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Early Childhood Educators' Views on Implementing Individualized Education Plans for Neurodevelopmental Disorders

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ABSTRACT

Purpose: This study aims to explore the perspectives of early childhood educators on the development and implementation of IEPs, identifying challenges, evaluating effectiveness, and suggesting improvements.

Methodology: This qualitative study utilized semi-structured interviews to gather data from 25 early childhood educators who have experience in developing and implementing IEPs for children with neurodevelopmental disorders. The interviews focused on the educators' experiences, perceived challenges, effectiveness of IEPs, and suggestions for improvement. Data were analyzed using NVivo software, following a thematic analysis approach to identify key themes and subthemes.

Findings: The analysis revealed several key challenges, including the administrative burden of extensive paperwork, inadequate training and professional development opportunities, and difficulties in collaboration with specialists. Inconsistent parental involvement and classroom management complexities were also significant obstacles. Despite these challenges, educators recognized the effectiveness of IEPs in providing personalized learning experiences, setting and achieving realistic goals, and adapting to the evolving needs of students. Suggestions for improvement included enhanced training programs, better collaboration mechanisms, increased parental engagement, adequate resource allocation, and the integration of technology and holistic support systems.

Conclusion: The findings highlight the complexities and potential benefits of implementing IEPs for children with neurodevelopmental disorders. Addressing the identified challenges through targeted improvements can enhance the overall effectiveness of IEPs and contribute to more inclusive and supportive early childhood education environments.

Keywords: Individualized Education Plans (IEPs), neurodevelopmental disorders, early childhood education, educator perspectives, administrative challenges, personalized learning, collaboration, parental involvement.

1. Introduction

The implementation of Individualized Education Plans (IEPs) for children with neurodevelopmental disorders in early childhood education settings is a critical yet complex task (Béna et al., 2013; Boyer, 2022; Girirajan et al., 2011). These plans are designed to provide tailored educational interventions that address the unique needs of each child, ensuring they receive appropriate support and resources to thrive academically and socially (Gibbs & Warren, 2022; Klein et al., 2017; Sun et al., 2020; Sun et al., 2022). However, the process of developing and implementing IEPs involves various challenges and requires effective collaboration among educators, specialists, and parents (Rojas-Torres et al., 2023).

Early childhood educators play a significant role in the successful implementation of IEPs. Their perspectives and experiences are invaluable for understanding the practicalities and obstacles involved in this process (Hakyemez-Paul et al., 2018). According to Baglama and Demirok (2021), preservice special education teachers highlight the importance of early intervention and the need for comprehensive training to effectively support children with special needs (Baglama & Demirok, 2021).

Early childhood is a crucial period for cognitive, social, and emotional development. High-quality early childhood education can significantly impact a child's developmental trajectory, particularly for those with neurodevelopmental disorders. Research by Hakyemez-Paul (2020) underscores the importance of parental involvement in early childhood education, which is a critical component in the development and implementation of effective IEPs (Hakyemez-Paul, 2020). In their comparative study of Turkish and Finnish contexts, Hakyemez-Paul et al. (2018) emphasize the role of early childhood educators in fostering collaborative relationships with parents to enhance the educational experiences of children with special needs (Hakyemez-Paul et al., 2018).

Despite the recognized benefits of IEPs, their implementation is fraught with challenges. One significant issue is the administrative burden placed on educators. Heiskanen, Alasuutari, and Vehkakoski (2019) highlight the extensive documentation required for IEPs, which can detract from the time educators spend on direct interaction with students (Heiskanen et al., 2019). Additionally, the lack of adequate training and professional development opportunities for educators is a persistent challenge. As noted by Baglama and Demirok (2021), preservice teachers

often feel ill-prepared to address the diverse needs of children with neurodevelopmental disorders, suggesting a gap in both initial teacher education and ongoing professional development (Baglama & Demirok, 2021).

Moreover, effective collaboration with specialists such as speech therapists, occupational therapists, and psychologists is essential for the successful implementation of IEPs. However, educators often face difficulties in coordinating with these professionals due to scheduling conflicts and communication barriers (Hakyemez-Paul et al., 2018). This lack of cohesive teamwork can impede the delivery of integrated support services, ultimately affecting the quality of education provided to children with special needs.

Despite these challenges, IEPs have the potential to significantly enhance the educational outcomes for children with neurodevelopmental disorders when implemented effectively. Research by Sun et al. (2020) on the infusion of human umbilical cord tissue mesenchymal stromal cells in children with autism spectrum disorder illustrates the advancements in medical and educational interventions that can improve cognitive and behavioral outcomes (Sun et al., 2020). Similarly, Keen, Webster, and Ridley (2015) provide an overview of how tailored educational strategies can support the academic performance of children with autism spectrum disorder, highlighting the positive impact of personalized learning approaches (Keen et al., 2015).

Personalized learning, which is a core component of IEPs, allows educators to tailor their teaching strategies to meet the individual needs of each child. This approach not only enhances student engagement but also leads to better academic and developmental outcomes. As Tomás-Roca et al. (2021) discuss, the developmental resilience of synaptome architecture underscores the importance of individualized and adaptive educational interventions that can promote neuroplasticity and cognitive development in children with neurodevelopmental disorders (Tomás-Roca et al., 2021). To overcome the challenges associated with IEP implementation, educators and researchers have proposed several strategies. Enhanced training programs are crucial for equipping educators with the necessary skills and knowledge to support children with neurodevelopmental disorders effectively. Çetin and Demircan (2020) advocate for the integration of STEM education in early childhood, which can provide educators with innovative tools and methodologies to engage children in meaningful learning experiences (Çetin & Demircan, 2020).

Improving collaboration between educators, specialists, and parents is another critical area for enhancement. Regular

meetings, integrated services, and shared responsibilities can foster a more cohesive approach to supporting children with special needs (Hakyemez-Paul et al., 2018). Furthermore, increasing parental engagement through workshops and effective communication strategies can bridge the gap between home and school environments, ensuring a more consistent and supportive educational experience for the child (Rad et al., 2022).

Adequate resource allocation is also essential for the successful implementation of IEPs. Ensuring that educators have access to necessary materials, support staff, and funding can significantly improve the quality of education provided to children with neurodevelopmental disorders (Heiskanen et al., 2019). Additionally, leveraging technology to streamline the IEP process and manage data more efficiently can reduce the administrative burden on educators and allow them to focus more on direct instructional activities (Sun et al., 2020).

The theoretical framework for this study is grounded in the principles of inclusive education and the ecological systems theory proposed by Bronfenbrenner. Inclusive education emphasizes the right of all children to receive an education that meets their individual needs in a supportive and non-discriminatory environment. Bronfenbrenner's ecological systems theory highlights the interconnectedness of various environmental factors that influence a child's development, including family, school, and broader societal contexts (John et al., 2020). Understanding the perspectives of early childhood educators within this framework can provide valuable insights into the systemic factors that affect the implementation of IEPs and inform strategies for creating more inclusive and supportive educational environments.

This research is significant as it addresses a critical gap in the literature by focusing on the views of early childhood educators who are directly involved in the development and implementation of IEPs. Previous studies have primarily concentrated on the perspectives of parents and specialists (Hakyemez-Paul, 2020; Heiskanen et al., 2019). By highlighting the experiences and challenges faced by educators, this study aims to contribute to a more comprehensive understanding of the IEP process and identify practical solutions to enhance its effectiveness.

The successful implementation of IEPs for children with neurodevelopmental disorders in early childhood education settings requires addressing various challenges, including administrative burdens, lack of training, and difficulties in collaboration. Despite these challenges, IEPs have the

potential to significantly improve the educational outcomes for these children through personalized learning and tailored interventions. Enhancing training programs, improving collaboration, increasing parental engagement, and ensuring adequate resource allocation are critical steps towards overcoming these challenges. By understanding and addressing the perspectives of early childhood educators, this study aims to contribute to the development of more effective and inclusive educational practices that support the diverse needs of all children. This study aims to explore the perspectives of early childhood educators on the development and implementation of IEPs, identifying challenges, evaluating effectiveness, and suggesting improvements.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a qualitative research design to explore early childhood educators' views on implementing Individualized Education Plans (IEPs) for children with neurodevelopmental disorders. Given the exploratory nature of the research, semi-structured interviews were utilized to gather in-depth insights and personal experiences from the participants.

The study involved a purposive sample of early childhood educators from various early learning centers and primary schools. Inclusion criteria required participants to have direct experience in working with children diagnosed with neurodevelopmental disorders and familiarity with the development and implementation of IEPs. A total of 25 participants were interviewed, with sample size determined by theoretical saturation, where no new themes or insights emerged from the data.

Participants were provided with an information sheet detailing the study's purpose, procedures, and their rights, including the right to withdraw at any time without penalty. Written informed consent was obtained from all participants before the interviews commenced. To ensure confidentiality, pseudonyms were used, and any identifying information was removed from the transcripts.

2.2. Measures

2.2.1. Semi-Structured Interview

Data were collected through semi-structured interviews, allowing for flexibility in responses while ensuring key

topics were covered. An interview guide was developed, focusing on the following areas:

- Experiences with developing and implementing IEPs
- Perceived challenges and facilitators in the IEP process
- Views on the effectiveness of IEPs in supporting children with neurodevelopmental disorders
- Suggestions for improving the IEP process

Each interview lasted approximately 45-60 minutes and was conducted either face-to-face or via video conferencing, depending on participant availability and preference. All interviews were audio-recorded with the consent of the participants and subsequently transcribed verbatim for analysis.

2.3. Data Analysis

The transcribed interviews were analyzed using NVivo software, a qualitative data analysis tool that facilitates the coding and identification of themes. The analysis followed a thematic approach, involving the following steps:

Familiarization with the data: Reading and re-reading the transcripts to become immersed in the content.

Initial coding: Generating initial codes from the data that are of interest and relevance to the research questions.

Searching for themes: Collating codes into potential themes and gathering all data relevant to each theme.

Reviewing themes: Checking if the themes work in relation to the coded extracts and the entire data set.

Defining and naming themes: Ongoing analysis to refine the specifics of each theme and the overall narrative of the data.

Writing the report: Weaving together the themes to provide a coherent and compelling account of the data.

3. Findings and Results

The study included 25 early childhood educators from various early learning centers and primary schools. The participants comprised 20 females and 5 males, reflecting the gender distribution typical in the early childhood education sector. The age range of participants varied from 25 to 60 years, with a mean age of 37 years. Regarding educational qualifications, 15 participants held bachelor's degrees, 7 had master's degrees, and 3 had obtained specialized certifications in special education. The professional experience of the participants ranged from 3 to 25 years, with an average of 12 years of teaching experience. Most participants (18) had over five years of experience working with children diagnosed with neurodevelopmental disorders, and all had direct involvement in developing and implementing Individualized Education Plans (IEPs).

Table 1

The Results of Qualitative Analysis

Categories	Subcategories	Concepts
Challenges in Implementing IEPs	Administrative Burden	Paperwork, Time Constraints, Bureaucracy, Inadequate Resources
	Training and Professional Development	Lack of Training, Need for Ongoing Support, Limited Access to Workshops
	Collaboration with Specialists	Communication Barriers, Scheduling Issues, Role Clarity
	Parental Involvement	Limited Engagement, Diverse Expectations, Communication Gaps
Effectiveness of IEPs	Classroom Management	Behavior Management, Balancing Diverse Needs, Overcrowded Classrooms
	Personalized Learning	Tailored Strategies, Student Engagement, Positive Outcomes
	Goal Setting and Achievement	Realistic Goals, Measurable Outcomes, Continuous Monitoring
	Flexibility and Adaptability	Responsive Adjustments, Adapting to Needs, Innovation in Approaches
	Educator Satisfaction	Professional Fulfillment, Job Satisfaction, Reduced Stress
Suggestions for Improvement	Student Progress Monitoring	Regular Assessments, Tracking Development, Feedback Mechanisms
	Enhanced Training Programs	Specialized Training, In-Service Training, Peer Learning Opportunities
	Improved Collaboration	Regular Meetings, Integrated Services, Shared Responsibilities
	Increased Parental Engagement	Parental Workshops, Effective Communication, Collaborative Goal Setting
	Resource Allocation	Adequate Funding, Access to Materials, Support Staff Availability
	Policy and Practice Reforms	Streamlined Processes, Updated Guidelines, Advocacy for Policy Change
	Use of Technology	Digital Tools for IEPs, Online Resources, Data Management Systems
Holistic Support Systems	Mental Health Resources, Social Services Integration, Community Support	

The analysis of the interviews with early childhood educators revealed three main themes: Challenges in Implementing IEPs, Effectiveness of IEPs, and Suggestions for Improvement. Each theme encompassed various subthemes and concepts, illustrating the multifaceted nature of the educators' experiences and perspectives. Below is a detailed report of these findings, supported by direct quotations from the interviews.

3.1. Challenges in Implementing IEPs

3.1.1. Administrative Burden

Educators highlighted significant administrative challenges associated with IEPs, such as extensive paperwork and time constraints. One participant noted, "The amount of paperwork is overwhelming, and it takes time away from actually teaching the children." This sentiment was echoed by others who mentioned the bureaucracy involved and the inadequate resources provided to manage these tasks effectively.

3.1.2. Training and Professional Development

The lack of sufficient training and ongoing professional development was a recurrent issue. Educators expressed the need for more specialized training. As one interviewee stated, "We need more training, especially on specific neurodevelopmental disorders. The workshops offered are too few and far between."

3.1.3. Collaboration with Specialists

Participants frequently cited challenges in collaborating with specialists, including communication barriers and scheduling issues. One educator remarked, "It's hard to get everyone together – therapists, parents, and teachers. We all have different schedules, and it often feels like we're not on the same page."

3.1.4. Parental Involvement

Limited parental involvement and diverse expectations posed additional challenges. One participant explained, "Some parents are very involved, while others are hard to reach. This inconsistency makes it difficult to create effective IEPs."

3.1.5. Classroom Management

Managing a classroom with diverse needs was another significant challenge. Educators struggled with behavior management and balancing the needs of all students. As one teacher put it, "It's tough to give each child the attention they need, especially when the class is large and there are so many different needs to meet."

3.2. Effectiveness of IEPs

3.2.1. Personalized Learning

Despite the challenges, educators acknowledged the benefits of IEPs in providing personalized learning experiences. One participant noted, "When done right, IEPs really help in tailoring the teaching methods to each child's needs, which leads to better engagement and outcomes."

3.2.2. Goal Setting and Achievement

Effective goal setting and achievement were critical aspects of successful IEPs. Educators emphasized the importance of setting realistic and measurable goals. As one educator shared, "Setting achievable goals and continuously monitoring progress is key. It helps in seeing the small victories and keeps everyone motivated."

3.2.3. Flexibility and Adaptability

The ability to adapt and respond to the evolving needs of students was highlighted as a strength of IEPs. One participant remarked, "IEPs allow us to be flexible and make adjustments as we see how the child is progressing. It's about finding what works and being willing to change when it doesn't."

3.2.4. Educator Satisfaction

Successful implementation of IEPs contributed to educator satisfaction. Teachers reported feeling professionally fulfilled when they saw positive outcomes. "Seeing the progress these kids make, no matter how small, makes all the hard work worth it," said one educator.

3.2.5. Student Progress Monitoring

Regular assessments and tracking of student development were essential for monitoring progress. As one participant explained, "Consistent monitoring and feedback are crucial.

It helps in understanding what areas need more focus and celebrating the progress made."

3.3. *Suggestions for Improvement*

3.3.1. *Enhanced Training Programs*

Educators suggested more comprehensive and ongoing training programs. One participant proposed, "We need specialized training sessions that are more frequent and cover a wide range of topics related to neurodevelopmental disorders."

3.3.2. *Improved Collaboration*

Improving collaboration between educators, specialists, and parents was another key suggestion. One educator recommended, "Regular meetings and better integration of services would help. We need to work as a team with shared responsibilities."

3.3.3. *Increased Parental Engagement*

To enhance parental involvement, participants suggested workshops and better communication strategies. One educator shared, "Organizing workshops for parents and setting up effective communication channels can make a big difference in their involvement."

3.3.4. *Resource Allocation*

Adequate resource allocation was seen as vital. Educators called for more funding and access to necessary materials and support staff. "We need more funding and resources. Having enough materials and support staff can significantly improve the IEP process," one teacher noted.

3.3.5. *Policy and Practice Reforms*

Participants advocated for policy and practice reforms to streamline processes and update guidelines. One participant emphasized, "Policy changes that reduce bureaucracy and update current practices are needed to make the IEP process more efficient."

3.3.6. *Use of Technology*

The use of technology was suggested to streamline the IEP process. One educator commented, "Digital tools for managing IEPs and online resources can save time and help in keeping everything organized."

3.3.7. *Holistic Support Systems*

Finally, the need for holistic support systems that integrate mental health resources and social services was highlighted. "We need a more comprehensive approach that includes mental health support and social services to truly support these children," one educator suggested.

4. **Discussion and Conclusion**

This study aimed to explore the perspectives of early childhood educators on the implementation of Individualized Education Plans (IEPs) for children with neurodevelopmental disorders. Through in-depth semi-structured interviews, several themes emerged, providing insights into the challenges faced, the effectiveness of IEPs, and suggestions for improvement.

One of the most prominent challenges identified was the administrative burden associated with IEPs. Educators highlighted that the extensive paperwork and bureaucratic processes required to develop and maintain IEPs often detract from their primary teaching responsibilities. This finding aligns with Heiskanen, Alasuutari, and Vehkakoski (2019), who reported that recording support measures in pedagogical documents can be time-consuming and cumbersome for educators (Heiskanen et al., 2019). Additionally, the lack of adequate training and professional development opportunities was a significant concern. As noted by Baglama and Demirok (2021), preservice special education teachers often feel inadequately prepared for the demands of early childhood intervention, underscoring the need for more comprehensive training programs (Baglama & Demirok, 2021).

Collaboration with specialists also posed challenges, particularly in terms of communication and scheduling. This issue is consistent with findings from Hakyemez-Paul, Pihlaja, and Silvennoinen (2018), who emphasized that effective collaboration between educators and specialists is crucial for the successful implementation of IEPs but is often hindered by logistical barriers (Hakyemez-Paul et al., 2018). Moreover, parental involvement was identified as another area of difficulty. Educators reported varying levels of engagement from parents, which can complicate the development and execution of IEPs. This observation is supported by Hakyemez-Paul (2020), who highlighted the importance of parental involvement in early childhood education and the challenges of achieving consistent engagement across different contexts (Hakyemez-Paul, 2020).

Despite these challenges, the study revealed that IEPs have the potential to significantly enhance the educational outcomes for children with neurodevelopmental disorders when implemented effectively. Educators acknowledged the benefits of personalized learning, which allows for tailored teaching strategies that meet the unique needs of each child. This finding is in line with Keen, Webster, and Ridley (2015), who noted that children with autism spectrum disorder (ASD) benefit greatly from individualized educational approaches that address their specific learning requirements (Keen et al., 2015).

The importance of setting realistic and measurable goals within IEPs was also emphasized by the participants. Regular monitoring and assessment of these goals are crucial for tracking progress and making necessary adjustments. Sun et al. (2020) highlighted similar findings in their study on medical interventions for children with ASD, emphasizing the importance of continuous monitoring and adaptive strategies to improve cognitive and behavioral outcomes (Sun et al., 2020).

Furthermore, the flexibility and adaptability of IEPs were highlighted as key strengths. Educators appreciated the ability to make responsive adjustments based on the child's progress and changing needs. This adaptability is essential for supporting the developmental resilience of children with neurodevelopmental disorders, as discussed by Tomás-Roca et al. (2021), who emphasized the importance of adaptive educational interventions in promoting neuroplasticity and cognitive development (Tomás-Roca et al., 2021).

The participants provided several suggestions for improving the implementation of IEPs. Enhanced training programs were a recurrent recommendation. Educators called for more specialized and ongoing training to equip them with the skills and knowledge needed to support children with neurodevelopmental disorders effectively. This aligns with the findings of Çetin and Demircan (2020), who advocated for integrating STEM education into early childhood programs to provide educators with innovative tools and methodologies (Çetin & Demircan, 2020).

Improving collaboration among educators, specialists, and parents was another key suggestion. Participants recommended regular meetings, integrated services, and shared responsibilities to foster a more cohesive approach. Hakyemez-Paul et al. (2018) similarly emphasized the need for better collaborative practices to enhance the effectiveness of early childhood education for children with special needs (Hakyemez-Paul et al., 2018).

Increasing parental engagement through workshops and effective communication strategies was also suggested. Educators believed that involving parents more actively in the IEP process could lead to better outcomes for the children. Rad et al. (2022) supported this view, highlighting the importance of parental involvement in achieving inclusive and equitable quality early childhood education (Rad et al., 2022).

Adequate resource allocation was deemed essential for the successful implementation of IEPs. Participants stressed the need for more funding, access to necessary materials, and availability of support staff. Heiskanen et al. (2019) also noted that sufficient resources are crucial for managing the administrative and instructional demands of IEPs (Heiskanen et al., 2019).

Leveraging technology to streamline the IEP process and manage data more efficiently was another recommendation. Sun et al. (2022) discussed the potential of digital tools and online resources in reducing administrative burdens and enhancing the organization of IEP-related information (Sun et al., 2020).

Finally, the need for holistic support systems that integrate mental health resources and social services was highlighted. Educators believed that a comprehensive approach, including mental health support and social services, is necessary to provide effective and inclusive education for children with neurodevelopmental disorders. This is consistent with the findings of John et al. (2020), who emphasized the interconnectedness of various environmental factors in supporting the development of children with special needs (John et al., 2020).

This study explored the perspectives of early childhood educators on the implementation of Individualized Education Plans (IEPs) for children with neurodevelopmental disorders. The findings revealed several key challenges, including the administrative burden of extensive paperwork, inadequate training and professional development opportunities, and difficulties in collaboration with specialists. Additionally, inconsistent parental involvement and classroom management complexities were highlighted as significant obstacles. Despite these challenges, educators recognized the effectiveness of IEPs in providing personalized learning experiences, setting and achieving realistic goals, and adapting to the evolving needs of students. Participants suggested several improvements, such as enhanced training programs, better collaboration mechanisms, increased

parental engagement, adequate resource allocation, and the integration of technology and holistic support systems.

The perspectives of early childhood educators offer valuable insights into the complexities and potential benefits of implementing IEPs for children with neurodevelopmental disorders. While the administrative and collaborative challenges are substantial, the positive impacts of personalized learning and adaptive educational strategies underscore the importance of IEPs in supporting the development and academic success of these children. Addressing the identified challenges through targeted improvements can enhance the overall effectiveness of IEPs and contribute to more inclusive and supportive early childhood education environments.

This study has several limitations. The sample size was relatively small, consisting of 25 early childhood educators, which may not fully represent the diverse experiences and perspectives of all educators working with neurodevelopmental disorders. Additionally, the study relied on self-reported data from semi-structured interviews, which may be subject to bias and variability in responses. The findings are also context-specific, and the experiences of educators in different regions or educational settings may differ. Furthermore, the study did not include the perspectives of parents, specialists, or the children themselves, which could provide a more comprehensive understanding of the IEP implementation process.

Future research should consider larger and more diverse samples to capture a broader range of experiences and perspectives. Longitudinal studies could provide insights into how the implementation and effectiveness of IEPs evolve over time and the long-term outcomes for children with neurodevelopmental disorders. Including the perspectives of parents, specialists, and children could offer a more holistic view of the IEP process and identify additional areas for improvement. Moreover, comparative studies across different educational systems and cultural contexts could enhance the generalizability of the findings and inform best practices in IEP implementation globally.

To address the challenges identified in this study, several practical implications and suggestions for practice are recommended. First, educational institutions should provide ongoing, specialized training for educators to equip them with the necessary skills and knowledge to effectively support children with neurodevelopmental disorders. Enhanced collaboration mechanisms, such as regular interdisciplinary meetings and integrated service models, can improve communication and coordination among

educators, specialists, and parents. Increasing parental engagement through workshops and effective communication strategies is also crucial. Adequate resource allocation, including funding, materials, and support staff, is essential for the successful implementation of IEPs. Finally, leveraging technology to streamline administrative processes and enhance data management can reduce the burden on educators and allow them to focus more on direct instructional activities. These practical steps can contribute to more effective and inclusive education for children with neurodevelopmental disorders, ultimately supporting their academic and developmental success.

Authors' Contributions

In this article, the corresponding author was responsible for the intervention implementation, data analysis, and manuscript writing, while the other authors supervised the data analysis and manuscript writing.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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