EARLY CHILDHOOD EDUCATION TEACHERS' TEACHING EXPERIENCES ON MOTOR DEVELOPMENT OF CHILDREN DURING THE COVID-19 PANDEMIC

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

BURCU YÜKSEL

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN
THE DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS

JUNE 2022

Approval of the thesis:

EARLY CHILDHOOD EDUCATION TEACHERS' TEACHING EXPERIENCES ON MOTOR DEVELOPMENT OF CHILDREN DURING THE COVID-19 PANDEMIC

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ABSTRACT

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June 2022, 102 pages

The major focus of the current study was to examine how the motor development of preschool children was supported by their early childhood education teachers during the COVID-19 pandemic through online education. An online survey was applied to collect data from the participants across Turkey. The participants of the study were 294 (291 women and 3 men) early childhood educators who work in a private school. Descriptive statistics (mean, standard deviation, frequency, percentage) were used to analyze the data. According to the result of this study, 46.3%of teachers reported that online education wasnot appropriate to support the motor development of preschool children at all. Furthermore, during the COVID-19 pandemic and online education process, 45.9% and 42.2% of them observed no regression or progress in gross and fine motor skills of preschool children, respectively. The findings of the study highlighted that online education with preschool children was a difficult process and it needed to be revised.

Keywords: motor development, early childhood education, online education, the COVID-19 pandemic

ÖZ

COVID-19 SALGINI SÜRECİNDE OKUL ÖNCESİ EĞİTİMDE MOTOR GELİŞİM: ÖĞRETMEN DENEYİMLERİ

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Haziran 2022, 102 sayfa

Bu çalışmanın amacı COVID-19 pandemi döneminde online eğitimi deneyimlemiş okul öncesi öğretmenlerinin uzaktan online eğitim ile okul öncesi düzeydeki çocukların motor becerilerini nasıl destekledikleri incelenmesidir. Veri toplamak üzere online bir anket geliştirilmiş olup tüm Türkiye genelinde uygulanmıştır. Çalışmaya özel okulda görev yapan 294 katılımcı dahil olmuştur (291 kadın ve 3 erkek). Verilerin analizinde betimleyici istatistik yöntemi (ortalama, standard sapma, frekans ve yüzdelik) kullanılmıştır. Bu çalışmanın sonuçlarına göre çalışmaya katılan öğretmenlerin %46.3'ü uzaktan yürütülen online eğitimin okul öncesi dönemindeki çocukların motor gelişimlerini desteklemek için uygun bir yöntem olmadığını belirtmişlerdir. Ayrıca, çalışmaya katılan öğretmenlerin %45.9'u ve%42.2'si okul öncesi düzeyindeki çocukların kaba motor ve ince motor becerilerinde gerileme ve ilerlemeden ziyade bir durağanlık olduğunu gözlemlemişlerdir. Bu çalışmanın bulguları okul öncesi çağındaki çocuklar ile uzaktan online eğitim sürecinin zor olduğunun ve yeniden düzenlenmeye ihtiyaç duyulduğunun altını çizmektedir.

Anahtar Kelimeler: motor gelişim, okul öncesi eğitim, online eğitim, COVID-19 salgını

ACKNOWLEDGMENTS

First of all, I would like to acknowledge to my supervisor Assoc. Prof. Dr. Irmak Hürmeriç Altunsöz for her support, encouragement and realization of this study. Also, I am grateful to my best friend because of his endless patience, motivation and support. I completed this process thanks to him.

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LIST OF ABBREVIATIONS

BOTMP :Bruininks–Oseretsky Test of Motor Proficiency

MABC :Movement Assessment Battery for Children

PDMS :Peabody Developmental Motor Scales

PPT :Power Point

TGMD :Test of Gross Motor Development

WHO :World Health Organization

CHAPTER I

INTRODUCTION

Movement is an undeniable fact of life. It begins with the existence of the universe. All creatures move in some way. However, human movement is the most complex one to understand (Aslan & Yamak, 2021). There are very essential movements for human life, such as heart beating, breathing, and voluntary, involuntary, and automatic movement processes in muscles. How people learn motor coordination and how they provide motor control are very important to understand how people live. Understanding this movement process plays a critical role in efficient teaching and learning (Orhan & Ayan, 2018), because nowledge of that process of development provides significant information for the education and health field (Gallahue et al., 2012).

In parallel with that information, the importance of the early childhood education period has to be explained because it affects children's future life. The early childhood years support children's cognitive, social-emotional, and physical development. If a child successfully acquires motor skills in that period, it continues in that way. The early years are very critical because the brain develops most rapidly in this period and has a high capacity for change, so it functions as the foundation for health and well-being throughout life (Durukan et al., 2016). Moreover, it is well known that the early childhood period indicates the most rapid development of human life (Özyürek et al., 2015). Elaborating on this, the basis of the movement in the early childhood period is explained below.

Motor development is the voluntary mobilization of the organism parallel with physical growth and the development of the central nervous system (Basit & Deniz, 2020). In other words, it is a lifelong process that starts in the prenatal

period,including the acquisition of skills that are essentially related to movement (Özer & Özer, 2004).

Since behavior is the indicator of development (Ward et al., 2007), the question as to how the child develops and n which direction can be understood by looking at the behaviors. Although the child seems to develop in different areas and at different speeds, there is a certain relationship between the behaviors and abilities that appear (Barela, 2013). For example, in the 0-2 age period, behaviors are given as symbols of thought and the motor behavior of the child gives significant information about her/his cognitive and mental development. While developmental psychologists are concerned with the effect of movement on social and emotional development, motor development is only a visual sign of cognitive development (Özer & Özer, 2004).

The first studies on motor development were conducted by Shirley (1931), Gessel and Thompson (1934), Mc Graw (1935), and Bayley (1935) (as cited in Özer & Özer, 2004). The names of these scholars are frequently encountered in motor development research due to being the pioneers determining the sequence of motor development very well. By making natural observations of children, these researchers obtained great information about the sequence of the normal development process, from the simplest movement to the acquisition of mature movement patterns. The order of acquisition of movements is fixed and universal, but the age of this acquisition of movements occurs within wide slices and it should be bear in mind that there are individual differences in development (Özer & Özer, 2004).

The development of movementforinfants starts with reflexes and reactions, and continues with rudimentary movement skills, fundamental motor skills (FMS), and sport-specific skills, respectively (MEB, 2013). These are fundamental movement skills, which constitutes the basis of movement development in the

early childhood period. It shapes the motor development of young children in the early years of life (Payne & Isaacs, 2006).

Fundamental motor skills are basic movement patterns that shape the basis of a lot of complex skills used in games, sports, and other recreational activities. They include locomotor skills, non-locomotor skills, and object control skills. Firstly, fundamental locomotor skills include walking, running, jumping, hopping, galloping, sliding, and skipping skills (Gallahue et al., 2012). To perform these fundamental locomotor skills, children use their gross motors. They use their big muscles, and they change their bodies wholly. Non-locomotor skills refer to fundamental body movements that do not incorporate traveling (Haywood & Getchell, 2014). In other words, they are the stability skills that involve movements of limbs or body parts, and sometimes even the whole body. For example, twisting, bending and curling include a wide range of body joints (Gallahue et al., 2012). The last one, the object control skills, includes such movements as kicking, throwing, and catching a ball, or striking a ball. Using such skills, children not only use their whole body, but they also manipulate an object by using a specific part of her/his body in coordination.

Children who are good at these skills are more likely to have higher self-esteem and self-confidence, and therefore they become more willing to participate in physical activities and games (Kohl, 2013). That's why, if a child properly attains those skills, she/he will be more successful in performing specific and complex movement skills (Özer & Özer, 2004).

The early childhood education period is the most ideal period to gain and learn these skills for preschool children. So, fundamental motor skills are very important because they are the building blocks of more specific skills developed later in childhood. Research shows that children who are good at fundamental motor skills are physically active much more than other children. For this reason, the early childhood period has a critical role to support the motor development of

preschool children (Kerkez, 2012). In line with this, early childhood education teachers are responsible for supporting and encouraging their students to gain these skills properly (Newell, 2020).

According to the early childhood education curriculum of the Ministry of National Education (2013), there are 5 main learning outcomes about motor development:

1. He/she does locomotor movements.
2. He/she does stability movements.
3. He/she does object control movements.
4. He/she uses his/her fine motor skills.
5. He/she moves with music and rhythm.

However, because of the COVID-19 pandemic, early childhood education teachers are faced with many difficulties in supporting the motor development of preschool children (Anggriawan, 2020). As a result of the COVID-19 pandemic, which has affected the whole world, not only the health and economic systems of the countries have been affected, but also the education systems of the countries have been affected negatively (Adedoyin & Soykan, 2020). Due to the instant outbreak of the pandemic, the stakeholders of education have been caught unprepared for online teaching. Which is why, the education process of children in the pre-school period has been tremendously affected by the pandemic (Apak & Kahraman, 2021).

Considering that preschool children perform movement-oriented learning and they do not yet have basic knowledge and skills such as reading and writing, it is obvious that they have negatively been affected in all developmental areas, but their motor development has to be paid a special attention. Motor skills have to be evaluated not only in themselves but also in other developmental areas. Children in the 0-6 age period will achieve more permanent and healthy learning

by taking role models, observing, touching, doing, living, and experiencing (Şentürk et al., 2015). However, with online education emerged out of the COVID-19 pandemic, preschool children as other students at the k12 level had to have online education (Gayatri, 2020). So, they were not able to receive a conventional education aiming to achieve the aforementioned objectives, as the online education negatively affected their learning process.

Not only children and students but also most teachers did not have any experience about online education (Cordovil et al., 2021). They were all new to this difficult situation. In this process, they had to have done all the things that they normally do in the classroom environment on online platforms (Pölzl-Stefanec**,** 2021). Three things are very critical here: the first is implementing online education with young children, the second is establishing and maintaining home-based education with those preschoolers, and the last is parent involvement (Daniel, 2020). Moreover, teachers had to think about Internet connection and technology usage, and they also have to learn new applications for online education (Aspro et al., 2007).

1.1. Significance of the Study

Because of the COVID-19 pandemic, all the systems in the world have been affected in one way or another (Adnan & Anwar, 2020). These effects have been experienced sometimes negative and sometimes positive. As a natural consequence of the COVID-19 pandemic, the education systems had to change in some ways (İnan, 2020). Teachers and students kept faced with the significance of keeping up with technological development, as they had to do the lessons and all activities in digital ways (Chen et al., 2020). They had to learn what online education is and how to do online education with students, especially the youngest ones. For early childhood educators, it was more difficult because the young children have to experience, touch, and learn by doing new things with the aid of teachers (Duran, 2021). Without experiencing the new

things, how do children properly learn them? Especially considering motor development and motor activities, all children were alone in front of the screen and they did not touch each other or run after. It was impossible to play most traditional games.

Moreover, with the outbreak of the COVID-19 pandemic, some questions attained a significant dimension in the realm of education, such as inequality in education, difficulties with parent involvement, teachers' training especially on technology usage (Zoom, Meet), children's adaptation to wearing masks and physical distance necessity, policy considerations to support early care and learning programs, childcare challenges, health and safety risks of children and staff and school closure.

In this study, the purpose was to examine the early childhood education teachers' teaching experiences on the motor development of preschool children during the COVID-19 pandemic. The researcher of the study tried to learn the problems, especially about the online education process with preschoolers. When humanity encounters this kind of pandemic or any other difficulty, the experiences the people undergo become quite telling. Examining teaching experience during the COVID-19, the question as to how the education process can be developed constitutes the critical point of this study.

Examining the early childhood education teachers' teaching experiences on motor development of preschool children during the COVID-19 pandemic contribute to the early childhood education literature. This process lights the way for preparing the children's physical education programs more efficiently when they face pandemics or any other natural disaster. In these kinds of situations, children have to be transferred to online education, and educators have to be ready for these difficulties. In the light of the COVID-19 process, some changes and revisions can be implemented to prepare the children's physical education programs and curriculum for online education.

1.2 Purpose of the study

The purpose of this study was to examine early childhood education teachers' teaching experiences in the motor development of preschool children during the COVID-19 pandemic.

1.3. Research questions

1. Before the online lessons,
   a) What kind of preparations did early childhood education teachers do before the lessons?
   b) Which resources did early childhood education teachers use to be prepared for the online lessons?
   c) Did early childhood education teachers and parents have difficulties in finding resources and providing the materials for the online lessons?
2. During the online lessons,
   a) Which activities, teaching methods, and materials did early childhood education teachers use during the online lessons?
3. After the online lessons,
   a) How did early childhood education teachers evaluate the motor development and motor skills of their students?
   b) What kind of activities and homework did early childhood education teachers provide for both their students and parents?

1.4. Limitations of the study

Limitations of the study were listed as follows:

1. The present research was implemented during the COVID-19 pandemic. Therefore, the circumstances and conditions were difficult to reach people, get information about their experiences, make observations and collect data.

2. Only the early childhood education teachers who worked in a private school could participate in this study.
3. Almost 2/3 of the participants participated in the study from different campuses and different cities of the same private school.
4. There were some limitations of the survey method such as the risk of dishonest answers, confusion about survey questions, and reliability of the answers (Fraenkel et al., 2015).

1.5. Definitions of Terms

"Motor" as a term is often accompanied by other related terms which are used to indicate the importance of biological and mechanical factors such as age and gender, which affect movement, e.g., strength, balance, flexibility, speed, endurance, as in the terms psychomotor, perceptual-motor, sensory-motor, motor learning, motor control, and motor development. On one hand, physical educators tend to use the "motor" as an example with a particular focus on motor processes. On the other hand, psychologists and educators tend to use the term "motor" as a suffix such as psychomotor, perceptual, and sensorimotor (Özer & Özer, 2004). The terms commonly used in this field are explained below.

Movement: A change in the position of any part of the body or the whole body (Gallahue et al., 2012).

Growth: An increase and change in the size of an individual's body in height, weight, etc. (Santrock, 2011).

Development: A change in an individual's functioning level in time (Santrock, 2011).

Maturation: It refers to qualitative changes which allow progress for higher levels of functioning (Santrock, 2011).

Experience: It means factors within the environment that affect the learning process of an individual (Haywood & Getchell, 2014).

Physical activity: World Health Organization defines physical activity as any bodily movement performed by skeletal muscles that need energy expenditure (Orhan & Ayan, 2018).

Motor control: It is the study of the behavioral, physical, and neural aspects of the movement (Haywood & Getchell, 2014).

Motor learning: It refers to the long-lasting acquisition of motor skill capability which is related to experience and practice (Haywood & Getchell, 2014).

Motor development: Motor development means the physical growth and strengthening of a child's body in terms of his/her muscles, bones, and ability to move, touch, feel and recognize his/her surroundings. It is mostly associated with the cognitive development of a child as well (Gallahue et al., 2012).

Early childhood period: Early childhood period refers to physical, social-emotional, cognitive, language, and motor development between 0-6 years of age (WHO, 2016).

Fundamental motor skills: Those skills are accepted as building blocks for much more complex movement skills, and they are essential and needed to develop in the early years of life (Özer & Özer, 2004).

Locomotor skills: Locomotor skills refer to any movements in the body to change body position from one place to another place. For example, walking, running, jumping, sliding, skipping, galloping, hopping, and leaping are locomotor skills (Gallahue et al., 2012).

Non-locomotor skills: These are the movements such as spinning, swinging, bending, etc. without displacement(Haywood & Getchell, 2014).

Object control skills: Object control skills include object manipulation like catching, kicking, throwing, striking, rolling, bouncing, etc. (Payne & Isaacs, 2006).

Gross motor skills: The term gross motor development refers to physical skills that use large body movements, normally involving the whole body. Here, gross means “large” (Gallahue et al., 2012).

Fine motor skills: Fine motor skills refer to more complex and precise movements using the hands and fingers. Fine motor skills are different from gross motor skills because they require more sensibility and attention to perform (Gallahue et al., 2012).

Family: Family means a social group made up of parents and their children (TDK, 2021).

Online education: It a form of education in which the main elements contain physical separation of teachers and students during instruction, and the use of various technologies are used to facilitate student-teacher and student-student communication (Donohue&Fox, 2007).

COVID-19: Coronavirus disease is a kind of infectious disease caused by the SARS-CoV-2 virus (WHO, 2020).

CHAPTER II

REVIEW OF THE LITERATURE

This chapter includes the explanations of motor development, theoretical models for studying motor development, Dynamic Systems Theory, Newell's Constraints Model, importance of motor development and early childhood education, COVID-19 Pandemic, and online learning in early childhood education.

2.1. Motor Development

Movement is the epitome of life. All the things that people do in a day include movement. The existence of human beings is mostly based on movements such as heart beating, breathing, and our voluntary, involuntary, and semiautomatic behaviors. Realizing how an individual learns motor control and movement coordination is vital to understand how people live and how they move (Donnelly et al., 2017).

According to Özer and Özer (2004), comprehending the developmental process of children helps researchers and educators to provide critical information about the teaching and learning process. So, it would not be wrong to suggest that it is a kind of guideline. Without having any knowledge about the developmental process of humans, there could only be guesses at proper educational techniques and intervention processes. Here, according to these researchers, the important thing is the process of instruction. Instruction should be fun, developmentally appropriate, and age appropriate as well. Instruction is a significant point of view in terms of teaching and learning processes. However, instruction does not clarify learning, but development does.

In the early conceptualizations, the study of motor development was outshined by interest in affective and cognitive development. In 2011, Santrock stated that development was a continuous and lifelong process that began with conception and ceases only at death. The researcher claimed that acknowledging the concept of lifelong development was significant enough to keep in mind. Moreover, it can be said that development is related to age, but it is not age dependent. The process of development, especially motor development, brings to researchers' minds the individuality of the learners. Each person is unique and has a different timetable to gain and learn motor abilities. From a historical perspective, the study of motor development has gone through periods that have emphasized a variety of explanations about the developmental process (Sevimli-Celik, 2011).

In their motor development book, Haywood and Getchell (2014) defined the terms "motor" as "movement". The human being begins to develop physically even before the birth. The development speeds up in the early childhood period. On one hand, such movements as blinking or breathing are examples of lifespan human movement. On the other hand, such movements as walking, running, jumping, and kicking a ball are examples of conscious motor skills and movements. During the motor development process, sense organs, muscles, and the mind work together, this in return provides a control for movements. In that sense, motor development means that it is the voluntary mobilization of the organism parallel with physical growth and the development of the central nervous system.

Motor movements include all the movements in which humans interact with their environments (Payne & Isaacs, 2006). Payne and Isaacs (2006) stated that motor skills were divided into two main categories in terms of muscular aspects: gross motor skills and fine motor skills. Gross motor skills are developed first, and then the fine motor skills begin to develop, as it results from the physiological anatomy of humans. Besides, they remarked that a well-developed muscle and nervous system are needed for essential motor skills. To support these motor

skills of children, parents and educators have to prepare an appropriate learning environment, efficient activities, and enough materials for children, because these opportunities have a direct effect on the children's motor development.

The beginning of children's crawling and walking is the first step of independent movement for them. In this way, children start to be responsible for their movements. Children's first physical activities are gross motor movements. Gross motor skills contain basic physical actions which need to move the body. Crawling, standing, walking, running, jumping, and such movements are given as an example of the fundamental movements. As a result of developing these gross motor skills, fine motor skills can be shaped. For this reason, at an early age of children, they have to be directed to support their gross motor skills first. Fine motor skills are small, sensitive, and more detailed movements compared to gross motor skills. To illustrate, such movements as writing, cutting with scissors, tracing, coloring, grasping, and reaching could be given as examples to fine motor skills (Ward et al., 2007).

In addition to these, Gallahue, Ozmun, and Goodway (2012) divided motor skills into three categories in terms of their functions and aims: locomotor, non-locomotor, and object control skills. First, the locomotor skills are the skills that move the body from one place to another. In other words, these are the individual skills that are used to move the body through space by shifting the leg movements of the body from one base of support to another. Such movements as walking, running, jumping, leaping, skipping, hopping, and sliding are examples of locomotor skills. Second, the non-locomotor skills refer to the skills which enable one or more parts of the body continue to get in touch with the floor or an object, while other parts of the body move in different directions, levels, or pathways. For instance, bending, twisting, turning, pushing, pulling, stretching, swinging and these kinds of movements can be accepted as non-locomotor skills. Third, object control skills mean manipulative skills. These are combined movement patterns including one or more non-locomotor and locomotor skills with other movement skills and concepts, such as throwing, catching, striking,

dribbling, rolling, kicking, and swinging. This category for the concept of body is critical to understand the motor development because the actions of the whole body is a very complicated issue (Newell, 2020).

Table 2. 1. Stages of motor skill development

Babyhood (0-2 years)	**Early childhood (2-7 years)**	**Middle childhood (8-9 years)**	**Late childhood (10-12 years)**
Stage 1: Rudimentary Skills	**Stage 2: Fundamental Movement Skills**	**Stage 3: Refined Movement Skills**	**Stage 4: Specialized Skills**
Rudimentary Skills • Sitting • Crawling • Creeping • Standing • Walking	*Basic locomotor skills* Walking, running, leaping, jumping, hopping *Combined locomotor skills* Skipping, sliding, stopping, dodging *Basic non-locomotor skills* Bending, stretching, twisting, turning, pushing, pulling, swinging	*Combined or refinement of one or more fundamental skills* • Running • Jumping • Sliding • Stopping • Landing • Rolling • Catching • Throwing • Dribbling • Kicking	*Advanced & refined versions of sports, dance, or other specialized skills* • Running long jump • Football pass • Handspring

(Özer & Özer, 2004, p.12)

Along with this, motor skills are divided into three categories in terms of the temporal aspects of the movement. It means that the time series in which the movement occurs is significant. Discrete, serial, and continuous motor skills are stated under this category. The discrete motor skills have a clearly defined beginning and ending, such as a tennis serve. The serial motor skills consist of several separate discrete skills performed in a particular sequence in rapid succession, such as dribbling a basketball. Lastly, the continuous skills refer to the skills that are performed repeatedly several times, such as swimming and peddling a bicycle (Gallahue et al., 2012).

Apart from these, motor skills are divided into two categories in terms of environmental aspects of the movement: open and closed motor skills. The open motor skills are performed in an unpredictable and constantly changing environment such as in most computer games or wrestling. The other one, the closed motor skills, is the opposite to open motor skills. That is, the closed skills are performed in an unchanging and predictable environment such as putting in golf or word processing on a computer (Newell, 2020).

The following shows the four main aspects of movement and the categories.

Table 2. 2. Four main aspects of movement and the categories

Muscular aspects of Movement	**Temporal Aspects of Movement**	**Environmental Aspects of Movement**	**Functional Aspects of Movement**
Gross Motor Skills	Discrete Motor Skills	Open Motor Skills	Stability Tasks
Fine Motor Skills	Serial Motor Skills	Closed Motor Skills	Locomotor Tasks
	Continuous Motor Skills		Manipulative Tasks

2.2.Theoretical Models for Studying Motor Development

Salehi, Sheih, and Talebrokni (2017) claimed that motor development was a constant change that arises from the interaction between the biology of the individual and environmental conditions throughout the life cycle. This developmental process is related to age, but it does not depend on age. In other words, there are individual differences among all children. Each child is unique, and therefore their developmental process has to be evaluated in itself. Each

child is alone in his/her timeline in terms of achieving movement skills. The age period of development represents only approximate time intervals in which certain behaviors are observed. If educators and parents overvalue these periods, continuity, sensibility, and individuality of the developmental process can be damaged, unfortunately.

One of the most important motor development models is “Gallahue’s Life Span Model of Motor Development”.

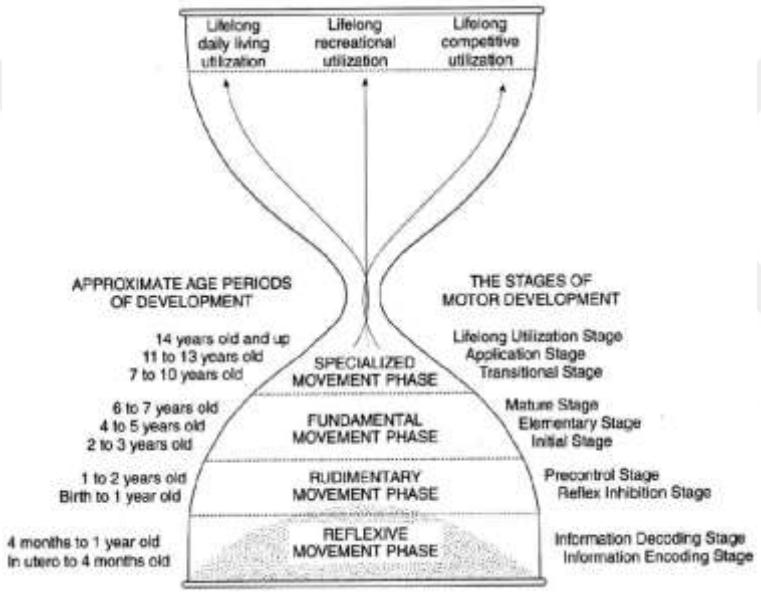

Figure 2. 1. Gallahue’s hourglass model
(Özer & Özer, 2004, p.88)

David L. Gallahue (1998), based on the ecological perspective, emphasizes and focuses on three critical factors: task, environment, and heredity. As this model has certain perspective stages and movements of development, the process of motor development is likened to tan hourglass. This hourglass model includes four phases which are respectively reflexive movement phase, rudimentary movement phase, fundamental movement phase, and specialized movement phase. Each phase consists of various stages.

In this model, phases and stages overlap each other, which means that individuals have to complete the end of one phase and then begin the next phase. For instance, all around the world, children learn how to sit before standing, how to stand before walking, and how to walk before running. In this model, proximate ages for all phases and stages were identified. Because of the genetic factors and environmental conditions, there may occur differences among individuals in terms of the age range of each period. (Salehi & Sheikh, 2017).

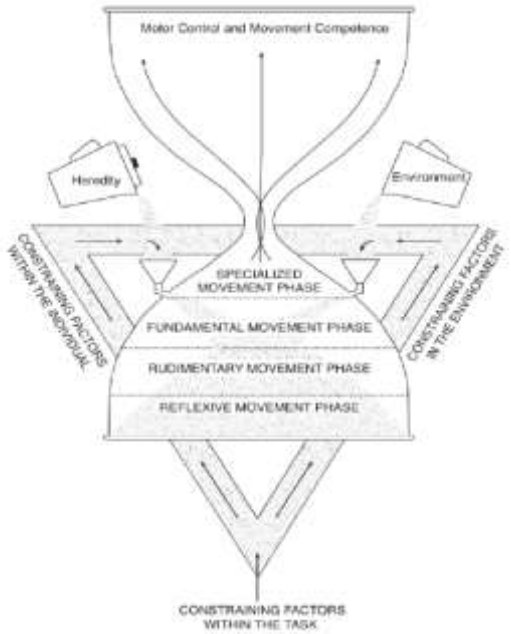

Figure 2. 2. Gallahue's hourglass model and constraining factors within the individual

(Gallahue et al., 2012, p.57).

In the hourglass model, Gallahue, Ozmun, and Goodway (2012) stated that the first period wascalled the 'reflexive movement phase'. Here, the definition of reflex is significant. Reflex can be defined asa kind of sudden, unexpected, and unintentional movement toward a specific stimulus. For example, if a person puts her/his hands on a hot surface, a reflex causes her/him to remove her/his hands immediately from that hot surface, which is called a protective reflex for humans. Through reflexive activities, the infants get information about their

environments. Their reactions to sounds, lights, touch, and changes have a significant role and effect on involuntary movements. These involuntary movements also help children to learn and explore their bodies and environments, as well. Reflexes are the first forms of human movement. Therefore, instead of learning, they are considered and accepted as 'abilities' rather than 'skills', as skills are not reflexive movements.

The second period is called the 'rudimentary movement phase'. These movements are the first forms of voluntary movements, and they are observed in infancy which covers the period between birth and roughly the age of two. Gallahue argues that childhood voluntary movements are called rudimentary movements because these movements are the simple and easy forms for more advanced movements in the latter. Besides, rudimentary movements are divided into three subcategories: stability movements, manipulative tasks, and locomotor movements. While gaining control of the head, neck, and trunk muscles is an example of stability movements, reaching, grasping, and releasing can be accepted as manipulative tasks. On the other hand, creeping, crawling, and walking are known as locomotor movements (Gallahue et al., 2012).

The third period of Gallahue's hourglass model is the 'fundamental movement phase'. Fundamental movement patterns are essential and the main observable patterns of children's motor behavior. Manipulative tasks such as catching and throwing, locomotor movements such as jumping and running, and stability activities such as one-foot balance are accepted as fundamental movement skills. These skills should be developed, and children have to be supported and encouraged to develop these skills in the early childhood period. The environmental conditions, appropriate instruction, encouragement, and ecology have a critical role and significance to develop these skills in the early years of life. Moreover, there are age-related differences in terms of performance and learning of these motor skills. Gallahue separated this phase into three subcategories: the initial stage, the emerging elementary stage, and the proficient

stage, respectively. In the light of all these, it might be claimed that Gallahue perceives the fundamental movements as basic movements for future and advanced skills throughout life (Gallahue et al., 2012).

The last stage of Gallahue's hourglass model is the 'specialized movement phase'. According to Gallahue, Ozmun & Goodway (2012), the skill development of this phase is associated with a variety of tasks, individual and environmental factors. Coordination, weight and height, body type, movement speed, reaction time, culture, customs, peer pressure, and emotional makeup can be thought of as examples of constraining factors. This phase also includes three stages: the transitional stage, application stage, and lifelong utilization stage (Salehi at al., 2017).

To realize motor development in itself is not a simple undertake, because explaining motor development requires a great deal of knowledge about humans. Moreover, not only information about motor development issues but also other developmental facts such as biological and mental features are needed as well. At this point, there appears many questions in researchers' minds. For example, why do some people develop their motor skills better than other people? Or, what is the relationship between the appearance of one motor skill and the disappearance of another motor skill? In that respect, metaphors, theories, models, and approaches help us to have a clear insight into lifespan human motor development (Salehi at al., 2017).

Throughout history, some metaphors have been used to clarify how motor skills develop. On the one hand, many of them have accounted for processes or products of motor development, but on the other hand a few of them have provided a clear explanation and perspective to understand motor development in terms of both processes and product integration. Clark's and Metcalfe's metaphor, "The Mountain of Motor Development: A Metaphor" becomes important to understand both the processes and products of motor development.

This metaphor emphasizes the interactive, cumulative, and sequential characteristics of motor development (Salehi at al., 2017).

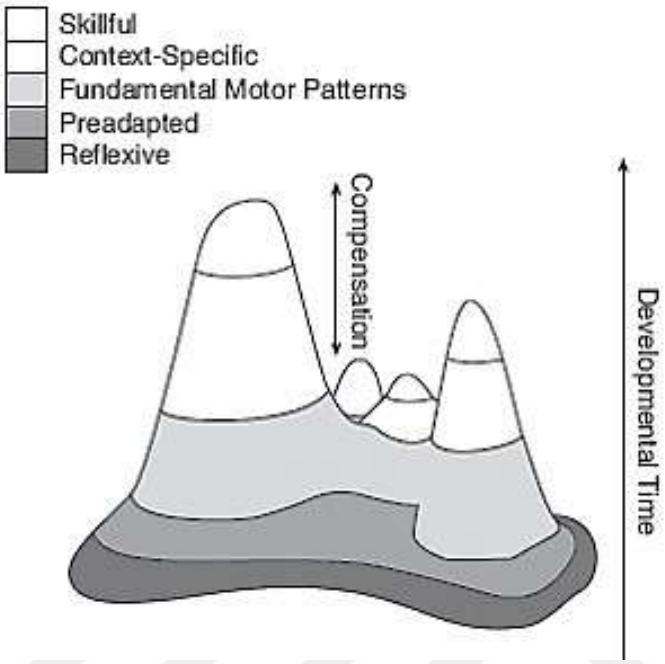

Figure 2. 3. The Mountain of Motor Development: A Metaphor (Gallahue et al., 2012, p.58).

The first stage of the mountain metaphor begins with birth and continues after about two weeks. This stage is called the 'reflexive stage' and it consists of primitive reflexes and postural reflexes and reactions. Primitive reflexes are involuntary responses, and they occur toward stimulus through lower brain centers. In addition, these reflexes are necessary to survive during the first days after birth. Palmar grasp, sucking, search, moro, startle, asymmetrical and symmetrical tonic neck, plantar grasp, Babinski reflex, palmar mandibular and palmar mental reflex are examples of primitive reflexes. Postural reflexes and reactions help the infant maintain posture in changing environment and they provide a basis for later voluntary movements. Crawling, stepping, swimming, head and body righting, parachuting reactions, labyrinthine, pull up, arm and leg stereotypes can be counted among postural reflexes (Salehi at al., 2017).

The second stage is the ‘preadapted stage’. In this stage, the infant’s behavior started to be target-oriented. This stage comes to an end when the infant begins to walk independently and succeeds in self-feeding. At this point, the infant has all the needs to survive at the most primitive standard (Gallahue et al., 2012).
The next stage is the ‘fundamental motor patterns’. At this stage, the child gains essential coordinative patterns to shape the basis of more developed skills such as dance, game, and sport (Haywood & Getchell, 2014).

After the fundamental motor patterns stage, the ‘context-specific motor skills’ stage starts. The critical point of this stage is that the patterns are used and changed for a specific target. For instance, the striking pattern is used and adapted for playing tennis, baseball, or golf (Haywood & Getchell, 2014).

The ‘skillfulness’ period is sitting at the top of the mountain of motor development. When a person becomes a skilled motor performer, it means that she/he has reached the top of the mountain. However, sitting on the top of the mountain does not last forever. For example, injuries, aging, or other situations may affect this process. Moreover, if a skilled motor performer does not practice enough and does not work hard, she/he cannot stay permanent on the top of the mountain, as well (Clark, 2007).

2.2.1.Dynamic Systems Theory

Dynamical systems theory developed by Thelen (1990) indicates that new behavior patterns emerge as a result of the collaborative interactions of various components in the task content. Thelen states that motor development emerges spontaneously as a result of the interaction of the body and its components, and it shapes behavior patterns. To develop their motor skills, babies must first perceive certain things in their environment (Kamm at al., 1990). Thus, babies are motivated for action, and they can use their perceptions for fine and symphonious movements. For example, when a baby is lying on her bed and if

she sees the mobile swinging at the head of the bed, it attracts her attention. Firstly, she looks at it, moves, makes some noise, reaches out, and then she tries to catch it (Lunkenheimer, 2018).

Dynamic systems theory suggests that development is not linear but a discontinuous process, and motivation has a critical role to learn motor skills. Support in the environment for the child's goals and skills, development of the central nervous system, and physical characteristics are necessary factors for each new skill or behavior. A change in any of these factors causes the system to be less stable and causes the child to seek new and more effective motor patterns (Haywood & Getchell, 2014).

Babies have more potential, abilities, and perceptual and conceptual skills than giving reflexive responses to external stimuli. This theory offers a perspective that emphasizes the significance of education by centering on individual development rather than age range (Kamm at al., 1990).

2.2.2. Newell's Constraints Model

Karl Newell (1986) suggested a model to explain how motor skills were acquired and learned. This model suggested by Newell points out that motor skills proceed from the interaction of three essential factors. Although there is a belief that constraints are like some barriers in the development process, they are not always cases or barriers according to this constraint model. Newell describes a constraint as a task, environmental, or individual-related factor, which shapes or affects the outcome of movement or motor pattern that is observed. There is an interaction between the task, organism, and environment. In other words, to recognize the movement process, the relationships among the individual, the individual's surroundings, and the individual's purpose have to be considered together. As a result of this relationship and interaction, specific movements are shaped. Newell's constraints model brings to our minds that all three corners of

the triangle have to be taken into accounting order to understand motor development clearly. Furthermore, dynamic systems theory supports Newell's constraints model (Hamilton et al., 2001).

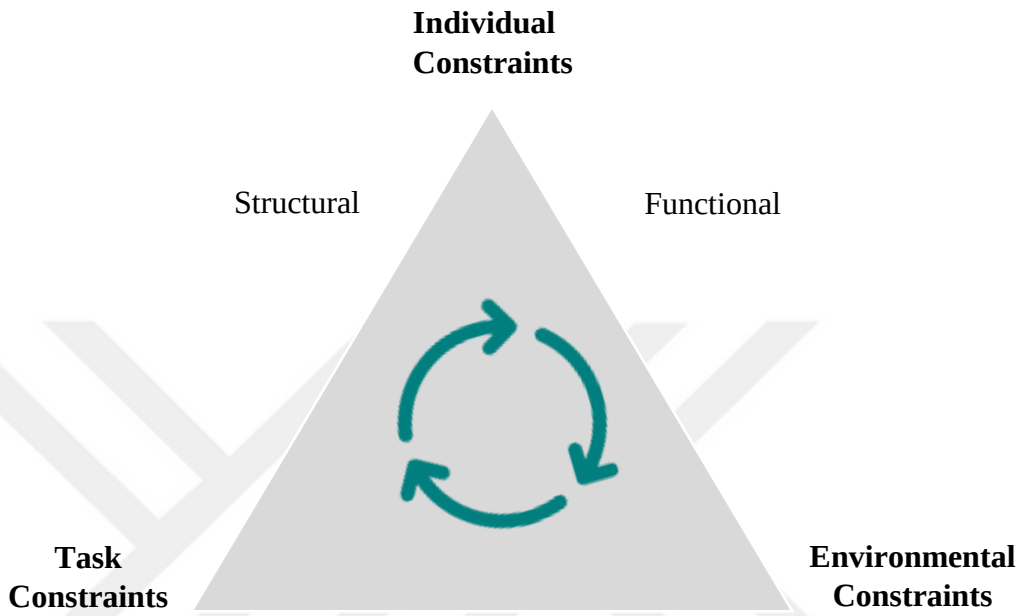

Figure 2. 4. Newell's Constraints Model

According to Newell's model, a constraint can be defined as a characteristic of the individual, task, or environment that supports some movements while not giving support to others. As the table demonstrates the model includes the interaction of individual constraints, task constraints, and environmental constraints. Individual constraints are the unique mental and physical characteristics of an organism or an individual. Haywood and Getchell stated that individual constraints could be either structural or functional. While the structural constraints are related to the body structure of the person, the functional constraints are associated with the individual's behavioral function. Environmental constraints refer to the world around us. Task constraints contain the aims and rule structure of a specific activity or movement (Newell, 1986).

2.3. Motor Development and Early Childhood Education

The process that contains the years from birth to primary school is defined as the early childhood period. The cognitive and physical developments of individuals accelerate in this period, and the basics of their future lives are laid and shaped in this process. The gains obtained in this developmental period greatly affect the children's future lives. For this reason, the early childhood period has a critical role (Duran, 2021). However, the individuals' characteristics, habits, behaviors, and attitudes are not only shaped in the early childhood period. They are also affected by genetics, environment, education, culture, nutrition, and such kind of factors. These factors have a significant effect on the mental and physical development of individuals (Özyürek, 2015).

According to Özer and Özer (2004), children who are in the development process cannot completely understand their bodies, abilities, needs, and interests, and they cannot be aware of their environment. Expressing and explaining their thoughts and feelings are very difficult for them. Therefore, parents and educators have to know child development at a satisfying level to raise them properly. To raise mentally and physically healthy children, the characteristics of child development have to be familiar with to a certain extent (Haywood &Getchell, 2014). If the characteristics of child development are well known, a good education can be provided in that way. In the child education environment, physical activities should be given particular importance to make children learn and explore new things. Especially, they have to have an opportunity and chance to interact with nature, animals, and objects. Applying a variety of physical activities, the fine and gross motor skills of children should be supported in the early years. For this reason, parents and educators have to organize and prepare the environment and curriculum at school and home as well.

Motor development begins with the prenatal period. It gains a sudden intensity in the early childhood period and loses its effects after that period. The basis of

physical and motor, social and emotional, language and cognitive developments of children are shaped in the early childhood period (Özer & Özer, 2004).

The most important feature of the motor development process is accepted as the child's continuous development and growth in the early years of life. In these years, child development contains visible and invisible growth, so his movement is at the forefront. The first communication and interaction between baby and mother are based on the baby's movement (Gallahue et al., 2012).

Table 2. 3. Motor Development Milestones

6 months	***1 year***	***2 years***	***3 years***
Start to sit unsupported	The point at objects/people	Able to kick a ball	Infantile reflexes absent
Rollover	Able to creep/crawl	Can crawl through tunnel	Climb stairs left and right
Push up from the tummy	Pick up small food	Able to walk	Jump with two feet
Make deliberate moves	Able to stand	Able to throw a ball	Walk across the small beam
Can grasp an object	Joins in with peek a boo	Can hold a thick crayon	Can climb slide ladder
Moves object to mouth	Puts objects in/out of the box	Stacks 3 to 4 blocks	Can clasp hands
4 years	***5 years***	***6 years***	
Able to hop on one foot	Walks heel to toe	Reaction time is improving	
Can walk backward	Able to skip but no rope	Able to hit a ball with a bat	
Can pedal tricycle	Control fingers individually	Changes directions easily	
Able to zip a zipper	Pick up small objects (pincer)	Able to throw towards the target	
Draws beyond a scribble	Do up buttons	Use a pincer grip to write	
Can copy body movements	Can cut simple shapes	Stand on one foot for 6 seconds	

(Gallahue et al., 2012)

The table shows the milestones of motor development in the early childhood period (Gallahue et al., 2012). However, it should not be forgotten that each child develops differently, and there are individual differences in development (Özer & Özer, 2004).

2.3.1. The COVID-19 Pandemic and Online Learning in Early Childhood Education

As a result of the COVID-19 pandemic in 2020 and 2021, education strategies and techniques have changed (Adedoyin & Soykan, 2020). It means that face-to-face education has left its place to online education (Kim et al., 2021). Online education is an educational process that is applied through the Internet as a form of distance education (Shin & Lee, 2009). Because of the COVID-19 pandemic and the emerging conditions, online learning and teaching had an inevitable role in early childhood education programs although educators and parents debate the technology and Internet usage of little children too much (Cordovil et al., 2021). However, especially teachers who worked in private schools had to conduct online education with young children faced many challenges due to the reasons beyond their control (Weigel et al., 2012).

During COVID-19 process, teachers used many applications, programs, and educational tools to support students. For instance, they used “Emaze” for evaluation a topic, “Padlet” for brainstorming, “Canva” for preparing posters, “Powtoon” or “GoAnimate” for animation, “StoryJumper” for digital stories, “CrossWordLabs” for crossword puzzles, “Easelly” for design template, “Bubbl” for mind map, “Flipped Classroom” for learning platform, and “Popplet” for saving and sharing lecture notes (Yarının Eğitimi, 2019).

This online education process had affected by some factors such as timing, communication, examples of tools, technique issues, the role of the early childhood education teachers, and the role of the parents (Kim, 2020). There are

some educators and researchers who believe that preschoolers need to use Information Communications Technology (ICT), and it is beneficial not only for the children but also for the educators **(**Košir et al., 2020).However, others think that technology has many risks, limitations, and disadvantages (Hu et al., 2021). Meanwhile, many children are exposed to and use technological devices and tools as a daily routine (Aspro et al., 2007).

For example, during online education, the teachers faced many difficulties such as Internet connection problems, technology usage like Zoom, and Meet programs, parents' involvement during online sessions, attention time of children to online lessons, and their home environment (Solekhah, 2020). There was a lockdown process, and they needed many materials for the lessons (Çelik & Çak, 2021). They had difficulties providing educational materials for preparing the activities. Besides, teachers had to lead the parents to supply their children with educational materials and they had to solve the accessibility problems of the materials (Anggriawan, 2020). Apart from these, they were trying to keep children's attention on the computer screen. However, when the short attention time of preschool children is considered, it is understood that this was very difficult (Gayatri, 2020). Moreover, teachers have a private life; they may have children, so they have to care about their children. Therefore, some teachers may have a social role both as a parent and a teacher. For example, when their students are trying to connect online lessons, some teachers have to do online lessons at the same time. If there is one computer or smart phone or tablet at home, what are they going to do in that situation? How can inequality in education be solved in terms of reaching technological devices?

In the following, there are some question marks appeared during the COVID-19 (Bağçeli-Kahraman &Apak, 2021).

- How did early childhood education teachers support preschoolers' motor development during the online education process?

- What did they observe about children's motor skills during online education?
- How did they evaluate and assess children's motor development in this process?
- How did early childhood educators view the school adaptation process?
- According to early childhood education teachers, how was children's adaptation to school affected by the COVID-19 pandemic?
- How did schools manage the process of the COVID-19?

The critical point is that this process should be evaluated by categorizing the process asbefore the COVID-19 pandemic, during the COVID-19 pandemic, and after the COVID-19 pandemic. However, it cannot be known anything about after the COVID-19 pandemic process for now because it has not come to an end yet completely. It might be compared to the periods which are determined by the government and the policies. For example, during the period of 2020-2021, schools were closed and opened again and again in short ranges. This affected the children's school adaptation process directly. Moreover, when children came to school, they had to wear a mask and had to follow the physical distance rules and cleaning requirements (Bağçeli-Kahraman &Apak, 2021). That was an unusual situation for both educators and students. Especially, preschoolers needed to move and play much more than other students in the school and classroom environment. Therefore, they had difficult times while playing and moving with a mask and following the physical distance rules. In parallel with this situation, educators had to prepare the activities and organize and design the environment according to these pandemic circumstances. They had to consider health risks to children. Besides, they had to make a PCR test frequently, because they had a risk for the COVID-19. This forced them financially.

Additionally, according to the education evaluation report of Tedmem (2021), the number of enrolments in schools decreased because of the COVID-19 pandemic. This information is supported by a result of a report. In 2019-2020,

174.750 teachers were working in private schools across the country. However, this number declined to 162.215 in the 2020-2021 education period. In the whole picture, the employment of the early childhood education teachers had to face with 14.86% decline rate, which equals to 3.376 teachers. In other words, 3.376 early childhood education teachers did not work because of the COVID-19 pandemic. Furthermore, there was a 33% decline rate in terms of enrolment in schools in the early childhood education field during this period. This is the most decrease rate compared to the other levels (primary school, elementary school, and high school). There could be many reasons behind this. For instance, as early childhood education was not compulsory, some parents did not give consent to send their children to school because of the COVID-19 risk (Tuzcuoğlu et al., 2021). Moreover, they were not sure about the school closure policies of the administrators of the schools and the government. Moreover, the policies changed frequently with regard to coronavirus cases. For example, when a student or a teacher catches the COVID-19 in a class, what is going to happen? Will the class be quarantined, or will they continue the education with online sessions? Such situations were very confusing for parents, students, and educators (Daniel, 2020).

Along with it, the vaccination issue caused some problems, because educators and school staffs wanted to be vaccinated and have priority. They thought that the coronavirus was spreading faster and easier among children, so they had much more risk than other people.

Apart from these, when schools opened for face-to-face education again, early childhood educators realized that preschool children's whole developmental areas were affected negatively, especially in terms of motor development and social-emotional development (Bağçeli-Kahraman &Apak, 2021). For example, they could not play with their peers, and as a result of this,

- They could not be socialized properly.
- They could not communicate with their peers.
- Their physical and motor development was affected negatively because they could not move freely outdoor however they wanted.
- They could not get proper early childhood education; therefore, their fine motor skills were affected negatively, such as cutting with scissors or using pencils accordingly.
- The COVID-19 pandemic created feelings of anxiety and fear in both preschool children and preschool teachers.
- Preschool children missed their school, their teachers, and their friends so much, and they wanted to return to their schools as soon as possible.
- Some preschool teachers were happy because they were with their families during this process.

Duran (2021) conducted a study, aiming to evaluate the effects of the COVID-19 pandemic on preschool education. The researcher used an open-ended questionnaire, and 140 preschool teachers participated in this study. As a result of this study, the researcher found that

- The process caused to spent time so much at home, and distance education made preschool teachers more passive.
- Teachers benefited from more art activities, literacy activities, and games during distance education. Activities (stories, experiments, and dramas) were mostly related to the COVID-19, cleanliness, and hygiene.
- The developmental evaluations and assessments of children during the COVID-19 pandemic process could not be fully and successfully made.
- Teachers did not find the distance education system appropriate and beneficial for preschool education.

- In this process, children were exposed to the negative effects of technological devices such as tablets, computers, and smart phones by spending much time before the screen.
- Participation of families positively affected children's education process.
- Internet and computer problems were experienced during distance education.

In another study by Gökçe et al. (2021), the researchers aimed to evaluate preschoolers' views about the COVID-19 pandemic process. The participants consisted of 43 preschool children who were students at public schools. The findings of the study showed that if appropriate guidance were provided for young children, they could be adapted to the new situation in a more comfortable way. Moreover, they were negatively affected in terms of socially and emotionally and they were exposed to digital games rather than physical games, unfortunately.

Alisinanoğlu et al. (2020) conducted another study to examine the family views on childhood fears during the pandemic process. 34 parents participated in this study, and the results showed that parents had some difficulties because their children cried for no reason, had temper tantrums, or shouted.

In short, early childhood education has been affected in some ways during the pandemic, but some solutions and revisions were offered for the early childhood curriculum in the light of this study. The most important point was that early childhood education teachers were not comfortable in terms of many aspects. They felt that they were not efficient and successful during the online education process. If they had a chance of choosing the type of education, they mostly would prefer face-to-face education with preschoolers. Overall, the education system, children, teachers, and parents were affected in some negative ways because of the COVID-19 pandemic and the online education process (Gökçe et

al., 2021). However, humanity has to take lessons from the COVID-19 pandemic, as it is a very important experience for humankind.

CHAPTER III

METHOD

The major focus of the current study was to examine the early childhood education teachers' teaching experiences on the motor development of preschool children during the COVID-19 pandemic. Following this aim, this chapter presents the prerequisite information including sampling and participants, research design, data collection procedures, data collection instrument and data analysis.

3.1. Research Design

A descriptive model was used to collect data. Descriptive research is a method to obtain the description of a subject or activity of interest. In this research type, the case or sample are studied, and data obtained from these cases or samples is described in detail to realize the main focus of the study. By conducting an online survey, quantitative data was collected from early childhood education teachers who worked in private schools (Büyüköztürk, 2005).In addition, qualitative data was considered to be necessary to acquire further information from the teachers in order to understand their perceptions and experiences on online education during COVID-19 pandemic period.

As a method used in this research, survey research designs have three major characteristics. First, it aims to describe some features or aspects of the population through using sampling. To make a description of the opinions, beliefs and abilities, researchers prefer using a survey (Büyüköztürk, 2005). Second, the main way to collect data from the participants is to ask questions

related to the interest ofthe study. Asthe last characteristic, if researcherswould like to to use a survey, they need a sample to survey with them.

3.2. Sampling and Participants

The study was conducted via online and digital tool called “Google Forms”. Through this tool, an online survey was applied to collect data from the participants across Turkey. The number of the participants were 294 (291 women and 3 men) and they were early childhood educators working in private schools. The purposive (convenience) sampling method was used to determine the sample. The link to the online survey was shared with both teachers and school administrators through e-mails and messages. The survey included questions regarding age, educational status, living place, job description, teaching experience in the field, the age range of class, and classroom size.

Table 3. 1. Gender distribution of participants

	Frequency	Percent
Woman	291	99,0
Man	3	1,0
Total	294	100,0

As during the COVID-19 pandemic private schools provided online education for their students, teachers simultaneously experienced this period with preschoolers. Therefore, the online survey targeted private school teachers. Moreover, because of the difficult conditions of the COVID-19pandemic, online survey was preferred since it provided easier, healthier, more efficient, and cost-effective way to collect data than other data collection instruments and techniques.

The age range of the participants was shown in the table below.

Table 3. 2. Age ranges of the participants

	Frequency	Percent
20-30 Ages	161	54,8
31-40 Ages	109	37,1
41-50 Ages	23	7,8
51+	1	,3
Total	294	100,0

Educational status of the participants could be described as follows:144 participants had bachelor's degrees, 114 participants had two years' degrees, 22 participants had a master's degree, 11 participants had a high school degree, 2 participants were university students, and 1 participant had a Ph.D. degree.

Table 3. 3. Educational background of the participants

	Frequency	Percent
High School	11	3,7
Associate Degree	114	38,8
Bachelor's Degree	144	49,0
Master's Degree	22	7,5
PhD	1	,3
Total	292	99,3
Missing System	2	,7
Total	294	100,0

The participants lived in different cities and participated inthe study across the country. There were more participants from Ankara, İstanbul, İzmir compared to other cities.

Table 3. 4. Cities of the participants

	Frequency	Percent
Muş	6	2,0
Afyon	3	1,0
Tekirdağ	15	5,1
Manisa	2	,7
Kayseri	9	3,1
Antalya	38	12,9
Kocaeli	2	,7
Kütahya	4	1,4
Bursa	4	1,4
Gaziantep	4	1,4
İstanbul	78	26,5
Ankara	39	13,3
İzmir	21	7,1
Adana	7	2,4
Ordu	4	1,4
Ağrı	4	1,4
Tokat	7	2,4
Nevşehir	13	4,4
Yalova	6	2,0
Trabzon	5	1,7
Diyarbakır	2	,7
Mersin	4	1,4
Şanlıurfa	1	,3
Osmaniye	1	,3
Muğla	1	,3
Denizli	2	,7
Düzce	2	,7
Erzurum	1	,3
Balıkesir	2	,7
Karabük	1	,3
Kastamonu	1	,3
Iğdır	1	,3
Kilis	3	1,0
Konya	1	,3
Total	294	100,0

Furthermore, the participants' teaching experience in the field was asked, because it was a critical issue to consider online education with preschoolers. 206 participants had been working for 1-10 years, 76 participants for 11-20 years, 10 participants for 21-30 years, and 1 participant had been working up to 31 years. However, 1 participant did not respond the question correctly.

In addition to that, the age range of the classes and classroom sizes were asked of the participants, which were demonstrated in the following tables to understand more clearly.

Table 3. 5. The age range of the classrooms

	Frequency	Percent
Missing Data	8	2,7
3-4 Ages	12	4,1
4-5 Ages	78	26,5
5-6 Ages	196	66,7
Total	294	100,0

The table shows that 12 classrooms had a 3-4 age range, 78 classrooms had a 4-5 age range, and 196 classrooms had a 5-6 age range. In the light of this table, it might be stated that among these participants online education was applied mostly to 4-6 ages rather than under 4-year-old children. 8 participants did not give a correct answer to this question.

Table 3. 6. Classroom sizes

	Frequency	Percent
Missing	1	,3
1-10 Children	24	8,2
11-20 Children	255	86,7
21+ Children	14	4,8
Total	294	100,0

The table demonstrates the classroom sizes, and it was observed that most classrooms had11-20 children. 2 participants did not give a correct answer to this question. In short, almost 4600 children were observed by their early childhood education teachers during the online education process throughout the COVID-19 pandemic.

3.3. Data Collection Procedures

This study was conducted between December 2021 and January 2022 through an online survey. Before the study, the approval of the Applied Ethics Research Center of Middle East Technical University (see Appendix A) was acquired to ensure that the study was ethically appropriate. After that, the researcher contacted with the Ministry of National Education to obtain legal permission to deliver the online survey to early childhood education teachers in private schools (see Appendix B). All aspects of the measurement were explained to the participants in a written way. After completing the survey part of this research, the teachers were also invited for a focus group interview. Only five teachers accepted to take part in the interview process. This semi-structured interview lasted around one hour.

3.4. Data Collection Instrument

An online survey was conducted with early childhood education teachers to collect information about their teaching experiences and observations during the online education process throughout the COVID-19 pandemic. This survey was prepared by an early childhood education teacher (the main researcher) and a motor development expert by following the steps of the process of developing a survey. First of all, an extensive literature review was carried out, in particular, on the areas of motor development, educational research, early childhood education, and the COVID-19 pandemic. Then, the major problem was defined, and the purpose and questions were stated. The items were written, and a draft

was determined. After that, 3 specialists in motor development checked the draft. Lastly, all the revisions were completed, and the final draft was formed. Moreover, in this process, the survey was checked several times, then applied with 5-6 early childhood educators to ensure the clarity of the questions, usage of neutral, analytical, and respectful language, and practicality. The survey was reformed according to the feedback received from these educators. After all these processes, the online survey was conducted with the target teachers. These processes were carried out for content validity.

All quantitative data were collected via the online survey, which consisted of 2 main parts. The first part included some demographic questions such as gender, age, living place, educational status, job description, and teaching experience in the field, the age range of class, and classroom size. These questions were essential and beneficial to understand the general characteristics of the participants. The second part contained 21 questions. 20 of them were closed-ended questions, and only the last question was an open-ended question to reach individual and diverse perspectives on the issue.

These 20 closed-ended questions had a logical categorization in themselves. According to this logic, the questions focus on three consecutive stages of online lessons, i.e., before, during and after the online lessons. For example, such questions aimed to be answered: before the online lessons, what kind of preparations did early childhood education teachers make in terms of materials, content, and sources; and during online lessons, which techniques, materials, and sources did they use; and after the online lessons, how did they follow their students' motor development? In short, the survey has aimed to focus on all three stages of presenting a lesson. The whole survey was added to Appendix C.

Qualitative data for this study was collected through a focus group interview. A series of questions for the interviews were prepared by the main researcher and a motor development expert, driven by the research purposes of this study and

related literature on COVID-19 and online education. Then, another motor development expert checked the clarity of the questions, and five questions were finalized for the interview process. The following questions were asked to obtain perspective and perceptions of early childhood education teachers on online education to support their students' motor development during COVID-19 period.

1. What do you think about online education in general?
2. What types of teaching methods did you use to support motor development of preschool children during online education process? (Especially for fine motor skills and gross motor skills)
3.What types of technological educational tools did you use to support motor development of your students?
4. Did you have any opportunity to assess and evaluate motor development of your students during online education process? If yes, how did you do that?
5. What kind of difficulties did you experience in online education during the COVID-19 pandemic? What were your solutions about these problems?

3.5. Data Analysis

Descriptive statistics (mean, standard deviation, range, frequency, percentage) were used to analyze the quantitative data. In this part, Statistical Package for the Social Sciences (SPSS, version 26.0) was employed for all analyses. On the other hand, content analysis method was used to analyze the qualitative data with the explanatory purpose for the data accumulated from the quantitative research.

CHAPTER IV

RESULTS

This chapter contains the results of data analysis related to the research questions. Findings for each question were displayed respectively. Besides, research questions consisted of three main categories: before the online lessons, during the online lessons, and after the online lessons. First, before the online lessons part was discussed, then it continued during the online lessons part, and lastly, it ended after the online lessons part.

4.1. Research Question 1

1. Before the online lessons
   a) What kind of preparations did early childhood education teachers make before the lessons?
   b) Which resources did early childhood education teachers use to be prepared for the online lessons?
   c) Did early childhood education teachers and parents have difficulties in finding resources and providing the materials for the online lessons?

Survey questions 2, 10, 11, 12, and 13 were related to part of before the online lessons; therefore, the results of these questions were described in this section.

> "Q2. Did you make any preparations to support the motor skills of your students before starting the online lessons? If your answer is yes, what kind of preparations did you make? You can choose more than one option."

Table 4. 1. Question 2

	Frequency	Percent
Yes	287	97,6
No	7	2,4
Total	294	100,0

Table 4. 2. Question 2 cont.

	Responses	
	N	Percent
Preparation of the lesson plan	225	19,1%
Decide on the activities	223	19,0%
Preparation of the videos	132	11,2%
Preparation of the PPT	88	7,5%
Preparation of the materials	229	19,5%
Give information about the lesson to parents before the lessons	171	14,6%
Search for resources	103	8,8%
Others	4	0,3%
Total	1175	100,0%

The early childhood education teachers were prepared for online lessons. They mostly prepared the materials, lesson plans, and activities before the online lessons. More than half of them gave information about the lesson to parents before the lessons. Along with it, they prepared videos. They mostly did not prepare PPT and search for resources.

> "Q10. What kind of resources did you use to support the motor development of your students during the online education process?"

Table 4. 3. Question 10

	Responses	
	N	Percent
I produced activities and materials myself.	194	21,1%
I used books, magazines, and these kinds of written sources.	139	15,1%
I searched on the Internet.	221	24,0%
I compared notes with my colleagues.	173	18,8%
I used the school sources that I work for.	190	20,7%
Others	3	0,3%
Total	920	100,0%

This table shows that the early childhood education teachers mostly made search on the Internet and produced their activities and materials. In addition to that, they used the school's sources that they worked. Moreover, they used written sources and shared their ideas with their colleagues as well.

"Q11. How hard was finding resources about motor skills to support the motor development of your students during the online education process?"

Table 4. 4. Question 11

	Frequency	Percent
Extremely hard	12	4,1
Very hard	27	9,2
Hard	172	58,5
Not hard	83	28,2
Total	294	100,0

Most early childhood education teachers thought that finding resources about motor skills to support the motor development of their students during the online education process was hard.

"Q12. How hard was providing materials for online lessons?"

Table 4. 5. Question 12

	Frequency	Percent
Extremely hard	14	4,8
Very hard	31	10,5
Hard	181	61,6
Not hard	68	23,1
Total	294	100,0

Similar to their responses to the question 11, most early childhood education teachers thought that providing materials for online lessons was hard.

> "Q13. Did parents provide the materials to use in the online lessons for their children during the online education process?"

Table 4. 6. Question 13

	Frequency	Percent
Yes	143	48,6
No	13	4,4
Partly	138	46,9
Total	294	100,0

Results show that the parents mostly provided the materials to use in the online lessons for their children during the online education process.

4.2. Research Question 2

During the online lessons

a) Which activities, teaching methods, and materials did early childhood education teachers use during the online lessons?

Survey questions 1, 3, 4, 5, 14, and 15 are related to during the online lessons therefore the results of these questions were described in this section.

> "Q1. How often did you apply motor skills activities to support the motor development of your students during the online education process?"

Table 4. 7. Question 1

	Frequency	Percent
Never	2	,7
Rarely (1-2 Days)	19	6,5
Sometimes (3 Days)	73	24,8
Often (4 Days)	117	39,8
Always	83	28,2
Total	294	100,0

As shown in the table, the early childhood education teachers included motor skills activities in online lessons for at least 4 days to support the motor development of their students during the online education process.

> "Q3. What kind of activities did you apply to support the motor development of your students during the online education process? You can choose more than one option."

Table 4. 8. Question 3

	Responses	
	N	Percent
Morning Exercise	235	8,9%
Rope Games	45	1,7%
Ball Games	93	3,5%
Hula Hoop Games	43	1,6%
Rocket Games	13	0,5%
Stability & Balance Movements	149	5,6%
Imitation of Animal Movements	158	6,0%
Breathing Exercises	141	5,3%
Playing with Playdough	205	7,8%
Transferring & Picking Activities	110	4,2%

Table 4.8. (continued)

String	169	6,4%
Cut & Paste Activities	236	8,9%
Holding & Controlling Pencil	211	8,0%
Attaching & Detaching the Objects	157	5,9%
Folding the Objects	164	6,2%
Puling & Stretching the Objects	81	3,1%
Opening & Closing the Objects	140	5,3%
Turning the Objects	89	3,4%
Fastening the Objects	90	3,4%
Folk Dance & Dance With Music and Rhythm	109	4,1%
Others	5	0,2%
Total	2643	100,0%

According to of the responses received from the question 3, the early childhood education teachers mostly applied cut and paste activities and applied rocket games at least.

> "Q4. What kind of materials did you use to support the motor development of your students during the online education process? You can choose more than one option."

Table 4. 9. Question 4

	Responses	
	N	Percent
Playdough	252	9,7%
Boxes of different sizes	184	7,1%
Jars of different sizes	161	6,2%
Plastic bottles	174	6,7%
Toilet paper rolls	234	9,0%
Cushions and pillows	130	5,0%
Exercise mat	45	1,7%
Chairs and tables	125	4,8%
Rocket	14	0,5%
Hula hoop	55	2,1%
Ball	141	5,4%
Balloon	169	6,5%
Rope	150	5,8%
Bead and macaroni	193	7,4%
Dry legumes	181	6,9%
Spoon, togs, and pincer	128	4,9%
Glass, plate, and bowl	184	7,1%
Fabric, tulle, cloth, and ribbon	80	3,1%
Others	6	0,2%
Total	2606	100,0%

The early childhood education teachers mostly used playdough, whereas they used rockets at the minimum level.

> "Q5. What kind of teaching methods did you use to support the motor development of your students during the online education process? You can choose more than one option."

Table 4. 10. Question 5

	Responses	
	N	Percent
Role modeling	261	17,7%
Explaining	199	13,5%
Question-answer	190	12,9%
Play	224	15,2%
Telling story	190	12,9%
Music	198	13,5%
Drama and impersonation	158	10,7%
Trip and observation	47	3,2%
Others	4	0,3%
Total	1471	100,0%

As the table displays, the early childhood education teachers mostly employed the role modeling method mostly, while they utilized the trip and observation technique at the minimum level.

> "Q14. Did preschoolers have an online 'Physical Education and Sports' lesson? If your answer is yes, how often did they take this lesson in a week? And, who applies this lesson?"

Table 4. 11. Question 14

	Frequency	Percent
Yes	228	77,6
No	66	22,4
Total	294	100,0

Table 4. 12. Question 14 cont.

	Frequency	Percent
1 lesson period	109	37,1
2 lesson periods	108	36,7
Much more than 2 lesson periods	14	4,8
Total	231	78,6
Missing System	63	21,4
Total	294	100,0

Table 4. 13. Question 15

	Frequency	Percent
Early childhood education teachers	20	6,8
Physical Education and Sports teachers	213	72,4
Others	1	,3
Total	234	79,6
Missing System	60	20,4
Total	294	100,0

As the responses to the questions of 14 and 15 demonstrates, the preschool children participated in "Physical Education and Sports" lesson at least 1 lesson period a week, and this lesson was mostly applied by Physical Education and Sports teachers.

4.3. Research Question 3

After the online lessons,

a) How did early childhood education teachers evaluate the motor development and motor skills of their students?
b) What kind of activities and homework did early childhood education teachers provide for both their students and parents?

Survey questions 6, 7, 8, 9, 16, 17, 18, 19, and 20 were related to the part of before the online lessons; therefore, the results of these questions were described in this section.

> "Q6. Did you give any homework to support the motor development of your students during the online education process? If your answer is yes, what kind of homework did you give? You can choose more than one option."

Table 4. 14. Question 6

	Frequency	Percent
Yes	231	78,6
No	63	21,4
Total	294	100,0

Table 4. 15. Question 6 cont.

	Responses	
	N	Percent
Repetition of the lesson activities	133	42,4%
Offering different activities	178	56,7%
Others	3	1,0%
Total	314	100,0%

The early childhood education teachers gave some homework to support the motor development of their students during the online education process. They mostly offered different activities to the parents.

> "Q7. Did you offer any activities to parents without an online education process to support the motor development of your students? If your answer is yes, what kind of activities did you offer? You can choose more than one option."

Table 4. 16. Question 7

	Frequency	Percent
Yes	254	86,4
No	40	13,6
Total	294	100,0

Table 4. 17. Question 7 cont.

	Responses	
	N	Percent
Sharing some pictures and photographs	186	38,2%
Sharing links to educational and purposeful channels and videos	167	34,3%
Sharing of digitally prepared games and sources	130	26,7%
Others	4	0,8%
Total	487	100,0%

The early childhood education teachers offered some activities to the parents without an online education process to support the motor development of their students through sharing some pictures and photographs with them.

> "Q8. How did you follow these activities and homework that you give and offer to parents to support the motor development of your students?"

Table 4. 18. Question 8

	Responses	
	N	Percent
Through photographs and videos	252	36,7%
Though voice record	91	13,3%
Through online meetings with student	112	16,3%
Through online meetings with parents	71	10,3%
Through phone calls with students or parent	147	21,4%
I could not follow.	9	1,3%
Others	4	0,6%
Total	686	100,0%

The early childhood education teachers mostly followed the activities and homework that they gave and offered to the parents to support the motor development of their students through photographs and videos.

> "Q9. Which skills did activities and homework that you share and give to the parents to support the motor development of your students during the online education process?"

Table 4. 19. Question 9

	Responses	
	N	Percent
Fine motor skills (holding pencil, cutting by scissor)	277	40,6%
Locomotor skills (walking, running, sliding, gallop, leaping, skipping)	137	20,1%
Object control skills (throwing, catching, keep-up, rolling, striking with a rocket to the ball)	147	21,6%
Stability (non-locomotor) skills (balance, stretching, twisting, swinging)	117	17,2%
Others	4	0,6%
Total	682	100,0%

It is observed that the early childhood education teachers shared and gave some activities and homework to the parents to support the motor development of children, and these were mostly related to fine motor skills.

> "Q16. Did you evaluate the motor skill competence of your students during the online education process? If your answer is yes, what kind of assessment and evaluation instruments did you use?"

Table 4. 20. Question 16

	Frequency	Percent
Yes	226	76,9
No	68	23,1
Total	294	100,0

Table 4. 21. Question 16 cont.

	Responses	
	N	Percent
Observation form	98	23,1%
Taking notes	141	33,2%
Communication with parent	159	37,4%
Motor development test	23	5,4%
Others	4	0,9%
Total	425	100,0%

According to the responses to the question 16, the early childhood education teachers evaluated and assessed the motor skill competence of their students mostly through communicating with the parents during the online education process.

> "Q17. What did you observe about the fine motor skills of your students during the online education process?"

Table 4. 22. Question 17

	Frequency	Percent
I observed regression.	69	23,5
I observed stability.	124	42,2
I observed progression.	94	32,0
Others	7	2,4
Total	294	100,0

The early childhood education teachers mostly observed that there was stability in the fine motor skills of their students.

> "Q18. What did you observe about the gross motor skills of your students during the online education process?"

Table 4. 23. Question 18

	Frequency	Percent
I observed regression.	73	24,8
I observed stability.	135	45,9
I observed progression.	80	27,2
Others	6	2,0
Total	294	100,0

The early childhood education teachers mostly observed that there was stability in the gross motor skills of their students.

> "Q19. What do you think about the online education process to support the motor development of your students? Was it proper or not?"

Table 4. 24. Question 19

	Frequency	Percent
Yes, it is appropriate.	76	25,9
No, it is not appropriate.	136	46,3
I am not sure.	82	27,9
Total	294	100,0

Most early childhood education teachers thought that online education wasnot appropriate to support the motor development of preschool children.

> "Q20. How was hard to support the motor development of your students during the online education process?"

Table 4. 25. Question 20

	Frequency	Percent
Extremely hard	27	9,2
Very hard	68	23,1
Hard	182	61,9
Not hard	17	5,8
Total	294	100,0

The early childhood education teachers mostly stated that supporting the motor development of their students was hard during the online education process.

4.4. Additional Comments (Question 21)

The early childhood education teachers emphasized some critical points about online education with preschool children. Some of them stated that parents hada significant role in the online education process, because their children wereso young, and they needed support. Besides, similar to the teachers, the parents had

to prepare for the online lessons. They should have supplied the materials and they should have been knowledgeable about the content. Their awareness was very important.

While some early childhood education teachers focused on the parent's role, some others underscore the significance of the teachers' role. They indicated that teachers had to be trained for the online education to use technology more effectively. Furthermore, they should have been supported with the sources and materials and motivated about application of the activities.

In addition to these, the early childhood education teachers referred to children's individual needs, interests, developmental levels, and age groups. These factors should have been considered before preparing the content of the online lessons. Moreover, the parents and educators had to be careful about the amount of technology usage by the preschool children.

Table 4. 26. Summary of comment (Question 21)

Children	Parent	Teacher
• The importance of the age group of children • Children's needs, interests, and motivation • Children's individual needs • Increasing children's individuality forefront of the screen	• Parent involvement and raising the awareness of parents • Being prepared for online lessons in terms of both content and materials • Difficulties to provide the materials	• Teachers' training about online education • Being prepared for online lessons in terms of both content and materials • Providing enough digital applications, books, and sources

Table 4.26. (continued)

• The high amount of technology usage • Literacy skills (holding the pencil properly) • Internet connection problems	• Physical education and sports teacher's support • Difficulties to provide the materials • Effectiveness of online lessons • Internet connection problems • Having a routine exercise time every day

4.5. Results of the Focus Group Interview

A focus group interview was performed with five early childhood education teachers. Based on the analyses of these interviews, early childhood education teachers seemed to have difficult time to use online education for their students' motor development. The teachers emphasized a few major points in relation to their online education experiences. As a result, three main themes were identified through the qualitative analysis, which were the online learning challenges, teaching difficulties, and material (un)availability.

The teachers indicated that online learning was not appropriate for young children, and they emphasized that online learning was quite limited for this age group. For example, a teacher identified that

> "On the screen, teaching something to preschool children is very difficult. If we had a chance to choose, we would choose face-to-face education because controlling, directing, and reaching to them is easier [in face-to-face]. Moreover, it is more effective than online education. However, when we think about COVID-19 conditions, we had to offer online education and we had no other choice. Nevertheless, children did something on the screen."

In terms of teaching fine or motor skill activities, teachers had difficulty in providing gross motor activities during online education. For fine motor skill activities, they preferred to use simple and applicable activities. In the interview, one of the participants indicated that

> "Playdough activities, books, worksheets, cut and paste activities, and tracing activities are the most preferred ones during online education. We wanted parents to provide worksheets, we also sent children's books to home and we shared the screen. Applying fine motor activities were easier than gross motor activities."

However, the teachers did not make use of gross motor skill activities for their students at all. They felt too lonely in front of the screen to practice those activities. Hence, they solely found and presented some videos to their students. They mostly emphasized the following idea:

> "We had much more difficulties about gross motor activities because children were alone on the screen. We had no chance to play whole group games. Activities were limited. At this point, we tried to support children with morning exercises, YouTube videos and these kinds of simple activities. However, it was more difficult than the fine motor activities."

In addition, they mentioned the role of support from other teachers for their teaching experiences. For example, one of them remarked that

> "We tried to show gross motor activities first. Then, we used some YouTube videos. However, we expected much more support from physical education and games teachers because we played an active role to support and apply fine motor activities. We need their supports about gross motor activities."

Motor development evaluation process was not easy during the online education according to these teachers. Thus, they did not hold an examination for the

students. Rather, they observed the students' progress. The teachers mainly highlighted the following idea.

> "We used a rubric to evaluate motor development of our students. It was simple and we prepared it. Furthermore, we made an observation during the process. We took some notes about motor development of our students. However, we did not have any chance to apply a valid test or scale unfortunately even though we know that that was a necessity."

During the focus group interview, the teachers were asked to identify the main problems and their solutions for this period. Upon that, one teacher emphasized that "the biggest problem was providing material and sources". He/she also remarked that they had to adapt the content and program into online education because they were prepared initially for face-to-face education.

> "First of all, the biggest problem was providing material and sources. Parents also had some difficulties to provide sources and materials for their children. Furthermore, the academic content and program was designed and prepared for face-to-face education, and we had to revise it in accordance with online education process by ourselves.

Another teacher elaborated on the issue and uttered the following:

> "In the past, we had no experience about online education process, and we did not know how to use technological devices and applications such as Meet and Zoom. Learning these all things took some time. Unfortunately, most of schools could not provide enough sources, materials, and technological support for their teachers. At first, we expect a proper early childhood education program for online education from the Ministry of National Education. Also, appropriate evaluation and assessment tools have to be prepared for online education as well. In parallel with these, related lectures can be added to the students' programs in the faculties of education of universities. Thus, university students can develop some contents, sources, materials, and tools for online education process. Besides, parents have to be informed about online education."

This focus group interview revealed that the early childhood education teachers faced similar challenges with their colleagues during the online education period. While the teachers needed support and professional training during this period,

children also needed more support. It seems that cooperation amongthe parents, teachers and school administrators were essential during similar occurrences.

CHAPTER 5

DISCUSSION AND CONCLUSION

The purpose of this study was to examine early childhood education teachers' teaching experiences in the motor development of preschool children during the COVID-19 pandemic. This chapter provided the research findings regarding the teachers' experiences of online teaching before, during, and after the class. Besides, research questions were discussed and then the implications of the results were introduced. Future recommendations were also added at the end of this chapter.

5.1. Preparation Phase for Online Classes during COVID-19

This study revealed that early childhood education teachers had a planning phase before the online lessons. They mostly prepared the materials, lesson plans, and activities before the online classes. According to Can and Ermeydan (2017), teachers have to prepare for lessons to manage the classroom appropriately. Their preparations are essential. For instance, they have to arrange the classroom environment according to the topic, prepare the materials, and give information about the topic before the lessons. In this way, students can be prepared and become active listeners and learners during the lessons. Furthermore, Franklin at al. (2015) described the role of teacher preparation programs in online learning environments. These researchers believed that teachers should be prepared for this learning environment through the professional development programs delivering knowledge, skills, and attributes.

This study also revealed that early childhood education teachers had some difficulties in finding resources and providing the materials for the online lessons

during their preparation phase. Keengwe and Onchwari (2009) indicated that preschool teachers had similar challenges during their instructional sessions about technology integration. Teachers in this study could use many applications, programs, and educational tools to support students' motor development. Technological tools should be considered in online learning environments as supportive tools. For instance, teachers in this study could use the word "Emaze" for evaluating a topic, "Padlet" for brainstorming, "Canva" for preparing posters, "Powtoon" or "GoAnimate" for animation, "StoryJumper" for digital stories, "CrossWordLabs" for crossword puzzles, "Easelly" for design template, "Bubbl" for mind map, "Flipped Classroom" for the learning platform, and "Popplet" for saving and sharing lecture notes (Yarının Eğitimi, 2019). Teachers may need pre-service or in-service training sessions for technology integration into the instructional sessions. This might be an effective strategy to support teachers' technological pedagogical content knowledge, which is defined as integrating technology with pedagogical skills in the teaching-learning environment. A variety of technological tools might enhance children's motor skills during online educational sessions.

Some studies also suggested that even one basic material could be used to enhance the motor competency of preschool children (Zembat et al., 2020). For example, playdough, boxes of different sizes, jars with different sizes, plastic bottles, toilet paper rolls, cushions and pillows, chairs and tables, balls, balloons, rope, bead and macaroni, dry legumes, spoon, togs, and pincer, glass, plate and bowl, fabric, tulle, cloth, and ribbon are essential materials for fine motor skills. These materials can be easily found and provided for little children (Rule & Stewart, 2002). In fact, many things can be ordered from the Internet in recent years. Shopping from the Internet is commonly used by many people. Furthermore, in the past, teachers had difficulties in finding sources. They generally had to use written sources, which were not easily accessible. Anymore, parallel with technological development, sources are more accessible than in the past (Yılmaz & Bayram, 2020). To sum up, teachers need more support for their

online education about the availability of materials and knowledge of creating technology-supported learning environments.

5.2. Online Education Process during COVID-19

Early childhood education teachers included motor skills activities for at least four days to enhance the motor development of their students during the online education process. This study also found that early childhood education teachers used small materials and applied fine motor activities rather than using big materials or applying gross motor activities during the online class. They mostly preferred cut and paste activities because they thought that each child had paper, scissors, and glue at home. This situation caused a limitation and restriction on them because the glue is a kind of depletable material. Still, they might want their students to use pillows or chairs at any time. Moreover, when teachers limit their ideas about materials and activities, children also be restricted automatically.

Apart from these, they stated that they needed more support from physical education and sports teachers to show movements correctly to children. However, the net is full of millions of videos, pictures, photographs, and sources. They did not have to show movements by themselves. According to a report from National Association for Sport and Physical Education, children have to spend time attending physical activities as much as possible they can do. In the normal conditions before the COVID-19 pandemic, they went to school by walking, riding a bicycle, or playing outdoor in different playgrounds. It is stated that children have to spend their time on these kinds of physical activities at least 60 minutes a day (Pınar, 2021). However, because of the COVID-19 pandemic, this situation was affected negatively. Children's physical activity was influenced both by qualitative and quantitative aspects.

In this study, early childhood education teachers tended to apply fine motor activities much more than the gross motor activities, and they gave a reason “the COVID-19 and online education”. However, they might direct and support their students to go outside, or they could provide suggestions such as collecting leaves and stones, making observations, and drawing them on a nature diary. In this way, their students could move more. A similar study conducted by Hu and his colleagues in 2021 shows that preschool teachers and educators had similar concerns and issues related to online education during the COVID 19 period. These issues were reported as engagement problems in children and a low level of support from the parents. Parents and school administrators may help solve instructional problems during online lessons to develop more cooperation among teachers.

5.3. Subsequent Phase for Online Classes during COVID-19

It has been found that early childhood education teachers mostly communicated with parents to assess and evaluate their students’ motor competency and indicated that children's fine and gross motor skills were stable. However, many studies show that children’s motor development was negatively affected (Pınar, 2021). Even though they observed stability in children’s motor skills, they had to evaluate and assess the motor development of children with an objective measurement technique and test. Here, there is a critical point that communication with parents should be considered: do they reflect the reality or not? Also, this technique is a subjective method to measure children’s motor competency. Therefore, teachers need objective measurements for assessment and evaluation.

There are many purposes of assessment measures defined in physical education and health literature, including classification, diagnosis, prescription, assessment and measurement of achievement, program evaluation, motivation, discrimination, prediction, and evaluation. Bruininks–Oseretsky Test of Motor

Proficiency (BOTMP), Movement Assessment Battery for Children (MABC), MABC Performance Test, Peabody Developmental Motor Scales (PDMS), MABC Checklist, Test of Gross Motor Development (TGMD) are good examples for successful measurements to assess and evaluate children's motor development (Wiart & Darrah, 2001).

Furthermore, early childhood education teachers in this study stated that they used some pictures and photographs to give homework to their students. However, there are millions of resources on the Internet, such as e-books, journals and magazines, videos, and other educational tools to use. In addition to these, teachers stated that online education was not appropriate for preschool children, but they also claimed that supporting the motor development of preschool children was hard. It is not very hard. It is just hard. They indicated that finding resources and providing materials for online education was hard. However, they mostly preferred the "hard" choice rather than other choices.

It should also be emphasized that early childhood education teachers provided very critical information about the problems of online education. They explained the essential factors which affect online education. Children's age group, needs, interests, motivation, and literacy skills play a critical role in the effectiveness of online education. Moreover, internet connection problems cause a series of issues during online education. These factors should be investigated for future studies to reveal the effects on children's motor development.

The Organization of Economic Co-operation and Development (OECD, 2021) published a booklet called "Using Digital Technologies for Early Education during COVID-19". This booklet includes six chapters about the education situation, approaches to digital technologies, problems, challenges, and solutions for online learning in the early childhood period. This type of publication might be useful to increase teachers' awareness of online education.

Implications

This study is significant in terms of the number of participants. Early childhood education teachers were reached from different cities of Turkey who had an online education experience during the Covid-19 pandemic. The data of this study has potential significance for policymakers, administrators, and the government. Early childhood education teachers' experiences provide insight and critical knowledge about difficult circumstances like the Covid-19 pandemic. Their experiences might provide a different perspective and possible solutions to the difficulties of the online education process. Some recommendations are given for preschool teachers, school administrators, policymakers, and future research.

Implications for Early Childhood Education Teachers and Parents

1) Early childhood education teachers should have much more awareness about the significance of motor development. They should apply motor activities regularly during the online lessons. Also, they can give place to motor activities by integrating with other activities.
2) Early childhood education teachers should regularly coordinate with parents to inform and involve them in the online learning process.
3) Early childhood education teachers should also be responsible for supporting, encouraging, and motivating their students and parents to increase children’s motor competency.
4) Early childhood education teachers should be trained to determine their inadequacies in motor development.
5) Parents should support their children at home in terms of motor activities because teachers have limited opportunities to support the motor skills of their students during the online education process.

Implications for School Administrators and Policy Makers

1) School administrators should monitor children’s motor development regularly.

2) They also should provide enough beneficial sources and materials for early childhood education teachers.
3) Early childhood education teacher programs need to be developed according to the online education process.
4) Policymakers should arrange the education system to adapt to the online learning process.
5) Some lectures about online education and the used technology can be added to undergraduate programs in the university's educational faculty.

Suggestions for future research

1) Qualitative research design should be added to deeply understand the experience of teachers, parents, and children during online education.
2) Focus group interviews and observations might be conducted to deeply analyze the experiences of teachers, parents, and children during online education.
3) It is suggested to examine the different teaching methods and techniques for motor development to find much more effective approaches during online education.
4) Some teachers' in-service training programs should be provided for early childhood education teachers, and this process can be assessed and evaluated.

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APPENDICES

APPENDİX A: ODTÜ ETİK İZNİ

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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18 MART 2021

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Irmak HÜRMERİÇ ALTUNSÖZ

Danışmanlığını yürüttüğünüz Burcu ŞAHİN'in *"COVİD-19 Salgını Sürecinde Okul Öncesi Eğitimde Motor Gelişim: Öğretmen Deneyimleri"* başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **059-ODTU-2021** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Dr.

APPENDİX B: MİLLİ EĞİTİM BAKANLIĞI ETİK İZNİ

T.C.
MİLLÎ EĞİTİM BAKANLIĞI
Özel Öğretim Kurumları Genel Müdürlüğü

Sayı : E-36077160-405.01-38513931 08.12.2021
Konu : Araştırma Uygulama İzin Talebi

DAĞITIM YERLERİNE

İlgi : a) Bakanlığımız evrak kaydına kayıtlı 01/12/2021 tarihli ve 38025520 sayılı dilekçe.
b) Millî Eğitim Bakanlığının 21/01/2020 tarihli ve 2020/2 Nolu Araştırma Uygulama İzinleri Genelgesi.

Orta Doğu Teknik Üniversitesi, Eğitim Fakültesi Beden Eğitimi ve Spor Bölümü Yüksek Lisans öğrencisi Burcu YÜKSEL'in " Covid-19 Salgını Sürecinde Okul Öncesi Eğitimde Motor Gelişim: Öğretmen Deneyimleri" konulu araştırmasına veri sağlamak amacıyla anket çalışması yapma izin talebine ilişkin ilgi (a) yazı ve ekleri Bakanlığımız tarafından incelenmiştir.

Bakanlığımıza bağlı özel bağımsız anaokulu ve özel anasınıfı öğretmenlerinin katılımıyla yapılması planlanan uygulamanın Covid-19 tedbirlerine uyulması ve denetimi il/ilçe millî eğitim müdürlükleri ve okul/kurum idaresinde olmak üzere, kurum faaliyetlerini aksatmadan, gönüllülük esasına göre; onaylı bir örneği Bakanlığımızda muhafaza edilen ve uygulama sırasında da mühürlü ve imzalı örnekten çoğaltılan, veri toplama araçlarının http://meb.ai/vqHi3J adresinden online olarak uygulanmasına ilgi (b) Genelge doğrultusunda izin verilmiştir.

Gereğini bilgilerinize rica ederim.

Abdullah SÜSLÜ
Bakan a.
Genel Müdür V.

Ek: Onaylı Veri Toplama Araçları (7 sayfa)

Dağıtım:
Gereği: Bilgi:
B Planı Orta Doğu Teknik Üniversitesi Rektörlüğüne

Bu belge güvenli elektronik imza ile imzalanmıştır.
Adres : MEB Başyazıcılar Kampüsü/E Blok ANKARA Belge Doğrulama Adresi: https://www.turkiya.gov.tr/meb-ebys
Bilgi için: M. YUMUKTACI
Telefon No : 0 (312)413 34 30 Unvan : Öğretmen
E-Posta: oolgm@meb.gov.tr İnternet Adresi: www.meb.gov.tr/meb@hs01.kep.tr Faks: 3122239926
Kep Adresi : meb@hs01.kep.tr
Bu evrak güvenli elektronik imza ile imzalanmıştır. https://evrakdogrulama.meb.gov.tr adresinden f087-8216-3658-84d4-3c33 kodu ile teyit edilebilir.

APPENDİX C: ANKET SORULARI (TÜRKÇE)

"COVID-19 Salgını Sürecinde Okul Öncesi Eğitimde Motor Gelişim: Öğretmen Deneyimleri"

Bu çalışma Orta Doğu Teknik Üniversitesi Beden Eğitimi ve Spor Bölümü'nde yürütülen bir yüksek lisans tez çalışmasıdır. Çalışmanın amacı COVID-19pandemi sürecinde uzaktan online eğitim uygulayan okul öncesi öğretmenlerinin öğrencilerinin motor gelişimlerini nasıl ve ne derece destekleyebildiklerini araştırmaktır**.**

Çalışma iki bölümden oluşmaktadır. İlk bölümde demografik bilgileriniz hakkında bilgi toplamak amacı ile sorular bulunmaktadır. İkinci bölümde ise online eğitim ile ilgili deneyimleriniz hakkında sorular vardır. Çalışma hakkında daha fazla bilgi edinmek isterseniz Burcu Şahin ile iletişime geçebilirsiniz. Email: e192710@metu.edu.tr.
Katılımınız için şimdiden teşekkür ederiz.
Saygılarımızla

Burcu Yüksel **Dr. Irmak Hürmeriç Altunsöz**
Yüksek Lisans Öğrencisi **Akademik Danışman**

Bölüm 1: Demografik Bilgiler

Yaşınız:

Cinsiyetiniz: Kadın Erkek

Eğitim durumu:

- Lise
- Ön lisans
- Lisans
- Yüksek Lisans
- Doktora

Yaşanılan şehir:

Göreviniz:

Toplam hizmet yılınız:

Sınıfınızdaki çocukların yaş grubu:

Sınıf mevcudu:

Bölüm 2: Online eğitim süreci deneyimleriniz

1. Online eğitim sürecinde öğrencilerinizin motor becelerini destekleyen etkinliklere ne sıklıkta yer verdiniz?

- Her gün
- Sık sık (en az 4 gün)
- Bazen (3 gün)
- Nadiren (1-2 gün)
- Hiç

2. Online derslere başlamadan önce motor becerilerin gelişimine yönelik hazırlıklar yapıyor muydunuz? Cevabınız evet ise ne tür hazırlıklar yapıyordunuz? Birden fazla seçenek işaretleyebilirsiniz.

- Evet
    - Ders planı hazırlamak
    - Etkinliğe karar vermek
    - Video hazırlamak
    - Power Point sunumu hazırlamak
    - Materyal hazırlamak
    - Ailelere konu ile ilgili ön bilgi vermek
    - Kaynak taraması yapmak
    - Diğer:
- Hayır

3. Online derslerde motor becerilere yönelik etkinlikler konusunda ne tür aktivitelere yer verdiniz? Birden fazla seçenek işaretleyebilirsiniz.

- Sabah egzersizleri (ısınma, açma-germe, esnetme, yerinde koşma vb.)
- İpli oyunlar
- Toplu oyunlar
- Çemberli oyunlar
- Raket oyunları

- Denge hareketleri
- Hayvan taklitleri
- Doğru nefes alma egzersizleri
- Oyun hamuru ile figürler oluşturma
- Aktarma ve ayıklama
- İpe boncuk dizme
- Kesme-yapıştırma
- Kalem tutma ve kontrolünü sağlama
- Nesneleri takıp çıkarma
- Nesneleri katlama
- Nesneleri çekme-germe
- Nesneleri açma-kapama
- Nesneleri döndürme
- Nesneleri bağlama
- Halk oyunları/Müzikle rtim oyunları
- Diğer:

4. Online derslerde çocukların motor becerilerini geliştirmek için ne tür materyaller kullandınız? Birden fazla seçenek işaretleyebilirsiniz.

- Oyun hamuru
- Karton kutular
- Kavanozlar
- Pet şişeler
- Tuvalet kağıdı ruloları
- Minder ve yastıklar
- Egzersiz matı
- Sandalye-sehpa-masa
- Raket
- Çember
- Top
- Balon
- İp
- Boncuk ve makarna
- Nohut, fasulye, mercimek vb.
- Kaşık-maşa-cımbız
- Bardak-tabak-kase
- Kumaş-tül-bez-kurdele
- Diğer:

5. Online derslerde motor becerileri geliştirmek için ne tür öğretim yöntemleri kullandınız? Birden fazla seçenek işaretleyebilirsiniz.

- Gösterip yaptırma
- Anlatım
- Soru-cevap
- Oyun
- Hikaye anlatma
- Müzik
- Drama-canlandırma
- Gezi-gözlem (ders sonrası için)
- Diğer:

6. Online dersler sonrasında öğrencilerinizin motor becerilerini desteklemek için ödevler verdiniz mi? Cevabınız evet ise ne gibi ödevler verdiniz? Birden fazla seçenek işaretleyebilirsiniz.

- Evet
  - dersteki etkinliğin tekrarı
  - farklı etkinlik önerileri
  - Diğer:
- Hayır

7. Ailelere online ders süreçleri dışında motor beceleri destekleyen etkinlik önerilerinde bulundunuz mu? Cevabınız evet ise ne tür etkinlik önerilerinde bulundunuz? Birden fazla seçenek işaretleyebilirsiniz.

- Evet
  - Çeşitli görseller ve fotoğraflar paylaştım.
  - Amaca yönelik video linkleri ve eğitim kanalları paylaştım.
  - Dijital olarak hazırlanmış oyun ve kaynak önerilerinde bulundum.
- Hayır

8. Aileler ile paylaşmış olduğunuz etkinlik önerileri ve öğrencilere verdiğiniz ödevlerle ilgili takibi nasıl sağladınız? Birden fazla seçenek işaretleyebilirsiniz.

- Fotoğraf ve video ile
- Ses kaydı ile
- Öğrenci ile İnternet üzerinden yüz yüze görüşerek
- Aile ile İnternet üzerinden yüz yüze görüşerek

- Aile veya öğrenci ile telefon konuşması yaparak
- Takibini sağlayamadım.
- Diğer:

9. Online eğitim sürecinde verdiğiniz ödevler ve paylaştığınız öneriler çoğunlukla hangi becerilere yönelikti? Birden fazla seçenek işaretleyebilirsiniz.

- Küçük kas becerileri (kalem tutma, makas kontrolü vb.)
- Yer değiştirme becerileri (yürüme, koşu, kayma, galop, sıçrama, sekme vb.)
- Nesne kontrolü gerektiren beceriler (atma, yakalama, sektirme, yuvarlama, topa raketle vurma vb.)
- Denge becerileri (dengede durma, esneme, dönme, salınım vb.)
- Diğer:

10. Online derslerde motor becerilere yönelik etkinlikler konusunda ne tür kaynaklar kullandınız?

- Kendim etkinlik ve materyal ürettim.
- Kitap, dergi vb. gibi yazılı kaynaklar kullandım.
- İnternetten araştırdım.
- Meslektaşlarımla fikir alış verişinde bulundum.
- Çalıştığım kurumun kaynaklarını kullandım.
- Diğer:

11. Online derslerde motor becerilere yönelik etkinlikler konusunda kaynak bulmak sizce ne kadar zordu?

- Son derece zordu.
- Çok zordu.
- Biraz zordu.
- Hiç zor değildi.

12. Online derslerde motor becerilere yönelik materyalleri sağlamak sizce ne kadar zordu?

- Son derece zordu.
- Çok zordu.
- Biraz zordu.
- Hiç zor değildi.

13. Online eğitim sürecinde aileler derste kullanılan ve motor becerilere yönelik olan gerekli malzemeleri sağlayabildiler mi?
- Evet
- Hayır
- Kısmen

14. Çocuklar online olarak "Beden Eğitimi ve Spor" dersi alıyorlar mıydı? Cevabınız evet ise haftada toplam kaç saat uygulanıyordu?
- Evet
    - 1 ders saati
    - 2 ders saati
    - 2 ders saatinden daha fazla
- Hayır

15. Online olarak verilen "Beden eğitimi ve Spor" dersini kim uyguluyordu?
- Okul öncesi öğretmeni
- Beden eğitimi ve spor öğretmeni
- Diğer:

16. Online eğitim sürecinde çocukların motor beceri yeterliliklerini değerlendirdiniz mi? Cevabınız evet ise ne tür değerlendirme araçları kullandınız? Birden fazla seçenek işaretleyebilirsiniz.
- Evet
    - Gözlem formu
    - Not tutma
    - Aile ile görüşme
    - Motor gelişim testi (Adı: .....)
    - Diğer:
- Hayır

17. Online eğitim sürecinde çocukların küçük motor becerileri ile ilgili gözlemleriniz neler oldu?
- Çocukların küçük motor becerilerinde gerileme olduğunu gözlemledim.
- Çocukların küçük motor becerilerinin sabit kaldığını gözlemledim.
- Çocukların küçük motor becerilerinde ilerleme olduğunu gözlemledim.
- Diğer:

18. Online eğitim sürecinde çocukların büyük motor becerileri ile ilgili gözlemleriniz neler oldu?
- o Çocukların büyük motor becerilerinde gerileme olduğunu gözlemledim.
- o Çocukların büyük motor becerilerinin sabit kaldığını gözlemledim.
- o Çocukların büyük motor becerilerinde ilerleme olduğunu gözlemledim.
- o Diğer:

19. Online eğitim süreci öğrencilerin motor becerilerini destekleyebilmek için ne kadar uygun bir yöntem?

- o Uygun
- o Uygun değil
- o Kararsızım

20. Online eğitim sürecinde öğrencilerinizin motor becerilerini desteklemek sizce ne kadar zordu?
- o Son derece zordu.
- o Çok zordu.
- o Biraz zordu.
- o Hiç zor değildi.

21. Öğrencilerinizin motor gelişimini online eğitim süreci içinde düşündüğünüzde eklemek istediğiniz başka konular var mı? Lütfen belirtiniz.

KATKILARINIZ İÇİN TEŞEKKÜR EDERİZ ☺

APPENDİX D: ANKET SORULARI (İNGİLİZCE)

QUESTIONS

1. How often did you apply motor skills activities to support motor development of your students during online education process?
    a) Always (Every day)
    b) Often (4 days of week)
    c) Sometimes (3 days of week)
    d) Rarely (1-2 days of week)
    e) Never

2. Did you make any preparations to support motor skills of your students before starting the online lessons?
    a) Yes
    b) No

If your answer is yes, what kind of preparations did you make? You can choose more than one option.

- Preparation of the lesson plan
- Decide to the activities
- Preparation of the videos
- Preparation of the PPT
- Preparation of the materials
- Give information about lesson to parents before the lessons
- Search for resources

3. What kind of activities did you apply to support motor development of your students during online education process? You can choose more than one option.
    - Morning exercises
    - Rope games
    - Ball games
    - Hula hoop games
    - Rocket games
    - Stability movements
    - Imitation of animal movements
    - Breathing exercises
    - Playing with play dough
    - Transferring and picking activities

- String
- Cut and paste activities
- Practices for holding and controlling pencil
- Attaching and detaching the objects
- Folding the objects
- Pulling and stretching the objects
- Open and close the objects
- Turn the objects
- Fastening the objects
- Folk dance and dance with music-rhythm
- Others

4. What kind of materials did you use to support motor development of your students during online education process? You can choose more than one option.
    - Play dough
    - Boxes with different sizes
    - Jars with different sizes
    - Plastic bottles
    - Toilet paper roles
    - Cushions and pillows
    - Exercise mat
    - Chairs and tables
    - Rocket
    - Hula hoop
    - Ball
    - Balloon
    - Rope
    - Bead and macaroni
    - Dry legumes
    - Spoon, togs and pincer
    - Glass, plate and bowl
    - Fabric, tulle, cloth and ribbon
    - Others

5. What kind of teaching methods did you use to support motor development of your students during online education process? You can choose more than one option.
    - Role modeling
    - Explaining
    - Question-answer
    - Play

- Telling story
- Music
- Drama and impersonation
- Trip and observation
- Others

6. Did you give any homework to support motor development of your students during online education process?
   - Yes
   - No

If your answer is yes, what kind of homework did you give? You can choose more than one option.

- Repetition of the lesson activities
- Offering different activities
- Others

7. Did you offer any activities to parents without online education process to support motor development of your students?
   - Yes
   - No

If your answer is yes, what kind of activities did you offer? You can choose more than one option.

- Sharing some pictures and photographs
- Sharing links of educational and purposeful channels and videos
- Sharing of digitally prepared games and sources
- Others

8. How did you follow these activities and homework that you give and offer to parents to support motor development of your students?
   - Through photographs and videos
   - Though voice record
   - Through online meeting with student
   - Through online meeting with parents
   - Through phone call with student or parent
   - I could not follow.
   - Others

9. Which skills did activities and homework that you share and give to parents to support motor development of your students during online education process?
    - Fine motor skills (holding pencil, cutting by scissor etc.)
    - Locomotor skills (walking, running, sliding, gallop, leaping, skipping etc.)
    - Object control skills (throwing, catching, keep-up, rolling, striking with rocket to ball etc.)
    - Stability (non-locomotor) skills (balance, stretching, twisting, swinging etc.)
    - Others

10. What kind of resources did you use to support motor development of your students during online education process?
    - I produced activities and materials myself.
    - I used books, magazines and these kinds of written sources.
    - I searched from the Internet.
    - I compared notes with my colleagues.
    - I used the school sources that I work.
    - Others

11. How hard was finding resources about motor skills to support motor development of your students during online education process?
    - Extremely hard
    - Too hard
    - Hard
    - Not hard

12. How hard was providing materials for online lessons?
    - Extremely hard
    - Too hard
    - Hard
    - Not hard

13. Did parents provide the materials to use in the online lessons for their children during online education process?
    - Yes
    - No
    - Partly

14. Did preschoolers have online “Physical Education and Sports” lesson?

- Yes
- No

If your answer is yes, how often did they take this lesson in a week?

- 1 lesson period
- 2 lesson periods
- Much more than 2 lesson periods

15. If your answer is yes for question 14, who apply this lesson?
    - Early childhood education teachers
    - Physical Education and Sports teachers
    - Others

16. Did you evaluate the motor skill competence of your students during online education process?
    - Yes
    - No

    If your answer is yes, what kind of assessment and evaluation instruments did you use?
    - Observation form
    - Taking notes
    - Communication with parent
    - Motor development test
    - Others

17. What did you observe about fine motor skills of your students during online education process?
    - I observed regression.
    - I observed stability.
    - I observed progression.
    - Others

18. What did you observe about gross motor skills of your students during online education process?
    - I observed regression.
    - I observed stability.
    - I observed progression.
    - Others

19. What do you think about online education process to support motor development of your students? Does it proper or not?
    - Yes, it is appropriate.
    - No, it not appropriate.
    - I am not sure.

20. How was hard to support motor development of your students during online education process?
    - Extremely hard
    - Too hard
    - Hard
    - Not hard

21. Comments

APPENDIX E: TURKISH SUMMARY / TÜRKÇE ÖZET

Hareket yaşam için yadsınamaz bir gerçektir. Evrenin oluşumuyla birlikte hareket başlar ve tüm canlılar bir şekilde hareket eder. Ancak, insanın hareketi diğer canlıların hareketlerini anlamaktan daha karmaşık bir haldedir (Aslan & Yamak, 2021). Kaslarımızda hareket sürecini içeren kalp atışı, nefes alıp verme gibi birçok istemli, istemsiz ve otomatik hareketler mevcuttur. İnsanoğlunun yaşamını çözümleyebilmek için temelde nasıl hareket ettiklerini, temel hareket becerileri ve koordinasyon gerektiren hareketleri nasıl edindiklerini ve motor kontrolü nasıl sağlayabildiklerini bilmek büyük önem taşımaktadır. Etkili bir öğrenme ve öğretme süreci için hareket sürecini kavramak ciddi bir role sahiptir (Orhan & Ayan, 2018). Bu alanda edinilen bilgiler eğitim ve sağlık alanları için de önemli bir bilgi birikimi sağlamaktadır (Gallahueve diğerleri, 2012).

Bu bilgilere parallel olarak, erken çocukluk eğitim döneminin önemi de açıklanmalıdır çünkü bu dönem çocukların ileriki yaşamlarını da etkilemektedir. Çocukların bilişsel, sosyal-duygusal ve fiziksel gelişimleri bu dönemde desteklenmektedir. Eğer bir çocuk motor becerileri erken çocukluk döneminde uygun ve etkili bir şekilde öğrenirse, bu aynı şekilde devam eder. Erken çocukluk dönemi hassas ve kritik bir dönemdir çünkü beyin en hızlı bu dönemde gelişir ve hayat boyu devam edecek sağlıklı bir yaşamın temelleri bu dönemde atılır (Durukan ve diğerleri, 2016). Ek olarak, insan gelişiminin en hızlı olduğu dönem yine erken çocukluk dönemidir (Özyürek ve diğerleri, 2015). Bu bilgilerin ışığında erken çocukluk dönemindeki temel hareketler aşağıda açıklanmaktadır.

Temel hareketler farklı açılardan çeşitli kategorilere ayrılsa da işlev anlamında yer değiştirme, denge ve nesne kontrolü olarak 3 sınıfa ayrılır. Yürüme, koşma, sekme, kayma gibi beceriler yer değiştirme becerileridir. Dönme, salınım gibi beceriler denge grubundaki becerilere ait olup; atma, yakalama, top sürme ve

topa vurma gibi beceriler nesne kontrolü gerektiren becerilere örnek olarak verilebilir (Gallahue ve diğerleri, 2012).

Ayrıca motor beceriler kas hareketleri anlamında 2 gruba ayrılmaktadır. Bunlar büyük motor beceriler ve küçük motor beceriler olarak açıklanabilir. Büyük motor beceriler büyük kasların hareketini gerektiren vücut hareketlerini kapsayan becerilerdir. Örneğin, yürüme, koşma, sekme, sıçrama gibi beceriler bu sınıfa girmektedir. Kalem tutma, yazma, makasla kesme, maşayla aktarma, cımbızlama, ayıklama gibi beceriler ise küçük motor beceriler kapsamına girmektedir (Gallahue ve diğerleri, 2012).

Motor beceriler zamana bağlı olarak kesik, devamlı ve seri olmak üzere 3 gruba ayrılır. Örneğin, tenis oynarken servis kullanmak kesik motor beceriler grubuna girerken, basketbol oynarken top sürmek seri motor beceriler grubuna girmektedir. Yüzme veya bisiklet sürme (pedallı) ise devamlı motor beceriler olarak nitelendirilmektedir (Gallahue ve diğerleri, 2012).

Motor becerileri iyi bir şekilde kavrayabilmek için motor beceri teorilerini ve motor beceri modellerini incelemek önemlidir. Bu kapsamda uygulanılan bu çalışmayı desteklemek için "Dinamik Sistemler teorisi", "Newell'in Kısıtlayıcılar modeli", "Gallahue'nun Kum Saati modeli" ve "Motor Gelişimde Dağ Metaforu" detaylı şekilde ele alınmıştır.

David Gallahue motor becerileri 4 ana döneme ayırmış olup bu dönemler yaş gruplarıyla birlikte sırasıyla refleksif hareket dönemi (anne karnından 1 yaşa kadar), olgunlaşmamış hareket dönemi (1-2 yaş), temel hareket dönemi (2-7 yaş) ve uzmanlaşmış hareket dönemidir (7-14 yaş ve üzeri). Bebek anne karnından itibaren uyaranlara ve çevresine karşı tepkisel hareketler göstermektedir. Örneğin, yakalama, emme, çekme gibi hareketler refleksif hareketler kapsamına girerken bebeğin hareketleri 1-2 yaş aralığındaki dönemde zamanla amaçlı ve istemli hale gelmeye başlar. Baş, boyun ve gövde kontrolünü sağlayabilme

olgunlaşmamış hareketler grubunda değerlendirilir. 2 yaştan sonra artık çocuğun hareketleri hayatı boyunca kullanacağı ve gerekli olan temel motor becerilere yöneliktir. Bir topa vurma, topu yakalama, sekme, koşma gibi davranışlar temel hareketler grubuna giren becerilerdir. 7-14 yaş aralığında çocuk artık becerileri, ilgisi ve ihtiyaçları doğrultusunda belirli alanlara yönlendirilir. Bu süreçte yavaş yavaş belirli bir spora yönelme ve bu doğrultuda pratikler yapma gözlemlenir. Çocuğun bu süreçte ailesi ve öğretmenleri tarafından uygun şekilde yönlendirilmesi son derece önemlidir (Salehi & Sheikh, 2017).

Gallahue'nun kum saati modelinde hareket dönemleri yukarıda anlatıldığı üzere aşağıdan yukarıya doğru bir sıra takip eder ancak burada dikkate alınması gereken 2 önemli faktör vurgulanmaktadır. Bunlar çevresel faktörler ve kalıtımsal faktörlerdir. Tüm bu gelişimsel süreçler yaşanırken çocuğun içinde bulunduğu çevre, kalıtsal olarak getirdiği özellikler ve bireysel farklılıklar unutulmamalıdır (Salehi & Sheikh, 2017).

Motor gelişimde "Dağ Metaforu" modelinde ise Clark ve Metcalfe'ın motor gelişimi bir dağa benzettiği görülmektedir. Bu modelde motor gelişimde sırasıyla 5 aşama bulunmaktadır. Bunlar refleksif, adaptasyon öncesi, temel hareketler, konuya özel ve ustalık gerektiren dönemlerdir. İlk aşama olan refleksif dönemde Gallahue'nun kum saati modelinde olduğu gibi bebek çevresindeki uyaranlara karşı tepkisel hareketlerde bulunmaktadır. İkinci aşamada ise bebeğin hareketleri giderek amaçlı ve sistemli hale gelerek anlam kazanır. Temel hareketler döneminde çocuk artık temel motor beceri ve bilgisi gerektiren hareketler yapabilirken, konuya özel dönemde çocuk spesifik noktalarda belirli alanlara yönelmeye başlar. Ustalık gerektiren dönemde ise birey artık belirli becerilerde ve alanlarda uzmanlaşmıştır. Ancak bunun devam edebilmesi kişinin gösterdiği performasa, pratik süresine, zamana, yaş almaya ve çeşitli yaralanma ve sakatlanmalara bağlı olarak değişiklik gösterir (Salehi & Sheikh, 2017).

Bu bilgilere paralel olarak, Dinamik sistemler teorisi ve Newell'in Kısıtlayıcılar modeli de motor gelişim sürecinin daha iyi anlaşılmasına yardımcı olacaktır. Dinamik sistemler teorisinde dikkat çeken önemli hususlardan birisi "bireysel hız kişilikleri" kavramıdır. Thelen, Corbetta ve Spencer (1996), bebeklerin bir hedefe ulaşamama davranış sürecini gözlemleyerek çeşitli sonuçlara ulaşmışlardır. Bebeklerin bir nesneye ulaşırken gösterdikleri çaba ve davranışlar bebeğin gelişimi hakkında yetişkinlere önemli ipuçları vermiştir. Burada ulaşılmak istenen ana düşünce şudur: sistemin bütününün nasıl çalıştığı sistemi oluşturan parçalar arasındaki ilişki ve etkileşime bağlıdır. Ayrıca bu değişim ve gelişim yaşam boyu öğrenmeye de büyük oranda bağlıdır (Lunkenheimer, 2018). Newell'in Kısıtlayıcılar modelinde ise 3 temel kısıtlayıcıdan ve bu kısıtlayıcılar arasındaki ilişkinin motor beceriler üzerindeki etkisinden bahsedilmektedir. Bu 3 temel kısıtlayıcı bireysel, çevresel ve görevsel olarak adlandırılmaktadır. Modelde bireyin motor becerilerinin hem kendisiyle ilgili faktörlerden, hem içinde bulunduğu çevreden kaynaklı faktörlerden hem de amacıyla ilgili faktörlerden etkilendiği vurgusu yapılmaktadır (Özyürek, 2015).

Okul öncesi dönemi kapsayan erken çocukluk sürecinin motor gelişime etkisinden bahsederken aynı zamanda temel motor gelişim teorileri ve modelleri ile desteklenen bu bilgilerin ardından son iki yılda tüm dünyanın mücadele vermek zorunda olduğu COVID-19 pandemi sürecinin erken çocukluk dönemindeki motor gelişime etkilerine değinmek büyük önem arzetmektedir. Herkesin bildiği üzere insanlık son 2 yılda coronavirüs ile karşı karşıya kalmış ve sadece sağlık alanında değil aynı zamanda eğitim anlamında da tüm dünyayı etkisi altına almıştır. Bu süreçte eğitim sistemi öğretmenlerin, ailelerin ve çocukların alışık olmadıkları bir hale bürünmüş ve alışık olunan yüz yüze eğitim süreciden uzaktan yürütülen online eğitim sürecine evrilmiştir. Tüm bunlar olurken küçük çocuklar göremedikleri bir virüsün ve sebep olduğu zorlukların sonuçlarıyla yüzleşmek zorunda kalmışlardır. Anlamlandıramadıkları şeyler hızla gerçekleşirken öğretmenleri ve arkadaşlarıyla yaparak-yaşayarak, bolca hareket ederek, dokunarak, tensel temas kurarak iletişim kurdukları

öğretmenlerinden, arkadaşlarından ve okullarından birden ayrılıp ekran karşısına geçmek durumunda kalmışlardır. Bu süreçte hem çocukların hem ailelerinin hem de eğitimcilerin sürece adapte olabilmesi zaman almıştır. Öğretmenlerin, ailelerin ve çocukların büyük çoğunluğu ilk kez uzaktan eğitim sürecini deneyimlemişlerdir ve bu zorlu ve alışılagelmemiş süreçte çeşitli zorluklarla karşılaşmışlardır. Zoom, Meet gibi programları ilk kez kullanmaya çalışan aileler ve eğitimciler bir taraftan hızlıca uyum sağlamaya çalışırken diğer taraftan çocukların gelişimlerinin en az hasarla bu süreçten çıkabilmesi için büyük çaba göstermişlerdir. Uygulamaların kullanımlarını öğrenmeye çalışırken aynı zamanda Internette yaşanan bağlantı sorunları, sokağa çıkma kısıtlamaları, kaynak ve materyal bulmada yaşanan güçlükler süreci daha da zorlu bir hale getirmiştir.

Özel okulda çalışan öğretmenlerin bu süreçte yaşadığı zorluklar yadsınamaz derecede fazladır çünkü devlet okulunda çalışan öğretmenlerin düzenli bir şekilde uzaktan online ders yürütme gibi zorunlulukları bulunmazken özel okulda çalışan öğretmenler tıpkı yüz yüze eğitimde olduğu gibi her sabah dersten önce tüm hazırlıklarını tamamlayıp öğrencileri için ekran karşısına geçerek ders sürecini yürütmüşlerdir. Tüm bunlar olurken eğitimciler hem sağlık hem ekonomik anlamda çeşitli sorunlarla baş etmek durumunda kalmışlardır (Gayatri, 2020).

Bu noktada, yapılan bu çalışmanın temel amacı okul öncesi düzeyde uzaktan online eğitim veren ve özel okulda çalışmış olan okul öncesi öğretmenlerinin bu alandaki deneyimlerini ve gözlemlerini öğrenerek COVID-19 pandemisi vb. gibi durumlarda okul öncesi düzeyde uzaktan online eğitim nasıl daha verimli ve sağlıklı hale getirilebilir bunu araştırmaktır. Çalışmaya katılan öğretmenlerin gözlemleri ve deneyimleri bu anlamda alana önemli katkılar sağlayacak olup çalışmanın sonunda öğretmenler, aileler, okul yöneticileri ve politika anlamında çeşitli önerilerde bulunulmuştur.

YÖNTEM

Araştırma Deseni

Araştırmada betimleyici model kullanılmış olup öğretmenlerin gözlemlerine ve deneyimlerine dayanan nicel veriler elde edilmiştir. Ayrıca odak görüşme ile nitel veriler elde edilmiştir.

Örneklem ve Katılımcılar

Çalışmaya 294 okul öncesi eğitimcisi katılmış olup katılımcılar COVID-19 pandemi döneminde özel okulda çalışmış ve uzaktan online eğitimi deneyimlemiş okul öncesi öğretmenlerinden oluşmaktadır. Katılımcıların 291 tanesi kadın, 3 tanesi erkektir. Yaş grubu en çok 20-30 yaş aralığında olup (161 kişi) büyük çoğunluğu lisans eğitimi mezunudur (144 kişi). Ayrıca çalışmaya ülkenin farklı bir çok ilinden katılım göstermişlerdir. Sırasıyla en çok İstanbul, Ankara, Antalya, İzmir, Tekirdağ ve Nevşehir'den katılım sağlanmıştır. Online eğitim sürecinde yaklaşık 4600'ün üzerinde okul öncesi düzeyinde çocuklar gözlemlenmiş olup yaş grubu en çok 60-72 ay (196 kişi) aralığındadır. Ayrıca öğretmenler sınıf mevcudunu genellikle 11-20 çocuk aralığında belirtmiş olup öğretmenlerin %86.7'si belirtilen aralıkta sınıf mevduna sahiptir.

Veri Toplama Süreci

Bu çalışmada veri toplamak üzere "Google Forms" üzerinden hazırlanan online bir anket kullanılmıştır. Veri toplanmaya başlamadan önce ilk olarak Odtü Etik Kurulu'ndan sonrasında da Milli Eğitim Bakanlığı'ndan gereken izin ve onaylar resmi olarak alınmıştır. Katılımcılara ankete dair ön bilgilendirme yazılı şekilde anketin başında aktarılmıştır. Daha sonra öğretmenler odak grup çalışması için davet edilmişlerdir. Beş öğretmen ile yaklaşık bir saat süren bir görüşme yapılmıştır. Çalışmaya katılım tamamen gönüllülük esasına dayanmaktadır ve çalışmaya katılım karşılığında herhangi bir şey talep edilmemiştir.

Veri Toplama Araçları

Bu çalışmada veri toplamak üzere "Google Forms" üzerinden hazırlanan online bir anket kullanılmıştır. Anketin dili Türkçe'dir. Ekte ileriye yönelik ışık tutması

adına hem Türkçe hem de İngilizce hali yer almaktadır. Anket 2 ana bölümden oluşmaktadır. İlk bölümde demografik bilgilere yönelik yaş, cinsiyet, eğitim tecrübesi (yıl), eğitim durumu, çevrimiçi eğitimin deneyimlendiği sınıfın yaş grubu, sınıf mevcudu, görev tanımı, yaşanılan şehir gibi sorular yer alırken ikinci bölümde gözlem ve deneyimlere yönelik olarak hazırlanan 21 soru mevcuttur. 20 soru kapalı uçlu soru olup 21. yani son soru öğretmenlere açık uçlu yöneltilen eklemek istediklerini ve yorumlarını paylaşabilecekleri bir fırsat olarak sunulmuştur.

Verilerin analizi

Bu çalışmada nicel veri için betimleyici model kullanılmıştır ve verilerin analizi SPSS 26. Versiyon kullanılarak yapılmıştır. Nitel veri için içerik analizi kullanılmıştır.

Sınırlılıklar

Çalışmanın COVID-19 pandemi sürecinde yapılmış olması, sadece özel okulda çalışmış olan okul öncesi öğretmenlerine yönelik olması, anket yönteminin kendisinden kaynaklanan soruları yanlış anlama, dürüst cevap vermeme gibi sınırlılıklar ve katılan öğretmenlerin yaklaşık 3'te 2'sinin aynı kurumun farklı kampüs ve şehirlerinden olması gibi sınırlılıklar bulunmaktadır.

BULGULAR

Araştırma sorusu 1: Online derslerden önce

Alt sorular

1. Okul öncesi öğretmenleri ne tür hazırlıklar yapıyordu?
2. Online derslere hazırlanırken ne gibi kaynaklar kullandılar?
3. Okul öncesi öğretmenleri ve aileler materyal ve kaynak bulmada ne gibi zorluklar yaşadılar?

Bu araştırma sorusu anketin 2, 10, 11, 12 ve 13. sorularını kapsamaktadır. Sonuçlar genel itibariyle şu şekildedir.

Öğretmenlerin %97.6'sı derse başlamadan önce hazırlık yapmıştır. Bu hazırlıkların büyük çoğunluğu ders materyallerini hazırlamaya yönelik olup kaynak olarak çoğunlukla İnterneti tercih etmişlerdir. Ayrıca öğretmenlerin çoğunluğu kaynak ve materyal temininin biraz zor olduğunu belirtmişlerdir. Bununla birlikte, öğretmenler ailelerin materyal temini konusunda zorlandıklarını ancak yine de temin ettiklerini ifade etmişlerdir. %48.6'sı "Evet, temin edebildiler." seçeneğini işaretlerken %46.9'u ise "Kısmen temin edebildiler." seçeneğini tercih etmişlerdir.

Araştırma sorusu 2: Online dersler sırasındaki deneyimler

Alt soru

1. Okul öncesi öğretmenleri ne tür aktiviteler, öğretim metotları ve materyaller kullanmışlardır?

Bu araştırma sorusu anketin 1, 3, 4, 5, 14 ve 15. sorularını kapsamaktadır. Sonuçlar genel itibariyle şu şekildedir.

Online eğitim sürecinde öğretmenler motor becerilere yönelik etkinliklere haftanın en az 4 günü yer vermişlerdir. Verilen seçeneklerden en az raket oyunlarına yer verirken, en çok kesme-yapıştırma aktiviteleri uygulamışlardır. Materyal olarak ise en az raketi tercih ederken en çok oyun hamurunu tercih etmişlerdir. Bununla birlikte 294 katılımcının 261 tanesi gösterip yaptırma-role model olma tekniğini kullandıklarını belirtmişlerdir. Ek olarak, öğretmenlerin %77.6'sı ayrıca bir "Beden Eğitimi ve Spor" dersi olduğunu ve haftada yaklaşık olarak 1-2 ders saati şekilde uygulandığını, dersin "Beden eğitimi ve Spor öğretmeni" tarafından uygulanmış olduğunu paylaşmışlardır (%72.4).

Araştırma sorusu 3: Online derslerden sonra yapılanlar

Alt sorular

1. Okul öncesi öğretmenleri öğrencilerinin motor becerilerini nasıl değerlendirdi?
2. Okul öncesi öğretmenleri öğrencilerinin motor becerilerini desteklemek için aileler ile ne gibi etkinlikler ve ödevler paylaştılar?

Bu araştırma sorusu anketin 6, 7, 8, 9, 16, 17, 18, 19 ve 20.sorularını kapsamaktadır. Sonuçlar genel itibariyle şu şekildedir.

Okul öncesi öğretmenlerinin %78.6'sı öğrencilerine çevrimiçi dersler sonrasında ödevler vermiş ve aktivite önerilerinde bulunmuşlardır. Genellikle online derslerde yapılan etkinliklerin tekrarını yapmaktan çok farklı etkinlik önerilerinde bulunmuşlardır. Aynı zamanda öğretmenler en çok fotoğraf ve görsel paylaşma yöntemini kullanarak etkinlik önerilerinde bulunmuşlardır. Bununla birlikte, okul öncesi öğretmenleri öğrencileri ile paylaştıkları bu aktivitelerin takibini en çok fotoğraf ve video aracılığıyla sağlamışlardır. Öğretmenlerin paylaştıkları bu ödevler genellikle küçük motor becerilere yönelik olup katılımcı öğretmenlerin %40.6'sı bu yönde cevap vermişlerdir.

Bunların yanı sıra, okul öncesi öğretmenlerinin %76.9'u öğrencilerinin motor becerilerini değerlendirdiklerini ifade etmiştir. %37.4 oranıyla en çok ailelerle iletişime geçilerek değerlendirme yapıldığı anlaşılmaktadır. Öğretmenlerin büyük bir çoğunluğu öğrencilerinin hem küçük motor hem de büyük motor becerilerinde gerileme ve ilerlemeden çok bir durağanlık olduğunu gözlemlemişlerdir. Ayrıca, 294 katılımcıdan 136'sı online eğitimin okul öncesi çocukların motor becerilerini destekleme yönünde uygun olmadığını ifade etmişlerdir. Son olarak öğretmenlerin %61.9'u yani 294 öğretmenin 182 tanesi online eğitim sürecinde okul öncesi çocukların motor becerilerini desteklemenin zor olduğunu belirtmişlerdir.

Yapılan odak grup görüşmesinde öğretmenler online eğitimde yaşadıkları sorunları ve algıları belirtmişlerdir. Genel olarak öğretmenler büyük kas grubunu geliştirici aktiviteleri yaptırmakta zorlandıkları, küçük motor aktiviteler

düzenlediklerini belirtmişlerdir. Online eğitim için kendilerinin daha fazla bilgi ve birikime ihtiyaç duyduklarını belirtmişlerdir.

TARTIŞMA

Araştırma sorusu 1

Araştırma sorusu 1'in cevapları incelediğinde, okul öncesi öğretmenlerinin online derslere yönelik olarak kaynak ve materyal bulma noktasında zorlandıkları ancak bazı araştırmaların sıradan günlük eşyaların bile motor becerileri desteklemek için etkili ve kullanışlı olduğunu önermektedir (Zembat et al., 2020). Örneğin, oyun hamuru, farklı boyutlarda kutu ve kavanoz, pet şişe, tuvalet kâğıdı rulosu, yastık ve minderler, sandalye, tabure ve masa, top, balon, ip, boncuk ve makarna, kuru bakliyat, kaşık, maşa ve cımbız, bardak, tabak ve kase, tül, kumaş, kurdele ve bez günlük yaşamda kullanılan aynı zamanda motor becerileri de destekleyebilecek materyallere örnek olarak gösterilebilir. Bu materyalleri sağlamak ve bulmak oldukça kolaydır (Rule & Stewart, 2002).

Bunlarla birlikte, son yıllarda, İnternet alışverişi yaygınlaşmış olup akla gelebilecek birçok malzeme ve materyal kolayca sipariş edilebilmektedir. Buna paralel olarak, geçmişe baktığımızda öğretmenler kaynak bulma hususunda çeşitli zorluklar yaşamışlardır. Ancak, günümüzde teknolojik gelişmelere bağlı olarak bu çok da mümkün değildir. Çünkü İnternet üzerinde milyonlarca dijital uygulama, oyun, kitap, dergi, yazılı ve görsel kaynaklar, videolar, eğitici kanallar mevcuttur.

Araştırma Sorusu 2

Araştırma sorusu 2 ile ilgili bulguları incelediğimizde okul öncesi öğretmenlerinin daha çok küçük materyalleri kullanmaya ve küçük motor becerileri destekleyen etkinliklere yöneldikleri görülmektedir. Öğretmenler çoğunlukla kesme yapıştırma aktivitelerine yer vermişlerdir çünkü her çocuğun evinde makas, yapıştırıcı ve kâğıt olduğunu varsaymışlardır. Aslında, bu bakış açısı öğretmenlerin kendilerini kısıtlamalarına ve dolayısıyla öğrencileri de

materyal ve aktivite noktasında kısıtlamalarına neden olmuş olabilir. Fakat yapıştırıcı, kâğıt gibi malzemeler bitebilirken yastık, minder, kaşık gibi materyallere ulaşması daha kolay olabilir.

Bunların dışında, okul öncesi öğretmenleri özellikle motor becerilere yönelik olan hareketleri öğrencilere gösterirken beden eğitimi ve spor öğretmeninin ek desteğine ihtiyaçları olduğunu belirtmişlerdir. Ancak bu her zaman mümkün olmayabilir. Bu noktada öğretmenler kendileri çaba gösterebilirler veya İnternetteki sayısız video, eğitici kanallar, fotoğraf ve görselleri kaynak olarak kullanabilirler.

Araştırma Sorusu 3

Araştırma Sorusu 3 ile ilgili elde edilen sonuçlara baktığımızda okul öncesi öğretmenlerinin birçoğunun çocukların hem büyük motor hem de küçük motor becerilerinde durağanlık gözlemledikleri tespit edilmiştir. Değerlendirme aracı olarak ise en çok aileler ile iletişime geçmeyi tercih etmişlerdir. Aileler ile iletişime geçme yöntemi objektif yani nesnel bir ölçme ve değerlendirme aracı olarak kabul edilemeyeceği için öğretmenlerin gözlemlerini ve sonuçlarını okullarda yüz yüze eğitime geçildiğinde kabul görmüş nesnel motor beceri testleri ile ölçerek değerlendirmeleri daha sağlıklı sonuçlar ortaya çıkmasını sağlayabilir.

ÖNERİLER

- Okul öncesi öğretmenleri motor beceriler ve genel motor gelişim ile alakalı daha çok bilgiye ve daha yüksek farkındalığa sahip olmalıdır.
- Okul öncesi öğretmenleri çocukların motor becerileri ile alakalı olarak düzenli bir gözlem ve değerlendirme yapmalı ve çıkan sonuçları aileler ile belirli aralıklarla paylaşmalıdır.
- Okul öncesi öğretmenleri çocukların motor becerilerini destekleme noktasında gerekli sorumluluğu üstlenmelidir.
- Aileler çocuklarını motor beceriler ile ilgili olarak ev ortamında da okula paralel şekilde desteklemelidir.
- Okul yönetimi öğrencilerin motor yeterliliklerini düzenli şekilde takip etmelidir.
- Ayrıca okul yönetime okul öncesi öğretmenleri için motor becerilere yönelik yeterli materyal ve kaynak desteği sağlamalıdır.
- Okul öncesi programları çevrimiçi eğitime uygun şekilde adapte edilmelidir.
- Eğitim sistemi pandemi ve benzeri koşullarda yaşanan deneyimler göz önüne alınarak tekrar değerlendirilip gözden geçirilmelidir.

APPENDİX F: TEZ İZİN FORMU

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TEZİN ADI / TITLE OF THE THESIS (**İngilizce** / English): EARLY CHILDHOOD EDUCATION TEACHERS' TEACHING EXPERIENCES ON MOTOR DEVELOPMENT OF CHILDREN DURING THE COVID-19 PANDEMIC

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