

Exploring Educators' Views on the Impact of Covid-19 Pandemic in the Development of Children under the Age of 3

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Abstract

The covid-19 pandemic affected the lives of all people worldwide. The unprecedented situations faced by people of all ages affected their mental and physical health. In this context, children are an especially vulnerable group as their development is in full swing and they have not yet acquired the skills to cope with stressful situations. Therefore, the purpose of

this study is to explore the views of 31 educators working in Attica (Greece) regarding the changes they observe in the development of children under the age of 3. In addition, the research addresses the type of activities that cannot be carried out in nurseries due to covid-19 health protocols, the alternative methods used by the educators and their suggestions for future interventions. The research instrument used was the semi-structured interview and the data was analyzed using thematic analysis. The results of the study show that the educators observe changes in the social, emotional and language domains of children's development. Specifically, children seem to suffer from strong attachment, anxiety, hyperactivity, inability to regulate emotions, fear of social interactions, and slow vocabulary development-especially foreign students. The researchers anticipate that the results of the present study will contribute to the investigation of the developmental implications of the covid-19 pandemic in children under 3 years old and provide useful information to educators for future interventions in nurseries.

Keywords: Educators, Pandemic impact, Covid-19, Children development under the age of 3, Greek ECEC settings.

1. The Impact of Covid-19

On 11 March 2020, the World Health Organization officially announced that covid-19 would be treated as a pandemic (Yang et al., 2020). Throughout that pandemic, the impact on people's daily lives have been unprecedented (Lee, 2020; Tahan et al., 2020): Months-long quarantine periods, enforced confinement, minimization of human relationships, restriction of free movement, strict enforcement of health protocols even in simple daily activities, and disruption of physically present services including commercial stores and schools. Consequently, the emergence of covid-19 virus created new conditions that affected people's lives at social, economic and political levels, in health and education (Lee, 2020; Stogner et al., 2020; Tahan et al., 2020; Tahan et al., 2020).

Obviously, these new life circumstances have a deeper impact on the physical and mental health of people of all ages. Several researchers (e.g., Vilelas, 2021; Baweja, 2021; Patel, 2020; Polizi et al., 2020; Schnell & Krampe, 2020; Casagrande et al. Kim et al., 2020) refer to the impacts on individuals (adults and children) and their long-term consequences. For example, feelings of powerlessness, health insecurity, economic and job insecurity, stressful experiences, adverse psychological effects, reduced productivity and self-efficacy, frustration, anger, loneliness, constant fear of illness, fear of interacting with other people, sleep disturbances and gastrointestinal problems are just some of the adverse effects that people may experience during the pandemic.

Despite the fact that the pandemic adversely affected people of all ages, young children were especially vulnerable (Brooks et al., 2020); the freedom to play and the appropriate educational environment are essential for normal personal and social skills development (Spiteri, 2021a; Figueiredo et al., 2021). However, during quarantine, children were confined to their home and therefore opportunities for interaction with peers and the social environment were minimal (Edmunds, 2020; Brooks et al., 2020). Since it is well documented that nurseries are the most important socialization factor after the family, and contribute to children's social, emotional, cognitive and intellectual development (OECD, 2018; Vandell et al., 2016; Melhuish et al., 2013), their prolonged closure combined with the above-mentioned constraints, may have negatively affected children's development.

This hypothesis is further supported by research (e.g., Orgiles et al., 2020; Jiao et al., 2020; Orgiles et al., 2020; Viner et al., 2020) on the impact of covid-19 on children. For example, Orgiles et al. (2020) conducted a survey in Italy and Spain in which parents of children aged 3-18 years participated; they were asked to report changes they observed in their children that could be attributed to the pandemic. Most parents emphasized on their children's difficulty concentrating, the intense feelings of boredom, irritability, nervousness and loneliness. Also, children during the quarantine period seemed to have problems sleeping, be anxious and have a reduced appetite for food (Tang et al., 2021; Jiao et al., 2020).

Furthermore, the results of Jiao et al. (2020) study in China with a sample of children aged 3-18 years, showed adverse effects on children's mental health during quarantine, such as intense attachment due to lack of interpersonal relationships, distraction and irritability. Similarly, Viner et al (2020) found that younger children aged 3-6 years were more likely to

show symptoms of attachment and fear of infection of their family members compared to older children. All of the above is confirmed by Brooks et al. (2020) who noted that young children are at risk of experiencing mental and physical dysfunction due to their removal from the educational environment and the change in their daily routine (Courtney et al., 2020; Liu et al., 2020).

Of particular interest are the results from studies (Bertia et al., 2021; Egan et al., 2021; Davies et al., 2021; Lafave et al., 2021a) which investigated the impact of disruption of the ECEC settings due to the pandemic on children's development. Specifically, Davies et al. (2021) studied the effects on the language domain of 8–36-month-old children and found that children who continued to participate in ECEC settings showed better vocabulary development. Egan et al. (2021) and Bertia et al. (2021) investigated changes in children's social-emotional development and concluded that the majority of children experienced difficulty in regulating their emotions.

Lafave et al. (2021a) note that the protocol for covid-19, which was applied after the opening of ECEC settings, disrupted the children's physical development activities and impacted the education on healthy eating due to equipment insufficiency. Finally, several studies (e.g., Spiteri, 2021b; Lafave et al., 2021b) report potential implications that may result from the disruption of ECEC settings due to the pandemic, including children's well-being, equity in education, opportunities for learning, physical and mental health.

In the case of Greece, the preventive measures against covid-19 led to a long period of time when nurseries could not operate. In particular, nurseries ceased their operation from February 2020 to May 2020 and then from November 2020 to May 2021. Essentially, the children remained outside the nurseries for approximately one and a half years, without any kind of distance education or generally any form of contact with the educators.

Considering all of the above, the aim of this study is to explore the views of 31 educators working in Attica (Greece) on the impact of quarantine for covid-19 on the development of children under the age of 3.

More specifically, the research questions are the following:

- Which were the effects of covid-19 quarantine on children's development?
- Which activities could not be implemented in nurseries because of the protocol for covid-19 and how that affected children's development?
- Which areas of children development should be emphasized considering the potential impact of the pandemic?

To answer the above research questions, data were collected by conducting semi-structured interviews and then analyzed using the thematic analysis. Using that method, the researchers were able to explore in depth the views of the educators (Robson, 2007) and highlight their concerns about the impact of the pandemic on children's development.

In summary, the present study attempts to contribute to the scientific literature regarding the

impact of covid-19 on children's development, because the existing research is limited (e.g., Bertia et al., 2021; Egan et al., 2021; Davies et al., 2021; Lafave et al., 2021a), and to our knowledge there is no similar research in Greece. We estimate that the impact of the pandemic on children's development will be of particular interest in the scientific community.

2. Method

2.1 Research Method and Instrument

Thematic analysis was chosen as the method of analysis in this study. That method consists of systematically identifying, organizing and understanding recurring patterns of meaning within a dataset (Braun & Clarke, 2012). Using this method, the researchers detected numerous patterns of meaning, but focused on those that were relevant to the topic under study, and in particular those that were most appropriate to answer the research questions. Therefore, the research questions acted as a guide for thematic analysis (Tsiolis, 2014; Braun & Clarke, 2012).

A semi-structured interview, which is characterized by a set of predetermined questions, was used to collect the data (Creswell, 2016). This method of data collection allows the in-depth study of the topic under investigation and is also flexible in terms of: the order of questions, modifying the content of questions according to the subject of the research, and adding or removing questions and topics for discussion (Robson, 2007).

The steps followed after data collection for the thematic analysis are those suggested by Tsiolis (2014): (a) transcribing the interviews, (b) reading the texts carefully, to identify and gather the extracts from the text which correspond to each research question, (c) coding, (d) moving from codes to themes, and (e) writing up the findings.

In terms of research ethics, the educators participated voluntarily. Also, before the interview they were informed of the purpose of the study, the reasons why their participation was necessary and the possibility of withdrawing at any stage of the interview if they wished. Finally, the researchers provided assurance of the participants' anonymity and that the research data would only be used for the specific research purpose (Cohen et al., 2012).

2.2 Participant Characteristics

The survey included 31 educators working in nurseries in Attica (Greece) with children under the age of 3. The majority of the participants were women, which generally characterizes the gender situation of educators in Greece. The range of their age was 25-56 years and their experience ranged from 5-23 years. Finally, all educators were university graduates and a few of them held a postgraduate degree.

2.3 Reliability and Credibility of Research

The reliability of the survey was supported through participant checks. Specifically, transcripts of the interviews, interpretation and discussion of the findings were returned to the participating educators (Cohen et al., 2012). They were asked to study the section describing their own experience and to make comments if they felt that the paper did not represent their

views. The comments were considered by the researchers. In this way, validation of the findings by the participants was achieved (Creswell, 2016).

In terms of the validity of the study, the researchers described the findings in detail and consistently. Since it is impossible to present all the educators' responses, the most typical cases and those that most clearly answered the research questions were selected (Cohen et al., 2012). Therefore, readers of the paper can engage in interpreting the findings and reach their own conclusions (Silverman, 2020).

3. Results

Educators' reports on the changes they have observed in children's development are analyzed in the social, emotional and cognitive domains.

In the social domain, the majority of educators observed changes in children's behavior and attribute this to the minimization of interactions with their peers during quarantine. In fact, it seems that with the reopening of nurseries the children had difficulty in building friendships, and following the social rules of the classroom:

'with the pandemic, children were confined to their house for a long time, so that the lack of daily interaction with peers caused them problems; when they returned to school it became difficult for them to form friendships, share things and follow the school routine'
- S.

Also, during quarantine the reduction in interaction with peers may have led children to increase the hours of computer and tablet use, which may have contributed to the reduction of their sociability:

'perhaps during quarantine the children spent more hours using tablets, computers and mobile phones since they did not have their friends. I believe that this affected their degree of socialization, which has made it more difficult for them to make friends' - V.

However, a minority of educators have not observed any impact of the quarantine on the children's social sphere:

'children are willing to play and communicate with peers and adults; they constantly play with other children and interact without social fear; they had missed their friends' - L.

Regarding the emotional impact of the pandemic on children, the majority of educators observed changes including strong attachment to parents, difficulty in managing emotions, intense anxiety and fear:

'children are irritable and have strong attachment to parents' - A.

'they are afraid of close contact with other children and adults' - K.

'I observe difficulty in managing emotions and believe it is a result of confinement; they cannot manage their anger and their joy is either restrained or excessive' - E.

'inability to recognize and express their emotions; I believe that became very intense

after the pandemic' - D.

On the other hand, a minority of educators have not noticed any change:

'no, I did not notice any change in their emotional state' - G.

Regarding the cognitive development domain the educators emphasize the children's lack of attention and concentration and the negative impact on their speech development. The majority of the sample feels that children cannot easily concentrate, maintain their attention long enough and avoid distractions. Also the majority of educators, especially those who have foreign children in their classes, believe that the children's development is slower, especially vocabulary enrichment:

'the children show a severe lack of attention; their attention is constantly distracted and I believe it is one of the consequences of the pandemic' - A.

'the children's speech develops through teamwork and cooperation. All these were forbidden and now children do not interact with each other. I think this affects their speech development making it slower' - S.

'yes, I noticed changes because almost all children in my class are foreigners; their parents don't speak Greek and during their necessary stay at home they didn't have experiences and stimuli to develop their speech' - F.

However, there is also a minority of educators who have not detected changes in the development of children's cognitive-linguistic domain:

'I did not notice differences in the children's speech because, despite staying at home, they maintained contact with friends and relatives; therefore they had sufficient stimuli for language development' - X.

The second theme concerns the constraints on the implementation of daily nursery activities due to the covid-19 protocol. Thus, it seems that group activities, collaboration with children from other classes, celebrations, dramatic play, puzzles and activities in play corners are not carried out in order to avoid the spread of the virus:

'children are not allowed to share toys and exchange objects; therefore, we avoid group games and anything else that requires intense interaction with several people at the same time' - R.

'the morning circle, which is important for children's language development and interaction, does not take place' - A.

'we cannot carry out theatrical performances and let the children dance freely' - O.

Regarding the impact of avoiding the above activities on children's development, the majority of educators emphasize the negative consequences in the social and emotional domain:

'I believe that there are negative consequences; while we should stimulate their sociality, the restrictions that have been applied contribute to children's detachment and make it

difficult for them to build close relationships' - I.

'yes, I think there are consequences; all those restrictions we impose on children reinforce their fear and their anxiety that someone might get sick if they are not careful. We also teach them to keep social distancing from their peers, which is not right for their development' - N.

Of course, there is also a small minority of educators who believe that not being able to carry out certain activities will not have an impact on children's development:

'there is no negative impact on children because they are content with what we give them' - T.

However, most educators used alternative methods such as working in small groups of children, to somehow implement the activities that were prohibited due to covid-19 restrictions.

'we adapted the group-based activities to covid-19 restrictions by working in smaller groups of 3-4 children, to enhance children's interaction. However, that is not easy because we have to repeat the same activity many times' - S.

'we work strictly in groups of children whose composition does not change' - K.

Finally, the educators suggest that the areas and/or activities that should be emphasized in the future to help children after covid-19 should predominantly improve the social and emotional domains of the children. These domains are followed by the cognitive-linguistic domain and by the education on hygiene rules:

'children should be left free in the nursery to interact with each other through play and the social and emotional domain should be stimulated because they need it' - B.

'there should be a particular focus on the language area; many activities for language development should be implemented, to provide children with equal opportunities and experiences' - P.

'children should be familiarized with hygiene rules to avoid the spread of the virus' - M.

However, a small minority of educators feel that it is not necessary to focus on any area of development, as they use alternative ways of delivering all the necessary activities:

'no, I do not think that we should focus on one area or another; after all, activities for the holistic development of children are carried out in alternative ways' - G.

4. Discussion

The results of the survey showed that the majority of educators believe that the covid-19 quarantine and the closure of nurseries for a long period of time negatively affected the development of children. The findings of the survey are consistent with previous studies (Berti et al., 2021; Egan et al., 2021; Davies et al., 2021; Lafave et al., 2021a).

More specifically, educators reported that they observed negative impacts on children's social

development. Children find it difficult to build friendships, interact with each other, share toys and follow school routines. These results are consistent with previous studies reporting (Berti et al., 2021; Egan et al., 2021) the negative impact of closing the ECEC settings on children's sociality. This finding can possibly be justified if we consider that nurseries are the most important socialization agency after the family (Melhuish et al., 2013). They are the context in which they develop their social skills, learn to work in teams, develop values and attitudes that promote collegiality and form healthy interpersonal relationships (OECD, 2018). Therefore, the combination of the social constraints imposed by the pandemic, the lack of interpersonal relationships outside the family and the absence from nurseries may have negatively affected children's social development.

Regarding the emotional domain, educators reported a negative impact on children's development including strong attachment to parents, difficulty in managing emotions, hyperactivity, high anxiety and fear. These findings are consistent with previous research (Berti et al., 2021; Egan et al., 2021; Orgiles et al., 2020; Jiao et al., 2020; Orgiles et al., 2020; Viner et al., 2020; Brooks et al., 2020). A possible explanation for this finding could be that children under the age of 3 are at a developmental stage where self-regulation, recognition and acceptance of emotions, development of autonomy and personal empowerment are in progress. These characteristics are formed in the context of family and nurseries through appropriate activities and interaction with other individuals (Bertia et al., 2021; Cascio & Schanzenbach, 2013). However, the constraints of quarantine and the children's absence from nurseries may have deprived them of the appropriate experiences for their development. In addition, many studies report that the symptoms of anxiety and uncertainty experienced by parents during the pandemic may be passed on to their children (e.g., Courtney et al., 2020; Schnell & Krampe, 2020; Casagrande et al., 2020).

Regarding the cognitive domain, most reports of this study emphasized on slow language development; reduced vocabulary and children's lack of attention and concentration. These results are in line with previous studies (Davies et al., 2021; Bertia et al., 2021). In particular, the study by Davies et al. (2021), which demonstrated the positive effect on language development for children 8-36 months of age who continued to attend ECEC settings during the pandemic, is in complete agreement with our own study. Moreover, the research findings highlight the important role of nurseries for children's language development (e.g., Melhuish et al., 2013; Cascio & Schanzenbach, 2013), especially for those coming from family environments with fewer language stimuli (e.g., Davies et al., 2021; Bradbury et al., 2016; Bennett, 2008), such as foreign children.

Of particular interest are the results of the study regarding the inability to implement specific activities in nurseries due to the covid-19 protocol, and the effects the educators believe that these restrictions may have on children. Essentially, the activities that cannot be implemented are those that require teamwork, intense interaction between children and sharing of toys (e.g., drama, play corners, music and movement, celebrations). Some educators, in order to implement those activities, created smaller groups of 3-4 people that did not change during the year. However, the majority of educators believe that this method further reinforces children's fear of social interaction and does not cultivate their social skills. Indeed, despite

the fact that the adherence to hygiene rules is necessary to avoid the spread of the virus those alternative ways of implementing the activities do not seem to promote children's social development, which is the main purpose of nurseries (e.g. Bradbury et al, 2016; Cascio & Schanzenbach, 2013; Bennett, 2008). These findings are in line with the study by Lafave et al. (2021a), who highlighted the challenges faced by educators due to the strict covid-19 protocols.

Finally, the majority of educators believe that the main purpose of future programs and activities should be the elimination of the negative effects of the pandemic on children's development. The domain which needs the most attention is the socio-emotional, followed by the cognitive-linguistic domain and the hygiene education. This need is also highlighted by previous research (e.g. Koch, 2022; Spiteri, 2020); children are a vulnerable age group and ensuring their healthy development is important for all humanity.

5. Research Limitations and Implications for Practice and Further Research

Regarding the limitations of the research it should be mentioned that the views of the educators came from only one city in Greece and therefore the results may not reflect those from different cities or countries. Also, only the staff were allowed to enter the nurseries during the study, due to the covid-19 restrictions that were applied during that period. Thus, the researchers agreed with the educators to use the outdoor space of the nurseries to conduct the interviews. However, there were occasions when the city noise was quite loud and often distracted the interviewees. Therefore, the interviews were not always conducted under ideal conditions.

Nevertheless, the research findings suggest a guideline for the effects that covid-19 quarantine may have had on children's development. Besides, the views of the majority of educators converge and are confirmed by previous research (e.g., Bertia et al., 2021; Egan et al., 2021; Davies et al., 2021; Lafave et al., 2021a). Therefore, this study could contribute to the scientific literature on the topic under study and provide material for further research, for example: studying more cities in Greece or other countries to compare the results; studying parents' perspectives on the effects of covid-19 and comparing the results with educators' views; investigating the impact of nursery closures on the development of children from less advantaged backgrounds, etc.

Finally, the results of the research may be useful for educators in designing future educational programs, which will be appropriate for the healthy development of children and for addressing the potential impact of the pandemic. According to the results, particular emphasis should be placed on programs and activities targeting the children's socio-emotional and cognitive-linguistic development, and their hygiene education.

6. Conclusion

In summary, this study attempts to contribute to the investigation of the covid-19 pandemic impact on the development of children under the age of 3. The majority of educators who participated in the study stated that they observed changes in children's development related to the social, emotional and cognitive-linguistic domains. Children appear to have developed

strong attachment with parents, show fear of social interaction, inability to manage their emotions, are hyperactive and have slow vocabulary development – especially those children who are foreigners

Although it will probably take several years before the full impact of the covid-19 pandemic on children is fully known, the first impressions from educators are important. Therefore, immediate action with appropriate intervention programs is recommended to counterbalance the adverse conditions that have been created and may have affected the children's opportunities for healthy development.

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