self-efficacy perceptions is observed. The reasons for individuals experiencing burnout may stem from themselves and their environment. Personal characteristics that can lead to burnout include a lack of self-confidence and self-compassion, an anxious mindset, dissatisfaction with their job or status, sensitivity in relationships, lack of or inability to utilize social opportunities, and high expectations from their surroundings. Problems originating from the workplace may include excessive workload, unclear job descriptions, long working hours, unfair distribution of tasks,

working in a noisy and unsettled environment, lack of job security, insufficient in-service educating, lack of consultation with stakeholders in decision-making, and inadequate positive feedback related to their work (Göktepe 2016).

1.5. The Importance of Burnout-Related Research

Knowing the demographic characteristics of teachers who are more likely to experience burnout can contribute to the development of intervention programs. The consequences of long-term burnout are more exhausting or destructive for both the individual and their surroundings. Teacher burnout affects students, parents, colleagues, and the quality of education they provide, making it a matter that requires early identification, intervention, and resolution. Such programs would not only enhance the quality of education provided by emotionally strong teachers but also increase the efficiency of the state's investments in education. Burnout is more commonly observed in professions that involve direct interactions with people (Dolgun 2015). In the profession of preschool teaching, which requires intensive work due to interactions with families, the continuous classroom education without breaks, and the high number of students, teachers may experience difficulties in developing or exhibiting their professional competencies (Kan 2008). Personal symptoms of burnout include distractibility (Salvagioni et al. 2017), depression (Bianchi et al. 2021; Koutsimani et al. 2019; Meier and Kim 2021; Wurm et al. 2016), psychosomatic disorders (Bauer et al. 2006; Figueiredo-Ferraz et al. 2021; Misiolek-Marín et al. 2020), increased use of alcohol (Cunradi et al. 2009), cigarettes (Fabio et al. 2019), or illicit substances (Andrade et al. 2021), decreased self-esteem (Johnson et al. 2020; Kabakleh et al. 2020), anger outbursts (Muscatello et al. 2006), increased aggressive behavior (Evers et al. 2002; Mikolajczak et al. 2018), loss of sexual desire (Habis and Maalouf 2019; Papaefstathiou et al. 2019), tendency to withdraw from society (Tavella et al. 2021), increased complaints (Biddle et al. 2023), and sleep disorders (Shechter et al. 2023; Tawfeeq et al. 2023). Professionally, these personal symptoms can lead to procrastination, excessive risk-taking regarding their work, conflicts with colleagues, and a decrease in the desire for professional development, job satisfaction, and organizational commitment (Basım and Çelik 2007; Çam 1992; Izgar 2003; Sürgevil 2006; Torun 1997; as cited in Dolgun 2015). In cases of severe burnout, along with these psychological changes, physiological changes occur in the human body. Under intense stress, enzymes, such as cortisol, are secreted by the pituitary and adrenal glands, which play a role in enzyme secretion. When these enzymes are secreted in the short term, they facilitate the metabolism's ability to cope with stress. However, long-term stress can lead to the death of brain cells, memory loss, and weight gain (Black 2003; as cited in Kan 2008). Additionally, these individuals lose interest in their work, leading to a decrease in creativity, and due to burnout, they rely more on previous learnings and struggle to adapt to new developments (Dolgun 2015). Furthermore, a physically and emotionally exhausted teacher finds it difficult to realize their potential in the classroom. This study can provide school administrators and policymakers with insights into what to pay attention to during future extraordinary situations.

COVID-19 is a type of virus that was identified in China in 2019 and has caused a global pandemic, leading the World Health Organization to declare it a pandemic on 11 March 2020, in Türkiye. This date also marks the day the first case was diagnosed in Türkiye. Following the coronavirus meeting held by the Presidency in Türkiye, it was announced that primary, middle, and high schools would be closed for 1 week and universities would be closed for 3 weeks as of March 16 as part of the measures to be taken against coronavirus (Anadolu Agency 2020). Pre-school and special education institutions continued both online and face-to-face training according to the level of exposure to the pandemic. For support, children were advised to watch TRT EBA Kindergarten at home, which is a TV channel created by the government with educational activities for

children. Health and hygiene measures, such as wearing masks and social distancing, were implemented in institutions (MEB 2020).

1.6. Studies on Pandemic and Burnout

The implications of this period for preschool teachers are unclear. In his research conducted in 2020, Rajkumar (Rajkumar 2020) stated that he observed increased levels of stress, anxiety, and fear in individuals, especially during periods when the course of the pandemic increased. There are studies revealing that stress, anxiety, and fear increase burnout (Agyapong et al. 2023a; Koutsimani et al. 2019; Ryan et al. 2023). When research conducted all over the world are evaluated together, it is observed that the studies on burnout during the COVID-19 process are high. It is noteworthy that these studies are especially in professions such as healthcare professionals, doctors, and nurses (Galanis et al. 2020; Ghahramani et al. 2021; Macaron et al. 2023; Magnavita et al. 2021; Rizzo et al. 2023). This situation is inevitable, as the occupational group that provided the most services in this process has been healthcare professionals. The situation is similar in Türkiye. When the studies are examined, it is seen that the majority are with healthcare professionals (Arpacıoğlu et al. 2021; Atilla and Karakaya 2021; Edis and Keten 2022; Hoşgör et al. 2021; Türkili et al. 2021; Yumru 2020). There are also studies conducted with teachers (Menekay 2024; Turan and Akkaynak 2021). Şimşek's study published in 2023 examined the relationship between professional satisfaction, burnout, and emotional labor of preschool teachers who started education with the reopening of schools that interrupted education and educating during the COVID-19 pandemic process. However, this study does not directly cover the COVID-19 process. When the studies are evaluated, it is seen that the studies investigating the burnout and competencies of preschool teachers are insufficient in the literature.

Scientists working on the future emphasize that there is a high probability of unexpected situations, similar to the pandemic we experienced in 2020, occurring again (Coccia 2023; Platje et al. 2020). Studies on efficacy and burnout are quite numerous (e.g., Karayaman 2024; Uslu and Özkan 2018). However, research on such concepts in the field of preschool education is limited. This may cause preschool teachers to be overlooked, at least in Türkiye. Studies have shown that competence can be increased (Agyapong et al. 2023b; Flook et al. 2013), and burnout can be reduced with the intervention methods applied (Ansley et al. 2021; Oliveira et al. 2021). However, necessary interventions can be made if the level of teacher burnout during the pandemic period and the relationship between this situation and teacher competence are determined.

It is important to see how teachers, who aim to ensure the balanced growth of children and to protect their well-being, are affected by this process and to reveal this situation with scientific methods. In addition, when a similar situation is encountered again, measures should be taken to keep the well-being of teachers serving children high. In order to decide on these measures, it is important to determine how different service workers are affected by the conditions in special situations, such as pandemics, and to evaluate the related factors so that measures can be taken in advance. For this reason, it is important to examine the perceptions of competence and burnout of preschool teachers serving young children in the COVID-19 process, especially in order to support the little research conducted in Türkiye and to determine the current situation.

1.7. Research Questions

When the above-mentioned studies are examined, due to the lack of observations on kindergarten teachers' perceptions of competence in the COVID process and burnout, the aim of the study is to examine the effect of kindergarten teachers' perceptions of

professional competencies on their professional burnout levels. In line with this purpose, answers to the following questions were sought:

This study clarified the following questions: what are the perception levels of efficacy and burnout of preschool teachers; does the level of efficacy affect burnout; and do the levels of professional efficacy and burnout differ according to demographic and professional characteristics?

2. Materials and Methods

2.1. Research Design

This study was designed in a quantitative survey model. Quantitative design is based on the objective acceptance of reality (Gnawali 2022), using structured data collection tools, aiming to achieve generalizable results through random sampling (Güçlü 2020). It involves the researcher describing or uncovering causal relationships by applying measurement, observation, or experimentation externally to events and phenomena (Arıkan 2011). Survey model studies attempt to explain reality as it is (Karasar 2017). In this study, it aimed to determine the professional competence and burnout levels of preschool teachers and to examine the impact of their professional competencies on their professional burnout.

In his study, Şeker (2015) created a quality of life index through empirical analysis in Istanbul. He calculated, ranked, and classified this index according to districts. In this study, our analysis was conducted in 2020–2021, assuming that Şeker's quality of life index calculations in 2015 were still valid.

2.2. Samples

In 2020–2021, there were a total of 15,785 preschool teachers working in Istanbul.

The formula below was used to determine the sample size (Creswell and Creswell 2017). The confidence level was 90%, and the margin of error was 0.07 to determine the sample size for the universe of Istanbul pre-school education teachers consisting of 15,785 people. According to this formula, the sample size was determined as 135.7.

In the formula, the total population (N) was taken as 1575, the Z value as 1645 for a 90% confidence level, and the margin of error (E) as 0.07.

$$n = N \cdot Z^2 \cdot p \cdot (1 - p) / [E^2 \cdot (N - 1) + Z^2 \cdot p \cdot (1 - p)]$$

$$Z^2 = 1.645^2 \approx 2.7060$$

$$E^2 = 0.07^2 = 0.0049$$

The study's sample consisted of 157 teachers working in kindergartens in Istanbul during the 2020–2021 academic year. They were selected using stratified sampling based on the type of school they work in (public or private) and the life index of the district where the school is located. Stratified sampling is a method used to ensure equal representation of subgroups (Gay 1987; cited in Özen and Gül 2010).

It was observed that female teachers constituted 94.3% of the sample, while male teachers made up 5.7%. This reflects the majority of female teachers working in preschool education institutions in Istanbul (MEB 2025). Additionally, 56.1% of the teachers were married, and 43.9% were single. Teachers aged 30 and below made up 47.1% of the participants, while those aged 31 and above constituted 52.9%.

Of the participating teachers, 31.8% worked in districts with a high life index, 33.8% in districts with a medium life index, and 34.4% in districts with a low life index. The life indices of the districts were grouped according to research by Şeker (2015), and it was assumed that this classification remained valid today.

In this study, the districts with high life indices included Beşiktaş, Kadıköy, Bakırköy, Şişli, Fatih, Üsküdar, Sarıyer, Eyüp, Maltepe, and Kartal, with a total of 50 teachers. Districts with medium life indices included Küçükçekmece, Büyükçekmece, Bahçelievler, Ataşehir, Pendik, Zeytinburnu, Beylikdüzü, Beykoz, and Tuzla, with a total of 53 teachers. Districts with low life indices included Kağıthane, Ümraniye, Güngören, Başakşehir, Avcılar, Bağcılar, Esenyurt, Çekmeköy, Silivri, Gaziosmanpaşa, Sancaktepe, Esenler, Sultangazi, Sultanbeyli, and Arnavutköy, with a total of 54 teachers. Care was taken to reach different districts in the sample selection.

Of the teachers, 36.3% had less than 6 years of teaching experience, 22.3% had 6 to 10 years of experience, and 41.4% had 11 years or more of experience. Of these teachers, 24.2% had less than 9 students in their class, 52.2% had between 9 and 16 students, and 23.6% had 17 or more students in their class.

Of the teachers in the sample, 44.6% worked in private schools, while 55.4% worked in public schools. Of these teachers, 26.1% were high school or associate degree graduates, while 73.9% were bachelor's or postgraduate degree graduates. Additionally, it was determined that 64.3% of the teachers graduated from preschool teaching programs, while 35.7% graduated from child development or other departments.

Of the teachers, 43.9% most frequently used art activities, 34.4% used activities, such as music, movement, drama, and play, and 21.7% focused on other academic skills, such as science, mathematics, Turkish, and literacy preparation in their plans.

2.3. Assumptions

It was assumed that the study conducted by Şeker (2015) maintained its validity in 2020–2021 when the data were collected.

2.4. Instruments

In this study, "Personal information form", "Burnout Scale Short Form", and "Teacher Professional Competence Scale—Teacher Form" applied to preschool teachers were used to collect data.

2.4.1. Personal Information Form

This form included the participants' gender, marital status (married or single), life index of the district (high, medium, or low), professional seniority (less than 6 years, 6–10 years, or 11 or more), class size (less than 9, 9–16, or 17 or more), and education level (high school and associate degree or bachelor and postgraduate degree). It was prepared by the researchers and consisted of 11 questions in order to obtain information about the department they graduated from (preschool teaching or child development and other departments) and the type of activity used most frequently (art activities (1), movement activities (2), or other activities, such as Turkish and reading and writing preparation (3)).

2.4.2. Burnout Scale Short Form (BSSF)

The scale is designed to measure the levels of professional burnout across various occupational groups. Developed by Pines (1998; as cited in Çapri 2013), the original 21-item Burnout Scale Short Version was adapted to Turkish as a 10-item scale. The objective of the scale is to determine the professional burnout levels of adults. The validity and reliability of the scale were established by Burhan Çapri (2006; as cited in Çapri 2013). The short form consists of 10 items, measuring how often participants feel Exhausted, Disappointed with People, Hopeless, Trapped, Helpless, Depressed, Weak, Insecure, Have Difficulty Sleeping, and Unable to Endure Anymore. The scale is rated on a 7-point Likert scale ranging from "never" to "always". This self-report measure is unidimensional, with a total score range from 7 to 70. Lower scores indicate the absence of burnout, while higher scores suggest the

need for professional help. The reliability of the adapted short form was assessed using the Cronbach's alpha internal consistency coefficient, resulting in a value of 0.91. In studies utilizing the original scale, the reliability coefficients ranged from 0.85 to 0.92, supporting these findings. The test–retest reliability over a 4-week period was calculated at 0.88. To provide evidence of construct validity, significant correlations were found between the BSSF and variables theoretically related to burnout. For the sample in this research, the Cronbach's alpha internal consistency coefficient of the Burnout Scale was found to be 0.93.

2.4.3. Teacher Professional Competence Scale—Teacher Form

Developed by Koçyiğit, Erdem, and Eğmir, this scale aims to determine teachers' and teacher candidates' self-assessments of their general professional competencies. Data from 116 teachers working in various types of schools within the same city were utilized in the development of the scale. The scale comprises 11 sub-dimensions and a total of 65 items: subject matter knowledge (SMK), pedagogical content knowledge (PCK), legal knowledge (LK), planning of education and educating (PEE), creating learning environments (CLE), managing teaching and learning processes (MTLP), assessment and evaluation (AE), national, spiritual, and universal values (NSUV), student approach (SA), communication and collaboration (CC), and personal and professional development (PPD). The total score obtained from the scale provides information about teachers' professional competencies. The scale uses a 5-point Likert scale, ranging from "Cannot Do It At All" (1) to "Can Definitely Do It" (5). The minimum score that can be obtained from the scale is 65, and the maximum score is 325. The reliability coefficient of the teacher form of the scale is 0.92. Confirmatory factor analysis was applied to the scale forms, and the resulting fit indices, particularly the chi-square to degrees of freedom ratio, indicated that the teacher version of the model had an excellent fit (Koçyiğit et al. 2020). For the sample in this study, the Cronbach's alpha internal consistency coefficient of the scale was found to be 0.97.

2.5. Data Collection Process

The study was conducted in the 2020–2021 academic year with data collected from teachers working in independent kindergartens affiliated with the Ministry of National Education in Türkiye in Istanbul. These schools were selected using stratified sampling based on the type of school (public or private) and the life index of the district in which they are located.

In this study:

- Ethical Approval: First, the necessary permissions were obtained from the Ethics Committee (approval number 83078).
- School Selection: Schools were stratified based on their type and the life index of the district they were located in. Schools were then randomly selected from each stratum, and permission was obtained from their administrations through phone calls. Due to the COVID-19 pandemic, physical visits to schools were not possible.
- Survey Distribution: The measurement tools used in the study were sent to approximately 150 school administrators via Google Forms prepared by the researchers. The administrators then asked teachers to fill out these forms. Since there was not enough data initially, additional schools were selected using the same stratification and random selection method to ensure adequate representation. Teacher participation was voluntary.

2.6. Data Analysis

The data collected for this study were analyzed using a statistical software package which is SPSS 27. Before analysis, the data were defined within the program. Subsequently,

analyses were performed according to the research questions. To determine which types of tests would be used, the normality of the data was assessed using Skewness–Kurtosis values (±2 as per George and Mallery 2010), histogram graphs, and Q-Q plot graphs. Based on these evaluations, parametric analysis methods were employed.

To examine the impact of professional burnout on professional competence, regression analysis was utilized. For examining differences in professional burnout and professional competence scores among groups based on gender, marital status, age, life index of the district served, professional seniority, class size, type of school, graduated program, graduated department, and most frequently used activity type, independent sample *t*-tests and ANOVA were used due to the normal distribution of the data.

2.7. Limitations

This study was conducted with a relatively small sample size of kindergarten teachers in Istanbul, which may limit the generalizability of the findings. Although the sample was selected to represent diverse demographic characteristics, it may not fully capture the broader population of kindergarten teachers. Future research could benefit from using a larger and more representative sample to enhance the external validity.

3. Results

This section presents findings related to the levels of professional burnout and professional competence among teachers in the sample, the impact of professional competence and its sub-dimensions on professional burnout, and the differences in professional burnout, overall professional competence, and the sub-dimensions of professional competence across various demographic and professional variables. These variables include teachers' gender, marital status, age, the life index of the district they serve, professional seniority, class size, type of school they work at, their graduated program, their graduated department, and the most frequently used activity type.

Findings related to the first sub-objective of the research are presented in Tables 1 and 2.

Table 1. Arithmetic mean, standard deviation, and standard error values of the Professional Burnout Scale.

Dimensions	N	$\bar{x}$	ss	Sh$\bar{x}$
Burnout Score	157	3.26	1.32	0.105

Table 2. Arithmetic mean, standard deviation and standard error values of the subscales of the General Competencies Scale for Teaching Profession.

Dimensions	N	$\bar{x}$	ss	Sh$\bar{x}$
Subject Matter Knowledge	157	4.27	0.503	0.040
Pedagogical Content Knowledge	157	4.17	0.498	0.039
Legislative Knowledge	157	4.10	0.531	0.042
Planning Education and Educating	157	4.41	0.505	0.040
Creating Learning Environments	157	4.41	0.473	0.037
Managing Teaching and Learning Processes	157	4.36	0.485	0.038
Assessment and Evaluation	157	4.28	0.535	0.042
National, Moral, and Universal Values	157	4.62	0.456	0.036
Approach to Students	157	4.63	0.469	0.037
Communication and Collaboration	157	4.63	0.448	0.035
Personal and Professional Development	157	4.53	0.437	0.034
Overall Teaching Profession Competencies	157	4.39	0.374	0.029

As shown in Table 1, it was observed that the average burnout score of the 157 participating teachers was 3.26 out of 7.

According to Table 2, teachers rated their overall professional competencies with an average score of 4.39 out of 5. The highest averages were observed in the sub-dimensions of communication and collaboration and approach to students, both at 4.63. The lowest average was found in the legislative knowledge sub-dimension, at 4.10. The overall item average for general professional competencies of teachers was 4.39. This score suggests that teachers perceive their professional competencies to be at a high level.

In line with the study's second research question, the results of the regression test conducted to determine the effect of teachers' professional competencies and their sub-dimensions on their levels of professional burnout are presented in Tables 3 and 4.

Table 3. Simple regression analysis table for the effect of preschool teachers' professional competencies on their professional burnout levels.

Dependent Variable: Professional Burnout	**Model: R2 = 0.08; F = 14.899; p = 0.000**		
Independent Variable	**β**	***t***	***p***
Constant	6.783	7.400	0.000
Managing Teaching and Learning Processes	−0.806	−3.860	0.000

Table 4. Regression analysis on the effect of preschool teachers' professional competencies on burnout levels.

Dependent Variable: Professional Burnout	**Model: R2 = 0.11; F = 4.103; p = 0.000**		
Independent Variable	**β**	***t***	***p***
Constant	8.167	7.188	0.000
Managing Teaching and Learning Processes	−0.566	−2.375	0.019
Personal and Proffessional Development	−0.536	−2.026	0.045

As shown in Table 3, it was evident that the regression model was significant (F = 14.899; $p < 0.000$), and the sub-dimension "managing teaching and learning processes" explained 8% of the variance in burnout levels. Additionally, the sub-dimension "managing teaching and learning processes" ($\beta = -0.80$; $p < 0.005$) has a significant negative effect on professional burnout. Other sub-dimensions (subject matter knowledge, pedagogical content knowledge, legislative knowledge, planning education and educating, creating learning environments, assessment and evaluation, national, spiritual, and universal values, approach to students, communication and collaboration, personal and professional development) were not found to have a significant effect on burnout.

As shown in Table 4, the regression model was significant (F = 4.103; $p < 0.000$), explaining 11% of the variance in burnout levels. Additionally, the sub-dimensions "managing teaching and learning process" ($\beta = -0.56$; $p < 0.05$) and "personal and professional development" ($\beta = -0.53$; $p < 0.05$) had significant negative effects on burnout. However, other sub-dimensions (subject matter knowledge, pedagogical content knowledge, legislative knowledge, planning education and educating, creating learning environments, assessment and evaluation, national, spiritual, and universal values, approach to students, communication and collaboration) were not found to have significant effects on burnout.

The results of the independent group *t*-test conducted to answer the third question of the study are presented in Tables 5–7.

Table 5. Independent group *t*-test results to determine if the Professional Burnout Scale Scores differ by school type.

Score	Groups	N	x	ss	sd	*t*	*p*
Burnout	Private Public	70 87	2.96 3.50	1.257 3.505	155	−2.576	0.011

Table 6. Independent group *t*-test results to determine if Professional Burnout Scale Scores differ by the type of graduated program.

Score	Groups	N	x	ss	sd	*t*	*p*
Burnout	High School and Associate Bachelor and Post graduate	41 116	2.78 3.43	1.197 1.327	155	−2.752	0.007

Table 7. Independent group *t*-test results to determine if Professional Burnout Scale Scores and its sub-dimensions differ by type of graduated department.

Scores	Groups	N	x	ss	sd	*t*	*p*
Burnout	Preschool Education Child Development and Others	101 56	3.52 2.80	1.365 1.108	155	3.386	0.001

According to Table 5, the independent group *t*-test results indicated a statistically significant difference between the types of institutions in terms of teachers' professional burnout levels ($p = 0.011 < 0.05$). The difference between teachers working in public and private schools was found to be significant, with public school teachers experiencing higher levels of burnout compared to private school teachers (xpublic = 3.50; xprivate = 2.96). This suggests that teachers in public schools experience more burnout than their counterparts in private schools.

As shown in Table 6, the independent group *t*-test results indicated a statistically significant difference in teachers' professional burnout levels based on the type of graduated program ($p = 0.007 < 0.05$). The analysis showed that teachers with a bachelor's or post graduate degree experienced higher levels of burnout compared to those with a high school or associate degree (Xbachelor's and postgraduate = 3.43; X high school and associate = 2.78).

As shown in Table 7, the independent group *t*-test results indicated a statistically significant difference in teachers' professional burnout levels based on the department from which they graduated ($t(155) = 3.386$; $p = 0.001$). The analysis revealed that teachers who graduated from preschool education programs experienced higher levels of burnout compared to those who graduated from child development and other departments ($\overline{X}$ preschool education = 3.52; $\overline{X}$ child development and others = 2.80). This finding suggests that teachers who graduated from preschool education are more likely to experience burnout than their counterparts from other departments.

In the study, ANOVA and independent group *t*-test results indicated that teachers' burnout levels did not significantly differ by gender ($p > 0.05$), marital status ($p > 0.05$), age (under 30 or over 31) ($p > 0.05$), socioeconomic index of the district where they work (high, medium, or low) ($p > 0.05$), years of professional experience (less than 6 years, 6–10 years, or more than 11 years) ($p > 0.05$), class size (fewer than 9 students, 9–16 students, or more than 17 students) ($p > 0.05$), or the type of activities most frequently used.

The findings for the last question of the study regarding whether teachers' professional competencies make a significant difference in the determined variables are analyzed in Tables 8 and 9.

Table 8. Independent group *t*-test results for differentiation of General Teacher Competency Scale Scores by age.

Scores	Groups	N	x	ss	sd	*t*	*p*
Planning Education and Educating	30 years and under	74	4.31	0.525	155	−1.929	−0.026
	31 years and over	83	4.49	0.474			

Table 9. Independent group *t*-test results for differentiation of the General Teacher Competency Scale Scores by the type of school.

Scores	Groups	N	x	ss	sd	*t*	*p*
Subject Matter Knowledge	Private	74	4.40	0.464	155	2.849	0.005
	Public	83	4.17	0.513			
Subject Matter Knowledge	Private	74	4.32	0.452	155	3.472	0.001
	Public	83	4.05	0.504			
Legislative Knowledge	Private	74	4.20	0.500	155	2.251	0.026
	Public	83	4.01	0.543			
Managing Teaching and Learning Process	Private	74	4.45	0.458	155	2.157	0.033
	Public	83	4.28	0.496			
Assessment and Evaluation	Private	74	4.40	0.496	155	2.425	0.016
	Public	83	4.19	0.550			
Assessment and Evaluation	Private	74	4.47	0.360	155	2.368	0.019
	Public	83	4.33	0.375			

As shown in Table 8, according to the results of the independent group *t*-test conducted to examine the difference of teachers' general professional efficacy levels and sub-dimensions according to the age of the teachers, the difference in the age groups formed in the sub-dimension of planning education and training, which was one of the sub-dimensions of the professional efficacy scale, was statistically significant ($p < 0.05$). When the difference between teachers under 30 and teachers over 31 was examined, a difference was found in favor of teachers aged 31 and over in the sub-dimension of "educational instruction planning". As a result of the analysis of the other sub-dimensions of the general competence scale of the teaching profession, the difference between the age groups was not significant ($p > 0.05$).

Table 9 presents the results of an independent group *t*-test conducted to determine whether teachers' overall professional competencies and the sub-dimensions of their competency levels differ based on the type of institution they work for. The analysis revealed significant differences in several sub-dimensions, including subject matter knowledge, pedagogical knowledge, legislative knowledge, managing teaching and learning processes, and assessment and evaluation as well as in the overall perception of professional competency. Specifically, teachers working in private schools scored higher in subject matter knowledge (Xprivate = 4.40; Xpublic = 4.17; $p = 0.005$), pedagogical knowledge (Xprivate = 4.32; Xpublic = 4.05; $p = 0.001$), legislative knowledge (Xprivate = 4.20; Xpublic = 4.01; $p = 0.026$), managing teaching and learning processes (Xprivate = 4.45; Xpublic = 4.28; $p = 0.033$), and assessment and evaluation (Xprivate = 4.40; Xpublic = 4.19; $p = 0.016$). Additionally, the overall perception of General Teaching Competencies was significantly higher for teachers in private schools (Xprivate = 4.47; Xpublic = 4.33; $p = 0.019$). These results indicate that teachers in private schools perceive themselves as more competent in these areas compared to their counterparts in public schools. No significant differences were found in the other sub-dimensions of professional competency based on the type of institution ($p > 0.05$).

According to the ANOVA and independent group *t*-test results of the study, it was found that the sub-dimensions of teachers' professional competencies and overall compe-

tency levels did not show significant differences based on the teachers' gender ($p > 0.05$), marital status ($p > 0.05$), the life index of the district where they work ($p > 0.05$), professional seniority ($p > 0.05$), class size ($p > 0.05$), whether they graduated from preschool teaching or child development and other departments ($p > 0.05$), or the most frequently used type of activity, whether it be art activities (1), movement activities (2), or other activities, like Turkish, reading, and writing preparation (3) ($p > 0.05$).

4. Discussion

4.1. Discussion of the Findings on Teachers' Burnout and Competence Perception Levels

In accordance with the first aim of the study, the professional burnout levels of the teachers working with the preschool group were determined. According to the research results, the average burnout level of teachers was found to be x = 3.26. Scores between 2.5 and 3.4 are interpreted as warning signals for burnout (Çapri 2013). Therefore, it can be said that the teachers were at risk of burnout at the time of the study. There are many studies examining the burnout of preschool teachers. In a study conducted with 258 preschool teachers in Istanbul, it was found that teachers had moderate levels of emotional exhaustion and depersonalization and high levels of personal accomplishment (Teltik 2009). In another study conducted with primary and preschool teachers in Izmir with a total of 567 teachers, the burnout levels of the teachers were found to be low (Yılmaz Toplu 2012). Acar (2016) found in his study that the average burnout scores of preschool teachers working in Adana were very low in the depersonalization sub-dimension, low in the emotional exhaustion sub-dimension, and moderate in the personal accomplishment sub-dimension. In the study conducted by Yıldız and Üzüm (2018) in the Küçükçekmece district of Istanbul, in which they investigated the relationship between classroom management skills and burnout levels, it was concluded that the burnout levels of preschool teachers were non-existent (x = 2.51). In the study by Baş and Coşkun (2020), who examined the levels of burnout and organizational socialization of preschool teachers in Kahramanmaraş during the 2014–2015 academic year, it was found that the general burnout levels of teachers were moderate. When the studies are examined, it is seen that teacher burnout varies depending on the city and time. While the burnout level was found to be non-existent in a 2018 study conducted with preschool teachers in Istanbul by Yıldız and Üzüm using the same scale, the presence of burnout warning signals in this study, in which data was collected in 2021, suggests that factors, such as parent influence, administrative factors, system problems, and organizational issues (Uzesen 2017) along with the diseases experienced during the pandemic period and the policies of the Ministry of National Education towards independent kindergartens, may have contributed to the burnout warning signals found in this study.

Another finding of the study reveals that preschool teachers perceive their professional competencies to be 4.39 out of 5. Among the sub-dimensions of professional competencies, the highest averages belong to the sub-dimensions of communication and collaboration and approach to students, while the lowest average is in the area of legislative knowledge. When examining the standard deviations, it is observed that the areas where teachers' scores vary the most are legislative knowledge and assessment and evaluation. The area where teachers generally gave similar responses compared to others was personal and professional development. Additionally, in the study conducted by Koçyiğit et al. (2020), who also developed the scale used in this research, it was found that teachers at various levels believed they possessed high levels of professional competence. It was observed that the area where these teachers felt most competent was national, spiritual, and universal values. The lowest average score among teachers was in the legislative knowledge sub-dimension, which supports the findings of this study. Another study's findings also indicate that preschool teachers' self-efficacy perceptions regarding science teaching are lower

compared to teaching mathematics or literacy. Specifically, teachers feel less comfortable and less competent in planning, implementing, and teaching science activities to children (Tarakçı et al. 2020).

4.2. Discussion of the Findings on the Effect of Teachers' Perception of Competence on Burnout

The study indicates that the burnout of preschool teachers can be explained by the sub-dimension of managing teaching and learning processes alone and in conjunction with the sub-dimension of personal and professional development. A similar study conducted by Şenel (2014) in Denizli found that the teaching strategies of preschool teachers explained 5% of the total variance in their emotional exhaustion. This increase may reflect teachers' uncertainty regarding which tools to use in their educational activities due to the transition to online education during the pandemic. Additionally, education is a continuously evolving and changing discipline, aiming to maintain its relevance and sustainability (Escobar Arcay 2022). The transition from traditional and ineffective methods to scientific, effective, and up-to-date methods could be reflected in classrooms, provided that teachers adopt these changes in teaching and learning methods. The sub-dimension of managing teaching and learning processes includes effective classroom management methods, such as increasing students' interest in learning (Maylitha et al. 2023), centering learning on the student (Samaddar and Sikdar 2023), using information technologies like Web 2 tools, effectively in classrooms (Eremkin et al. 2023), employing constructive language, supporting children's reflective thinking (Bunda 2022), and selecting and organizing classroom materials. Current literature shows that preschool teachers often rely heavily on the lecture method (Koç 2023), use behavioral and reactive discipline methods (Kurt 2021), generally conduct program evaluations by asking questions (Kılınç et al. 2021), and struggle to use appropriate teaching methods and language in concept teaching (Erincik 2020). When teachers believe they lack classroom management skills, they may observe a decline in the effectiveness of their practices, leading to feelings of burnout. The study also found that personal and professional development impacts burnout. Increased factors such as job satisfaction, activity, initiative-taking, belief in professional success, collaboration with colleagues, self-education, and self-fulfillment desires contribute to reducing burnout (Sviderskaya et al. 2023). Consequently, if a teacher cannot find or utilize opportunities for continuous self-development, their interest, enthusiasm, and professional satisfaction may decrease, leading to an increased sense of burnout.

4.3. Discussion of the Findings Examining the Differentiation of Teachers' Burnout According to Demographic Information

When the gender-based differentiation in teachers' burnout was examined, it is seen that male teachers had a higher average of professional burnout. However, this difference was not significant. There are other studies that found that there is no significant difference in burnout of preschool teachers based on gender (Akman et al. 2010; Mahmood and Sak 2019).

The study found that the average levels of burnout among preschool teachers were similar across different age groups, indicating no significant differences in burnout levels based on age. Other studies have also found no significant differences in burnout levels among preschool teachers based on age (Mahmood and Sak 2019; Törnük 2019; Yıldız and Üzüm 2018; Yüksel 2020). In contrast to these findings, Öztürk and Deniz (2008) reported that teachers in the 26–30 age group had significantly higher average scores in the depersonalization sub-dimension compared to teachers aged 41 and above. Yüksel (2020) also examined the differences in burnout levels among preschool teachers aged 30 and younger, 31–40, and 41 and older. The study found that in the emotional exhaustion sub-dimension, teachers aged 30 and younger exhibited higher levels of burnout compared

to those aged 41 and older. Conversely, in the personal accomplishment sub-dimension, teachers aged 41 and older had lower burnout scores than their younger counterparts.

In this study, it was found that the burnout levels of teachers did not differ statistically according to the life index of the district where their schools were located. In a similar study, Törnük (2019) examined whether the burnout levels of preschool teachers differed based on the location of their schools and found no significant difference between teachers working in urban and rural areas. Another study, conducted in eight different provinces, including Istanbul, also found no significant differences in burnout levels among preschool teachers based on the geographical regions (Black Sea, Aegean, Marmara, etc.) where they worked (Akman et al. 2010). This suggests that burnout may be influenced more by national policies or cultural factors rather than regional or cultural effects. Factors such as the structure of the education system, working conditions, access to professional support and resources, commitment to work, work ethics, and work-life balance can impact teachers' burnout levels. Unlike regional studies, cross-country studies have shown differences in teacher burnout levels. For instance, a study conducted in China with 1795 preschool teachers in 2018 found that burnout was very prevalent among teachers (53.2%) (Li et al. 2020). In Croatia, a study with 100 participants reported that about half of the teachers experienced burnout (Hozo et al. 2015). In Serbia, a study with a sample of 482 preschool teachers found that this percentage dropped to 27.1% (Terzic-Supic et al. 2020). These findings support the idea that significant differences in burnout levels tend to emerge at the national level, influenced by national policies or cultural factors rather than regional differences.

When examining the findings of the study, it was found that the burnout levels of teachers did not differ significantly based on their professional seniority among those who had worked for less than 6 years, 6–10 years, or more than 11 years. This result is supported by other studies as well (Mahmood and Sak 2019; Yıldız and Üzüm 2018). In their study, Mahmood and Sak (2019) did not find a significant difference in burnout levels among teachers who had worked for 4 years or less, 5–9 years, or 10 years or more. Similarly, Yıldız and Üzüm (2018) also found that preschool teachers' burnout levels did not show significant differences based on years of professional seniority. However, there are studies that found professional seniority to be a differentiating factor in preschool teachers' burnout levels (Acar 2016; Adıgüzel and İpek 2016; Törnük 2019; Yüksel 2020). Acar (2016) found that teachers who had worked for 21–25 years had significantly higher levels of emotional exhaustion compared to those who had worked for less than 21 years. Adıgüzel and İpek (2016) found that preschool teachers' burnout levels in the sub-dimensions of emotional exhaustion and sense of personal accomplishment did not differ significantly based on their professional seniority. However, in the depersonalization sub-dimension, a significant difference was found based on professional seniority, with teachers who had worked for more than 10 years experiencing significantly more burnout than those who had worked for 6–9 years. Törnük (2019) found that teachers with 0–5 years of professional seniority were less burned out than those with 6–15 years of seniority. Additionally, according to this study's findings, teachers with 0–5 years of experience had lower levels of physical and emotional exhaustion than those with 6–15 years of experience and lower levels of mental exhaustion than those with 16 or more years of experience. Furthermore, in Yüksel's (2020) study, which examined the relationship between preschool teachers' professional burnout levels, self-efficacy perceptions, and personality traits, it was found that in the emotional exhaustion sub-dimension of the burnout scale, teachers who had worked for 1–5 years had significantly lower levels of burnout compared to those who had worked for 6–10 years, 11–15 years, 16–20 years, and more than 21 years.

When examining the findings, it was found that teachers with 17 or more students in their class had higher burnout levels compared to other teachers, but the difference in the

mean burnout scores between these groups was not statistically significant. Similarly, in the study by Mahmood and Sak (2019), the average burnout scores of preschool teachers with 26–30 students in their class were higher than those of teachers with fewer students, although this difference was not statistically significant. Adıgüzel and İpek (2016) also found that class size did not create a significant difference in the sub-dimensions of emotional exhaustion, personal accomplishment, or depersonalization in preschool teachers' burnout levels. However, in Alkevli's (2021) study, it was found that teachers with class sizes of 31 or more had a significant difference in the personal accomplishment sub-dimension of burnout. When these studies are evaluated together, it can be said that class size does not create a significant difference in teachers' burnout levels up to a certain point, but as the number increases, the difference in burnout becomes more pronounced.

When examining whether burnout varies according to the type of school teachers work at, it was found that teachers in public schools were significantly more burned out than those in private schools. In the sample, 94.3% of teachers working in public schools and 48.6% of teachers in private schools held bachelor's or postgraduate degrees. Additionally, 23.8% of teachers in private schools had graduated in preschool education compared to 88.5% of teachers in public schools. This may lead to high expectations and subsequent burnout due to teachers being aware of what can be achieved. Furthermore, 28.7% of teachers in public schools and 17.1% in private schools had classes with 17 or more students. The higher burnout levels among public school teachers may also be attributed to this heavier workload. The workload is not only related to the number of students but also the volume of administrative tasks. Additionally, during the pandemic, public school teachers may have struggled more with using technology (Kuzgun and Özdinç 2017). The cumulative effect of all these components may have resulted in higher burnout among teachers in public schools. In the literature, when examining teacher burnout by institution type, comparisons have typically been made between preschools and kindergarten classes. Mahmood and Sak (2019) found no statistically significant difference in teacher burnout levels according to institution type in their study, which may be due to the comparison being between kindergarten and preschool classes. Similarly, Törnük (2019) found no significant difference in burnout levels between teachers working in independent preschools and those working in kindergarten classes within elementary schools. However, Gürbüz (2008) found that teachers working in preschools had significantly higher burnout scores than those working in kindergarten classes. In this study, the difference may be due to private schools having the resources and technological infrastructure to adapt more quickly to online education during the COVID-19 pandemic. Additionally, public school teachers' interactions with students from economically disadvantaged families may have influenced how they perceived the impacts of the pandemic differently from teachers in private schools.

In this study, it was found that teachers with bachelor's or postgraduate degrees had significantly higher levels of burnout compared to teachers with associate's degrees or high school diplomas. Mahmood and Sak (2019) also found that preschool teachers with bachelor's degrees experienced higher levels of depersonalization, emotional exhaustion, and personal failure. This finding is supported by the research conducted by Öztürk and Deniz (2008), who showed that preschool teachers with bachelor's degrees had significantly higher averages in the depersonalization sub-dimension compared to teachers with associate's degrees and open education graduates. Similarly, Törnük (2019) found that preschool teachers with associate's degrees had lower burnout averages ($\bar{x}$ = 1.99) compared to those with bachelor's degrees ($\bar{x}$ = 2.34). In contrast, Yıldız and Üzüm (2018) found no significant differences in burnout levels among preschool teachers based on their educational attainment. When examining the literature, it can be concluded that teachers with bachelor's degrees tend to experience more burnout than those with

associate's degrees or open education degrees. This may be due to the higher expectations and pressures that teachers with bachelor's or postgraduate degrees place on themselves. They may feel a greater need to exert effort and face the frustration of not seeing their efforts rewarded adequately. This perception can lower their motivation, reduce job satisfaction, and negatively impact their professional development. Additionally, such a perception may negatively affect the overall work atmosphere in the educational environment.

In this study, it was found that teachers who graduated from preschool education programs had significantly higher levels of burnout compared to teachers who graduated from child development and other programs. In another study, Ekici (2017), conducted an analysis to examine whether the burnout levels of teachers with bachelor's degrees in preschool education, bachelor's degrees in child development, associate degrees in child development, and high school diplomas in child development differed. The results indicated that there were no significant differences in the sub-dimensions of personal accomplishment and depersonalization on the burnout scale. However, in the emotional exhaustion sub-dimension, it was found that teachers who graduated from high school child development programs experienced significantly less emotional exhaustion compared to those who graduated from other programs. The reason for this may be that learning about child development at an earlier period contributes to internalizing information and getting to know children better. This may bring about differences in the perspective on teaching. Prioritizing education more than development in faculties of education may have led to insufficient understanding of children's development and failure to provide appropriate expectations. High expectations may have triggered the burnout of education faculty graduates.

Furthermore, the study's findings showed that there were no significant differences in burnout levels based on the types of activities teachers used. However, teachers who included activities, such as mathematics, science, and pre-literacy preparation, had the lowest levels of burnout, while teachers who conducted movement activities experienced the highest levels of burnout. While planning the study, it was predicted that physical activity would positively affect psychological health and increase resistance to stress due to changes in the endocrine system (Civan et al. 2018). However, it was found that teachers conducting movement activities had higher levels of burnout. This could be due to the higher likelihood of unexpected events occurring during movement activities, leading to increased stress or physical strain for the teachers.

4.4. Discussion of the Findings Examining the Differentiation of Teachers' Perceptions of Competence According to Demographic Information

In this study, it was found that the professional competencies of teachers did not significantly differ based on their gender. Similarly, Koçyiğit et al. (2020) examined the competencies of teachers from different branches and concluded that the overall scores on the competency scale did not significantly differ by gender. However, in their study, there was a significant difference in favor of men in the legislative knowledge sub-dimension and in favor of women in the communication and collaboration and personal and professional development sub-dimensions. Another study by Yenen and Kılınç (2018) also found that male teachers had significantly higher average scores than female teachers in the subject matter knowledge, pedagogical content knowledge, and legislative knowledge sub-dimensions.

When examining the findings of the study, it was found that the average scores of teachers' perceptions of their professional competencies did not significantly differ based on marital status. Parlar (2017) also found no significant difference in adults' self-efficacy based on marital status. Similarly, a study conducted in India found that marital status did not significantly affect professional adjustment (Rizvi 2016).

In this study, it was found that teachers aged 31 and over had significantly higher competency perceptions in the planning education and educating sub-dimension. However, there were no significant differences in overall professional competency and other sub-dimensions of professional competency based on age. The perception of older teachers being significantly more competent in planning teaching and learning compared to younger teachers could be attributed to their experience. There were no significant differences in other sub-dimensions of professional competency and general professional competency based on age. Teltik (2009) also found no significant differences in the professional competencies of teachers aged 18–25, 26–30, or over 31. The COVID-19 pandemic was a period in which teaching and learning shifted between online and face-to-face formats. Teachers aged 31 and over generally have more experience, which might have helped them adapt more easily to changes in teaching and learning by using their planning skills.

This study found that teachers' professional competence did not show a statistically significant difference based on the living index of the district where their school is located. However, when examining the averages, it was observed that as the living index of the district increased, the general professional competence scores of the teachers also increased. This may be due to the fact that teachers in higher living index areas have more opportunities for their own education and professional development. Another reason could be that children from higher living index areas are exposed to more stimuli and, thus, come to school with certain knowledge already acquired. This might lead teachers to believe that they have a significant impact on the children's development, making them feel more competent.

The findings of the study indicate that the level of professional competence of teachers does not vary significantly based on their years of professional experience. Similarly, Çetinkaya (2019) found no statistically significant differences in the self-efficacy of preschool teachers based on their years of experience, whether it be 5 years or less, 6–10 years, or 11 years or more. Koçyiğit et al. (2020) examined the differences in the professional competencies of teachers working 1–5, 6–10, 11–15, 16–20, or 20+ years in different branches and found that teachers working 15–20 years in the sub-dimension of subject matter knowledge, teachers working 1–5 years in the sub-dimension of creating learning environments, and teachers working 11–15 years in the sub-dimension of personal and professional development thought that they were significantly more competent. Yenen and Kılınç (2018) conducted a survey with primary and secondary school teachers and found significant differences in competence perceptions based on years of experience. The highest averages were in the "national, moral, and universal values", "communication and collaboration", and "approach to students" dimensions for those with 16–20 years of experience and in the "communication and collaboration" dimension for those with 20 or more years of experience.

When examining the average scores of preschool teachers on the professional competence scale, no significant difference was found in teachers' overall professional competence or in the sub-dimensions of professional competence based on class size. Similarly, Çetinkaya (2019) investigated the self-efficacy of preschool teachers and found no significant differences among teachers with class sizes of 10–15, 16–20, 20–25, or 26 or more children. The absence of differences based on class size in this study may be attributed to the findings of Averill and Mueller (1925) and Shapson et al. (1978), who indicated that class size, whether small or large, is not related to teacher effectiveness.

In terms of professional competence, preschool teachers working in private schools were found to have significantly higher perceptions of overall professional competence and in the sub-dimensions of subject matter knowledge, pedagogical content knowledge, legislative knowledge, managing teaching and learning processes, and assessment and evaluation compared to those working in public schools. In other sub-dimensions of

professional competencies, there were no significant differences according to the type of school. There may be many reasons why teachers working in private schools feel more competent in general professional competencies. The relatively smaller class sizes in private schools and the less crowded schedule of guidance counselors may help teachers address their issues more effectively, thereby enhancing their sense of competence. Private schools often provide teachers with resources aligned with their objectives and place greater emphasis on using different educational approaches. Teachers are encouraged to participate in such educational programs. Additionally, in-service education in private schools can be conducted in small, interactive groups, leading to more pronounced learning and teaching processes and better classroom management, which in turn could boost teachers' competence (da Silva Devincenzi et al. 2022). Marketing strategies in private schools might also contribute to teachers' high perceptions of their competence. However, there are also findings in the literature indicating that preschool teachers in public schools perceive themselves to have higher overall competence compared to those in private schools (Göksu and Özmutlu 2023). This suggests that the context and support structures in each type of school may differently influence teachers' self-assessments of their professional abilities.

The research findings indicated that the total competence score averages of teachers with associate's degrees or high school diplomas (4.41) were slightly higher than those of teachers with bachelor's or postgraduate degrees (4.39), although this difference was not statistically significant According to the findings of Ertan (2016), preschool teachers with associate's and open university bachelor's degrees have very high self-efficacy beliefs in the teaching and learning process sub-dimension, whereas those with regular bachelor's degrees have good self-efficacy beliefs. When looking at the total self-efficacy scores, teachers with associate's and open university degrees had significantly higher scores than those with bachelor's degrees. One possible reason for these findings is that teachers with high school and associate's degrees often graduate from child development departments of vocational high schools. This early exposure to the field may lead to a stronger interest in the subject and provide them with more time to develop their skills. These findings support the view that preschool and child development bachelor's programs should aim to produce well-rounded professionals equipped with systematic knowledge, skills, research capabilities, adaptability, and strong ethical, intellectual, physical, and artistic education (Gu 2013). A study has shown that teacher competence, particularly in the early mathematics skills of migrant children, has a positive impact. In this context, higher education levels of teachers have been observed to produce more successful outcomes compared to lower levels (Kim et al. 2011). Therefore, enhancing the competencies of teachers with higher education levels will contribute to their efficiency and effectiveness in the classroom.

The findings of the study showed that the mean total efficacy scores of teachers with associate's degrees or high school graduates (4.41) are higher than the mean scores of teachers with bachelor's or postgraduate degrees (4.39), but this difference was not significant. According to the findings of Ertan (2016), the self-efficacy beliefs of preschool teachers with associate's and open education bachelor's degrees in the managing teaching and learning processes sub-dimension are at a very good level, while the self-efficacy beliefs of teachers with formal bachelor's degrees are at a good level. When the total self-efficacy scores of the teachers are examined, it can be said that teachers with associate's degree and open education graduates are significantly higher than teachers with bachelor's degree. The fact that high school and associate degree graduates generally graduated from the child development departments of girls' vocational high schools may have caused them to be interested in this field and to have more time to improve themselves since they were introduced to the field earlier. These findings support the view that preschool and child development bachelor's programs should aim to produce well-rounded professionals

equipped with systematic knowledge, skills, research capabilities, adaptability, and strong ethical, intellectual, physical, and artistic educating (Gu 2013). One study shows that teacher efficacy has a positive effect on early mathematics skills, especially in immigrant children. In this case, it was observed that higher levels of teacher education resulted in more successful outcomes than lower levels (Kim et al. 2011). Therefore, increasing the competencies of teachers with high levels of education will make them more effective.

It was found that the department of graduation did not make a significant difference in the professional competencies of preschool teachers. However, it was concluded that the mean total competence scores of the teachers who graduated from child development and other departments were higher than the mean scores of those who graduated from preschool teaching departments. All of the preschool teaching graduates (100%) were also undergraduate graduates. The fact that bachelor's and master's degree graduates who spend more time with faculty members are more knowledgeable may have caused them to see themselves as less competent.

The findings of the research showed that the type of activity used did not make a significant difference in teachers' perceptions of professional efficacy. It can be said that the teachers with the highest averages were the teachers who used activities, such as science, mathematics, and literacy preparation. The reason why these teachers feel themselves more competent than other teachers may be that they reflect the teacher perception they are used to in their educational life in activities that develop cognitive skills.

4.5. Recommendations

When the findings related to burnout were examined, it was found that bachelor's or postgraduate degrees were more burned out than high school or associate degree graduates. Preschool teacher graduates were more burned out than child development and other department graduates, and those who taught in public schools were more burned out than those who taught in private schools. Increased knowledge and skills acquired in the field of higher education may have led to increased stress and burnout due to greater responsibility and expectations. Studies can be conducted to reveal and solve the problems of teachers with bachelor's or postgraduate degrees working in public schools. These teachers can be supported to take initiatives to solve the problems that cause burnout. Thus, teachers can have areas in which they can exhibit their competencies. Since this research is limited to the items in the Burnout Scale, qualitative or mixed studies to examine the sources that cause burnout in order to reach deeper information about burnout will help to clarify the cause of the problem. In addition, the effect of the policies implemented at that time on the high level of burnout during the pandemic period can be sociologically examined.

Teachers' having a strong sense of self-efficacy can affect the quality of their interactions with their classrooms (Wolstein et al. 2021), help them create a more positive emotional environment in their classrooms and develop children's language skills (Guo et al. 2010), and support children's classroom participation and collaboration (Guo et al. 2011). Therefore, low self-efficacy in teachers can be seen as one of the barriers to children's acquisition of skills. In the study, teachers' perceptions of efficacy were low in certain areas. In cases where it is aimed to nurture these dynamics in classrooms, studies can be conducted to support teachers' perceptions of efficacy in areas, such as legislative knowledge and subject matter knowledge, where they feel their efficacy is low.

Findings related to professional competencies revealed that teachers aged 31 and over were more competent in planning instruction than teachers aged 30 and under. In line with this finding, coaching (von Suchodoletz et al. 2018), mentoring, or sharing systems can be established among preschool teachers to increase the interaction between teachers of different ages, or existing systems (e-Mente) (Erdoğan et al. 2021) can be expanded.

In addition, experience sharing sessions can be organized during educating. This would allow teachers to share their daily classroom experiences and learn from each other. In this way, by determining which subjects teachers need educating in, teachers can receive the education they need in the areas they really need, not just to be educated. For this purpose, a system can be developed to measure teachers' competencies in these areas.

The fact that teachers working in private schools consider themselves more competent than teachers working in public schools in the dimensions of subject matter knowledge, pedagogical content knowledge, legislative knowledge, managing teaching and learning processes, and assessment and evaluation may be a result of more opportunities and resources in private schools and the ability to carry out activities with smaller groups. The crowded classrooms in public schools may have caused teachers to feel inadequate. Effective teamwork between preschool teachers and assistant teachers is one of the key factors in ensuring quality educational work in preschools (Skubic 2019). These systems can support the previously mentioned mentoring work and create a learning environment by encouraging the sharing of experience and knowledge among teachers. The provision of support staff in public school classrooms can also support the increase in teachers' perceptions of efficacy.

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