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Challenges associated with group composition: A qualitative study about the perceptions of teachers in Portuguese public preschools.

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Abstract

We investigated the perceptions of teachers about challenges and opportunities associated with group characteristics in early childhood education (ECE) settings. We analyzed individual semi-structured interviews with 18 preschool teachers ($M_{\text{age}} = 51.77$, $SD = 7.74$), serving in Portuguese public ECE settings, using thematic analysis. According to teachers' accounts, groups with children with disabilities, mixed-age groups and groups with a higher number of younger children, socioeconomic disadvantaged groups, groups with children who speak a language other than Portuguese, and groups with more boys than girls, can be particularly challenging; larger groups and a lower adult-child ratio can also present increased challenges. Teachers noted the impact of teachers' age on their ability to manage groups perceived as more challenging. Teachers' accounts further indicated that increased challenges can result from an interaction between microsystemic variables. Findings support the relevance of considering multiple structure characteristics and the interactions among them when investigating variations in ECE quality.

Keywords: early childhood education, teachers' perceptions, group composition, thematic analysis

Challenges associated with group composition: A qualitative study about the perceptions of teachers in Portuguese public preschools

The positive and potentially enduring effects of high-quality early childhood education (ECE) on children's development and learning (Melhuish et al., 2015; Pianta et al., 2009; Slot, 2018) are becoming increasingly acknowledged (European Commission/EACEA/Eurydice, 2019). Therefore, the European Pillar of Social Rights (European Parliament, Council, and Commission, 2017) states that all children have the right to enroll in affordable, high-quality ECE. In 2021, around 95% of 4-year-olds were enrolled in ECE in European Union countries (Eurostat, 2021). With increased access to ECE, the challenge becomes to ensure high-quality education to all children (Schleicher, 2019).

Conceptually, ECE quality encompasses process and structural quality (Slot, 2018). Process quality builds on teacher-child interactions (Anders, 2015; Slot et al., 2015). Teachers are primarily responsible for providing high-quality experiences to children (Hattie, 2015), defined in terms of responsive, warm, and stimulating interactions (Mashburn et al., 2008; Schleicher, 2019), and of suitable and planned instruction (Pianta et al., 2009). In turn, structural quality refers to regulable features of classrooms, such as group (e.g., size, composition, adult-child ratio) and teacher characteristics (e.g., education, experience) (Slot, 2018; Slot et al., 2015). There is some evidence suggesting that structural features can contribute to process quality (Burchinal, 2018; Early et al., 2006; OECD, 2019; Slot et al., 2015), which is thought to be more directly associated with children's outcomes (Howes et al., 2008; Vandell et al., 2010). Considering that structural features are easier to regulate (Hu et al., 2017), these are frequently the main target of quality improvement efforts (Pianta et al., 2014).

This study is grounded on a bioecological perspective (Bronfenbrenner & Morris, 2006) and, thus, assumes that the interaction patterns established between teachers and children in the ECE classrooms microsystem, can contribute to children's learning and development. Simultaneously, person characteristics, like skills, past experiences (resource characteristics), temperament, motivation (force characteristics), age, gender, and ethnicity (demand characteristics), can relate to differences in interaction patterns (Bronfenbrenner & Morris, 2006). Through this bioecological lens, we investigated teachers' perceptions regarding group composition in ECE, conceptualized as the aggregated personal characteristics of the children enrolled (Cueto et al., 2016; Jones, 2016).

Given that teachers are key to ensuring high-quality ECE (OECD, 2020a), investments to improve their working conditions and well-being can produce relevant social and economic returns (OECD, 2020b). Relatedly, it is important to understand how microsystemic variables can impact teachers' ability to establish positive interactions with children and provide high-process quality (e.g., Rudasill & Rimm-Kaufman, 2009). This understanding can help inform enrollment policies (Ansari & Pianta, 2018) and group organization processes (Aguilar & Aguilar, 2020), contribute to teachers' education and professional development (Rudasill & Rimm-Kaufman, 2009), and help identify teachers' needs for support (Ansari & Pianta, 2018). In addition, teachers may benefit from an increased awareness about how group characteristics can impact their interactions with children and classroom practices (Rudasill & Rimm-Kaufman, 2009).

Teachers' Perceptions about Group Characteristics in ECE

Both research and policy can benefit from an inside perspective (Katz, 1998), that is, from analyzing teachers' insights (Barros & Leal, 2014) about challenges and

opportunities associated with group composition. Hence, we investigated teachers' perceptions about challenges and opportunities associated with group characteristics in ECE. Teachers' perceptions are thought to associate with teaching practices (Hardré et al., 2008). Perceptions give meaning to stimulus and are commonly constructed based on an individual's prior experiences, beliefs, and attitudes (Pickens, 2005).

Simultaneously, there is evidence indicating that students' characteristics (e.g., ethnic group, gender, beliefs, values), can influence teachers' perceptions (Pianta et al., 2003) and, consequently, associate with the quality of classroom interactions (Kuklinski & Weinstein, 2000; Myers & Pianta, 2008). For example, racial bias can lead teachers to hold more positive perceptions regarding the behavior and academic skills of kindergarten and older children when there is an ethnic match between the teacher and the student (Redding, 2019). Simultaneously, Caucasian teachers frequently hold more negative perceptions regarding the behavior (Ready & Wright, 2011; Wright et al., 2017) and academic abilities (Ouazad, 2014) of students from racial and ethnic minority groups, compared with Caucasian students.

Extant qualitative research has provided some insight into teachers' perceptions of group characteristics in ECE. One study, conducted in northern Europe, analyzed ECE teachers' ideas about the ideal group composition and work conditions to maximize children's learning, and found that teachers preferred a balanced distribution of children in terms of age, gender, language, ethnicity, and social status (Pramling Samuelsson et al., 2015). Teachers perceived more pedagogical and management difficulties in groups with higher age diversity. Further, teachers believed that girls and boys are different in their choices and the way they act and play, and considered an even number of girls and boys as more harmonious. In addition, ECE teachers preferred groups with fewer children with a different first language and considered social and ethnic diversity as

enriching for all children (Pramling Samuelsson et al., 2015). Teachers also shared a preference for working with smaller groups (Pramling Samuelsson et al., 2015).

Similarly, teachers have noted challenges associated with larger groups of children. In Nordic studies focusing on teachers' perspectives about group size, teachers shared concerns about children's well-being in larger groups (Alvestad et al., 2013), feeling they often lacked the time to give attention to children individually (Alvestad et al., 2013; Pramling Samuelsson et al., 2015; Sheridan et al., 2014) and to engage in their learning (Alvestad et al., 2013; Sheridan et al., 2014). In turn, teachers perceived more opportunities to interact meaningfully with children in smaller groups (Alvestad et al., 2013; Williams et al., 2018). Importantly, teachers believed that an adequate group size was dependent on other characteristics of the group, such as the presence of children with disabilities, age and gender composition, or adult-child ratio (Sheridan et al., 2014; Williams et al., 2018).

In a recent study, conducted with teachers in Head Start – a USA federal program aiming to promote the school readiness of young children from low-income families – high child-to-adult ratios were perceived as the biggest barrier to high-quality teacher–child interactions (Rodriguez & McKee, 2021). The typical ratio of two adults per 17-20 children was considered insufficient by teachers, who emphasized that substantial instructional time can be lost in routine tasks and that a third adult could allow more time to interact with children (Rodriguez & McKee, 2021).

There is also research focused on ECE teachers' ideas about specific group characteristics. A few studies in Europe and the USA investigated teachers' perceptions about the inclusion of children with disabilities and reported that, in general, teachers were favorable towards inclusion (Leatherman, 2007; Smith & Smith, 2000; Zabeli et al., 2020). Teachers believed that children with disabilities benefit from daily

interactions with peers without disabilities, but also noted more difficulties in meeting the needs of these children, particularly those with more severe conditions (Mitchell & Hegde, 2007). Furthermore, teachers often identified the need for more training and adequate supports to help them implement inclusive practices (Bryant & Ewing, 2018; Leatherman, 2007; Zabeli et al., 2020).

Other studies investigated the perceptions of ECE teachers about group age composition, identifying both challenges and opportunities. In a study conducted in Europe, teachers conveyed more negative views about teaching in mixed-age groups, because of difficulties associated with younger children's need for more attention, and difficulties in implementing differentiated activities (Ertürk-Kara, 2018). Nonetheless, teachers also identified opportunities related to mixed-age groups: all children benefit in terms of social development and younger children can engage in more advanced tasks, as they learn from older peers (Ertürk-Kara, 2018). Another study, conducted in New Zealand, identified positive challenges for teachers, who learn to be more flexible and adapt their practice (Beach, 2013).

Teachers' Perceptions about Cultural and Linguistic Diversity in ECE

ECE teachers' views about the group cultural and linguistic composition have also been investigated. In one small ethnographic study, Australian teachers shared overall positive attitudes towards cultural diversity and acknowledged the importance of teaching children about other cultures (Buchori & Dobinson, 2015). However, teachers' accounts suggested that they frequently lacked knowledge and adequate supports to manage cultural diversity and engage children in culturally sensitive ways (Buchori & Dobinson, 2015). Another study, conducted in the USA, found that teachers viewed cultural diversity within the classroom as an asset and, in general, felt efficacious and competent to teach in diverse classrooms (Bonner et al., 2017). Nonetheless, teachers

also shared that teaching in diverse classrooms can be specially challenging and an increased responsibility, namely in meeting the needs of children from diverse backgrounds, differentiating instruction, and creating classroom environments sensitive, respectful, and welcoming of the culture and language of all children, families, and communities (Bonner et al., 2017).

Another study yet, also in the USA, found that communication with dual language learners and their families was particularly challenging for teachers in Head Start programs, who emphasized the need for more supports to work with children who speak a first language other than Spanish (Choi et al., 2021). Similarly, in a study involving ECE teachers serving in classrooms that enrolled refugee children in Germany, language barriers and communication with children's families were also considered prominent challenges (Busch et al., 2018). Of note are also findings that teacher's perceptions of children's classroom behavior and academic skills can be related with teacher-student racial/ethnic match, with teachers frequently displaying more positive perceptions of children from their own racial/ethnic group (Redding, 2019).

This Study

Research has investigated teachers' perceptions about specific characteristics of ECE groups, except for one study, which examined teachers' ideas about an ideal ECE group (Pramling Samuelsson et al., 2015). In this study, we interviewed teachers and asked them to share their thoughts about group characteristics associated with increased challenges and the inherent opportunities of working with groups with such characteristics (Fylan, 2005). By adopting this approach, our study may provide a more comprehensive understanding of teachers' perceptions and unique understandings of ECE group composition. Nevertheless, we also had a particular analytic interest in

teachers' perceptions about specific challenges and opportunities associated with group cultural and linguistic diversity.

The Portuguese ECE Context

This study was conducted in Portugal, where ECE serves children aged between 3 and 6-years-old, and enrollment is guaranteed from the age of 4, but not mandatory (Law No. 65/2015). In 2018/2019, ECE coverage rates varied between 83% and 94% for 3- and 5-year-olds, respectively (Direção-Geral de Estatísticas da Educação e Ciência, 2019), and about 52% of the children attended ECE public settings, free-of-charge (Direção-Geral de Estatísticas da Educação e Ciência, 2020). Due to universal access to public ECE (Law No. 65/2015), these settings tend to be more diverse, compared with private settings. Hence, a study with teachers in the public sector can be particularly relevant.

In Portugal, the maximum group size in ECE can vary between 20 and 25 children (Decree-Law No. 147/97). In case of enrollment of a child with disabilities (in a maximum of two children with disabilities per group), group size must not exceed 20 children (Normative Dispatch No. 10-A/2018). There are, on average, 16 children per ECE teacher in Portugal; comparatively, the average in the European Union is of 14 children per teacher (OECD, 2020a). The number of teaching assistants per group is one (Governmental Order No. 272-A/2017). Group age diversity is recommended, but not mandatory (Normative Dispatch No. 10-A/2018).

To work as an ECE teacher in Portugal, a master's degree in ECE or an equivalent level is required (Decree-Law No. 43/2007). Around 99% of ECE teachers serving in Portugal are women (Edustat, 2021). In 2018, 42% of ECE teachers in Portugal were aged over 50 and only 1% were aged under 30 (OECD, 2020a). In 2019, there were 597 ECE teachers aged 50 and above for every 100 teachers aged below 35 (DGEEC/ME-

MCTES/PORDATA, 2020). Other European countries such as Greece, Czech Republic, and Hungary have a similar share of older teachers, but only Italy compares to Portugal in the low share of younger teachers (OECD, 2020a).

Method

Participants

Participants were 18 ECE teachers (100% female), serving in public settings located in urban and semi-urban areas within the metropolitan area of Lisbon. Teachers' ages ranged between 39 and 62 ($M = 51.77$, $SD = 7.74$). On average, teachers had 26 years of experience ($SD = 9.19$). Most teachers (78%) had a bachelor's degree while the rest held a master's degree in ECE. Around 28% served socially disadvantaged communities within the Educational Territories of Priority Intervention program. Group size varied between 19 and 25 children ($M = 23.22$, $SD = 2.17$). All groups were mixed age, except for one group of three-year-olds. Seventeachers served children with an Individualized Education Program, but almost all reported having at least one child in need of specialized support. Groups of participating teachers enrolled up to 17% of migrant children ($M = 6.88$, $SD = 5.07$), 30% of children with migrant mothers ($M = 16.77$, $SD = 8.27$), 32% of children who spoke a language other than Portuguese at home ($M = 4.77$, $SD = 7.49$), and 81% of children from an ethnic minority group ($M = 25.90$, $SD = 15.66$). Further, ECE groups enrolled up to 72% of children receiving School Financial Assistance ($M = 31.40$ $SD = 25.20$) (see Table 1). Information about mothers' level of education was missing for one of the groups, but the remaining enrolled up to 88% of children whose mothers finished 9th grade or a lower level of education ($M = 34.71$, $SD = 22.73$).

Procedure

Sampling

This qualitative study was approved by the Portuguese Directorate-General for Education and the Institutional Review Board at ISCTE. We began recruitment in September 2019 and conducted the interviews between November 2019 and February 2020. To recruit teachers serving diverse populations, we contacted school clusters with at least one ECE setting where the percentage of children receiving school financial assistance was below 33% or above 66%. We did not exclude teachers serving in other ECE settings from the same school cluster. Of the 122 school clusters contacted, 11 showed interest in participating (9%). We held meetings with teachers and/or representatives from these school clusters and all chose to participate in the broader research project. Overall, we interviewed 42 teachers, achieving saturation at the 18th interview. The 18 teachers included in this study represented eight of the 11 school clusters.

Data Collection

The interview guide was piloted before data collection. We scheduled interviews according with teachers' availability and conducted them after school hours or at lunch time, in the teachers' classroom or in a private room within school facilities, based on teachers' preferences. All interviews considered in this study were conducted by the first author. We briefed teachers about the purpose of the study, the topics that would be covered, and the expected duration of the interview, so they could provide informed consent (Fylan, 2005). We obtained teachers' consent to record audio, while assuring confidentiality and anonymity. In the interviews, we first asked teachers about characteristics of challenging groups and then asked about inherent opportunities of working with the groups they identified as particularly challenging. Finally, we asked all teachers about the challenges and the opportunities specific to ethnocultural

heterogeneous groups. We deleted all audio records after completing and verifying the transcripts.

Analysis

A research assistant transcribed the interviews and the first author verified the transcripts for accuracy. Considering our goal to organize teachers' perceptions of challenges and opportunities associated with group characteristics, through the identification of patterns/themes, we conducted thematic analysis, using NVivo 12. Thematic analysis involves identifying patterns and defining themes within data and the approach taken determines how the coding process evolves (Braun & Clarke, 2006). We used an inductive approach to coding the data, engaging in careful examination and comparison (Chandra & Shang, 2019) to generate themes (e.g., Thomas, 2006). Themes and sub-themes emerged directly from teachers' explicit accounts (Fereday & Muir-Cochrane, 2006; Guest et al., 2012).

The analytic process began with a review of the entire data set, which led to the identification of an extensive array of initial codes with potential research interest (Braun & Clarke, 2006). We sorted some of these into higher order codes and kept other miscellaneous codes separately, retaining all potentially relevant data (Kwong et al., 2018). Next, we sorted codes into themes and sub-themes, with some remaining in a miscellaneous section (Braun & Clarke, 2006). From here on, we continuously refined the analysis through an iterative review process (Kwong et al., 2018). We tested the validity of the themes to ensure that these reflected the data as truthfully as possible (Braun & Clarke, 2006) and reviewed coded extracts to relocate or discard them, whenever we noted incoherencies in the evolving coding scheme (Kwong et al., 2018). Ultimately, we discarded some themes and sub-themes because there was little evidence to support them (Kwong et al., 2018). We read-through all data, coding and/or recoding,

until reaching saturation, and defined a final thematic map (Braun & Clarke, 2006). The two authors participated in the coding process and continuously discussed progress, ensuring consensus regarding the retention of themes and sub-themes.

Results

We examined themes emerging from ECE teachers' accounts of challenging groups. We organized the characteristics of particularly challenging groups and associated opportunities into four themes: group composition, group size, adult-child ratio, beyond the group. Teachers did not associate opportunities with all subthemes of group composition, nor with the remaining three themes. Older teachers believed that their age was a relevant factor in how they perceived the challenges presented by different groups; therefore, this issue was addressed under a specific theme. Figure 1 illustrates the identified themes and sub-themes.

Group Composition

Groups with Children with Disabilities

For more than half of the teachers, the inclusion of children with disabilities can be particularly challenging. Nevertheless, a few teachers reported not feeling particularly challenged when working with these groups, mainly due to feeling adequately and sufficiently supported. The teachers who found these groups more challenging shared that they often struggle to attend to the needs of children who require more individualized supports within the group. For example, one teacher noted: "Children with disabilities, in particular, need more focused attention, and it is not always possible to provide them with that." (Teacher 9). According to teachers' accounts, this task can become even arduous when children have more severe limitations, when more than one child with disabilities is enrolled in the group, or when both of these factors meet, despite the reduction in group size. One teacher shared the

difficulties of her current situation: “Our group is smaller. (...) We have two children with disabilities. One of them has big limitations, so it’s hard, sometimes, to attend to everything.” (Teacher 12). Another teacher recalled a prior experience “I had a blind girl and a boy with a developmental delay (...) we have some training, but when we are faced with a real situation, how do we manage, right?” (Teacher 7). Teachers also pointed out that many children enroll in ECE settings without a diagnosis, so it is not uncommon for groups to exceed the maximum number of 20 children defined by law.

Furthermore, for these teachers, the inclusion of children with disabilities in classroom activities can be demanding, particularly in cases of children who exhibit very limited social and communication skills, children who display behavior difficulties, and children with difficulties concentrating and staying involved in a task. Considering teachers’ accounts, working with children with autism spectrum disorders seems to be particularly demanding, as they often struggle to “reach the child” (Teacher 14) and to “stabilize the child within the group” (Teacher 18). One teacher recalled an experience with a group that included a child with autism, who was supported by a special education teacher, that made her question “if inclusion is really working” because “sometimes, the child’s behavior was not compatible (...) maybe we shouldn’t have insisted, in that case, it was not very positive (...) for the other children (...) the development of their activities, even their playing, was sometimes compromised.” (Teacher 5).

Notwithstanding, teachers’ also perceived opportunities associated with groups with children with disabilities. According to their reports, one of the main opportunities associated with the work with these groups is the willingness of other children to accept children with disabilities, to help them, and to cooperate in their inclusion. Teachers shared experiences such as: “I didn’t have to say anything, they (the other children)

would help him, calm him down, include him in their activities, on their own initiative” (Teacher 3), “They (the other children) are very welcoming and very protective (of him), it’s really beautiful to watch.” (Teacher 14).

Teachers also emphasized the opportunity for personal gratification, derived from the work they develop with children with disabilities, as they contribute to and witness their evolution. Teachers’ accounts are illustrative of their “challenging” and “hard”, but “gratifying” journey with children with disabilities. Looking at her prior and current experiences with children with disabilities, one teacher said “It was really hard, but was also very enriching, to evaluate the work we all did with him, by the end of the year” (Teacher 15), while two others shared “(...) he couldn’t do that and now he is doing it (...), and God knows how hard it was to get there (...) that is the biggest reward.” (Teacher 12), “So, these small steps (being engaged, for a few minutes, in an individual or group activity), for me, are gratifying. Compared to the others, these may not be much, but meant a lot for him.” (Teacher 14).

Group Age Composition

Age composition was also considered a potentially challenging feature of groups by more than half of the teachers, who reported challenges in both age homogeneous and in age heterogeneous groups. First, according to these teachers’ accounts, serving groups with many 3-year-olds can be particularly demanding, because these children tend to require more care overall. Specifically, teachers noted that younger children often lack autonomy (e.g., many still wear diapers and pacifiers), need greater emotional availability, and may be less able to concentrate and engage in classroom activities (e.g., whole group activities), compared with older children. Thus, teachers’ ability to manage the group and avoid disruptions can wane. For example, one teacher mentioned that, “It’s harder to get a hold of the group.” (Teacher 11).

Some of these teachers also shared concerns about instances of older children imitating the behaviors of younger peers (e.g., throwing tantrums, not following classroom rules) in age heterogeneous groups. One teacher observed that in her current mixed-age group, “Some of the older children do not understand why they are expected to behave differently (...) they won’t hesitate to act like the younger ones.” (Teacher 7).

Lastly, considering teachers accounts, increased efforts may be needed in age heterogeneous classrooms to respond to a wider range of children’s needs. One teacher shared about her mixed-age group: “For us, it’s complicated (...). We need to respond differently to a lot of things, within the same group.” (Teacher 1). Thus, teachers considered that implementing differentiation practices and organizing the classroom educational environment was particularly challenging in these groups.

Despite the challenges teachers associated with age heterogeneity, they also identified opportunities associated with this type of group. Overall, teachers considered that interactions among children in age heterogeneous groups can be very enriching, more than in age homogeneous groups. One teacher shared “I support at 100% age heterogeneity in groups” (Teacher 4). Further, teachers emphasized that younger children tend to learn better and faster with older peers, who serve as models, with one teacher affirming “(...) the younger ones learn faster, because we all learn through models, right?” (Teacher 1). Furthermore, teachers noted that older children are generally very willing to help their younger peers and oftentimes develop a sense of responsibility for them. One teacher mentioned: “It’s very advantageous. (...) the older children feel responsible for and help their younger peers.” (Teacher 2), while another shared that, for the same reasons, in her current mixed-age group, “(older children) are an asset” (Teacher 6); another teacher further mentioned that age heterogeneity

“facilitates many practices”, as younger children learn about classroom dynamics with their older peers (Teacher 8).

Socioeconomic Disadvantaged Groups

Serving groups with a high number of children from families with low socioeconomic status, which often overlapped with minority status (i.e., belonging to an ethnic minority group, having migrant background, and speaking a different language), was also considered particularly challenging by about half of the teachers. Teachers associated contextual risks with lower social, emotional, and behavioral skills, as well as more learning difficulties overall in children from low-socioeconomic families. For example, one teacher mentioned about her current low-SES group: “This type of group is the most challenging. It’s like a diamond in the rough.” (Teacher 1). According to some teachers, families may not have the means or the knowledge to adequately support children’s learning and to provide them with structure. As another teacher, currently serving a setting located in a low-SES neighborhood, observed, “This context is hard, the neighborhood... there is no stimulation, the parents, it’s like a snowball effect, the parents didn’t learn, so they are unable to teach their children.” (Teacher 11).

For these teachers, one of the biggest challenges when serving these groups is the incidence of behavior problems, which leads them to spend a lot of time on behavior management tasks and, as one teacher currently serving in a low-SES group put it, to be “constantly managing emotions” (Teacher 9). Teachers reported child behavior problems that go from having difficulties sitting down, waiting for their turn, using respectful language, and following classroom rules, to tantrums and aggression. According to teachers’ accounts, externalizing behaviors can be particularly distressful for them and for the group. A handful of teachers shared experiences of children fighting each other, hitting adults in the classroom, hurting themselves, screaming

uncontrollably, throwing and breaking things in the classroom. When asked to describe how the externalizing episodes reported were experienced by them and by the group, teachers shared that it was: “really complicated” (Teacher 16), “disturbing” and “scary for the other children” (Teacher 13), “destabilizing of the group” (Teacher 15), and “hard to manage” (Teacher 15).

Nonetheless, teachers who worked with socioeconomic disadvantaged groups also highlighted the positive impact these groups had on their own personal and professional growth, and generally described their experiences in positive terms, such as, “I grew a lot, as a person and a teacher.” (Teacher 9), “It changes our perspective of the world and of life. That is really good.” (Teacher 16), “I talk about this (experience with a low-SES group) with enthusiasm, because I learned so much.” (Teacher 18) “Here (serving a low-SES group), I feel that I’m making a difference.” (Teacher 13). One of the teachers mentioned that she believed all teachers could benefit from going through such a hard experience, as it “opens up our spirit” (Teacher 6).

Groups with Children who Speak a Different Language

None of the teachers spontaneously identified cultural and linguistic diversity as a particularly challenging feature of groups. However, when directly asked about the challenges associated with group cultural and linguistic diversity, around half of the teachers considered that the inclusion of children who speak a language other than Portuguese can be a challenge. Nevertheless, a few teachers mentioned not feeling particularly challenged in their experiences with groups with children who speak a different language, as they managed to find alternative ways, considered effective, to communicate with children, such as through a shared language (usually English) or gestures. Among the teachers who faced increased difficulties in their work with culturally and linguistic diverse groups, one teacher shared about her experiences with

children from South Asian countries “I’ve experienced a lot of difficulties in understanding them and in making myself understood.” (Teacher 15). Teachers’ reports indicated that such difficulties depend on the children’s first language, that is, serving children who speak more familiar languages, such as Spanish or English, was not considered challenging by teachers. Furthermore, teachers identified the cases of children who only speak their first language at home as more challenging, compared with children whose parents already speak Portuguese, independently of their first language. Two separate accounts from teachers illustrate this idea: “If the parents only speak their native language, it’s hard, sometimes, for the children to learn Portuguese quicker.” (Teacher 14); “They (a child and her family) were from India. (...). But it wasn’t difficult in that case, because the mother already spoke Portuguese.” (Teacher 15).

When asked about the opportunities of working with culturally and linguistically diverse groups, teachers were unanimous in identifying the possibility of learning, from experience, about other cultures, as the biggest opportunity, for both the children and themselves. For example, teachers reported that, “Those experiences are very enriching, for the group, for the child (who is sharing her culture), and for myself.” (Teacher 1), “There is a lot to work with nationalities (...) it’s fun work (...) with the ethnicities, the cultures.” (Teacher 1). Teachers frequently used the word “enriching” to describe their work with these groups and emphasized the importance of cultural sharing for everyone in the group.

Groups with More Boys than Girls

Three teachers considered that a group with more boys than girls can be more challenging. Two teachers shared about their prior experiences: “There were mostly boys (in the group) and I, I think that can make things more difficult” (Teacher 16).

“There were mostly boys (in the group), which complicated things. There were a lot of boys, and they were very, they were aggressive.” (Teacher 9). According to these teachers, “girls are calmer” and “boys are more agitated” (Teacher 10). So, in their view, ideally, the gender composition of the groups should be as balanced as possible.

Changes in Group Composition

There were also a few teachers who considered that changes in group composition entail increased challenges, particularly in the first semester, because, in their words, “the pattern of relationships changes” (Teacher 17) as new children are enrolled in the group and “have to adapt (to classroom routines)” (Teacher 8), while the children who were part of the group before “were already used to a particular rhythm (...) and the new ones are not used to that rhythm” (Teacher 4).

Group Size

For close to half of the teachers, the number of children in the group can constitute a challenge. For part of these teachers, having a large group can be more challenging than children’s characteristics per se. As one teacher mentioned: “If the groups were smaller, independently of other characteristics, it would work better.” (Teacher 17). Group size in Portuguese ECE settings can reach up to 25 children, but using the words of two teachers with groups of 25 children, “It’s just too many children” (Teacher 17), “We can’t be everywhere.” (Teacher 10). For other teachers, increased demands arise from an interaction between the size of the group and other group characteristics, such as the enrollment of children with disabilities, the presence of younger children, and the adult-child ratio. Two of the teachers emphasized that the enrollment of children with disabilities should further reduce the size of the group from the stipulated 20 children.

Adult-Child Ratio

Teachers reported a frequent lack of “human resources” as a challenge to their work, that is, for them, the number of adults in the group is oftentimes insufficient. Teachers emphasized that in the cases of big groups in general, groups that include children with disabilities, and groups with younger children, more adults are needed. Usually, teachers can rely on the help of one teaching assistant, but reported that it is not uncommon for them to be alone in the classroom for some periods of the day, which only increases their difficulties, as illustrated in the accounts of two teachers, both with mixed-aged groups of 20 children: “(...) being alone, even for an hour, is very hard (...)” (Teacher 3), “I had to work alone many times, I think that a teaching assistant is sorely needed.” (Teacher 9).

Beyond the Group: Teachers’ Age

We asked teachers about group characteristics they viewed as particularly challenging, but for some of the older teachers, it was important to share that their age was associated with increased difficulties to manage groups perceived as more challenging. One teacher referred to her current experience, with a mixed-age group of 25 children, by saying “there are very tough days” (Teacher 11). Another teacher, with an age heterogeneous group of 20 children, said with humor that, “I get home in a kind of chock. More than I did 20 years ago, right? (...) retirement would be nice.” (Teacher 8). A third teacher showed big concerns for herself and her elder colleagues, sharing multiple cases in her school of teachers taking sick leave due to exhaustion. She believed that older teachers are in need of “(...) more stability (...) there are challenges that do not make sense at this point (in our careers)”, referring particularly to the work with larger groups, she goes on to say that teachers needed groups with other characteristics (i.e., smaller groups) so that they “can use their experience to go further”.

Currently, serving in a mixed-aged group of 25 children, this teacher feels “unable to do that, because the necessary conditions are not being provided” (Teacher 7).

Discussion

This study investigated teachers’ perceptions about the challenges and opportunities associated with group composition. Aligned with findings from previous investigations, teachers identified increased challenges associated with groups with children with disabilities (e.g., Mitchell & Hedge, 2007), age heterogeneous groups (e.g., Berry, 2004; Ertürk-Kara, 2018; Pramling Samuelsson et al., 2015), groups with a higher number of younger children (e.g., Ertürk-Kara, 2018), groups with children who speak a different language (Choi et al., 2021; Pramling Samuelsson et al., 2015), groups with a higher number of boys than girls (Pramling Samuelsson et al., 2015), and larger groups, in general (e.g., Alvestad et al., 2013; Sheridan et al., 2014; Williams et al., 2018). Considering existing evidence that the benefits of experiencing high-quality ECE may be particularly relevant for children with disabilities, children with low socioeconomic status, and children with a minority culture and language (OECD, 2019), these findings seem particularly important. Also, as mixed-age classrooms are an increasingly common model in ECE settings (Purtell & Ansari, 2018), identifying the challenges teachers may face in these classrooms can have important practical implications. Importantly, teachers also recognized opportunities in their work with groups with children with disabilities, with socioeconomic disadvantaged groups, with groups with children who speak a language other than Portuguese, and with mixed-age groups. Teachers’ accounts seemed to emphasize the importance of inclusion and the potential benefits of attending ECE for children experiencing situations of social and economic disadvantage. In addition, teachers’ accounts indicated that increased

challenges may arise from interactions between microsystemic structure variables, at the group and teacher-levels (Sheridan et al., 2014; Williams et al., 2018).

The Importance of Inclusion

First, in line with previous findings (Leatherman, 2007; Smith & Smith, 2000; Zabeli et al., 2020), most teachers were favorable to the inclusion of children with disabilities and acknowledged its benefits for the group and for themselves, as professionals. The opportunities identified by teachers seem consistent with findings from quantitative investigations suggesting that contact with children without disabilities is associated with developmental gains for children with disabilities (Justice et al., 2011; Justice et al., 2014; Mashburn et al., 2009); simultaneously, children without disabilities can become more sensitive, aware, and accepting of differences due to their contact with children with disabilities (Diamond, 2001). Similarly, teachers' perceptions about group cultural and linguistic diversity were, overall, positive. Resonating with previous findings, teachers emphasized the opportunity for cultural sharing in culturally diverse groups (Buchori & Dobinson, 2015). Perceiving diversity as an asset and opportunity is a right step towards enhancing its benefits for children's learning (OECD, 2019), and for the promotion of children's social inclusion and sense of belonging (Aguiar & Silva, 2018).

Furthermore, despite perceived challenges, teachers believed that working with mixed-age groups was the most beneficial model for children. Consistent with previous studies, teachers perceived generalized gains resulting from the opportunity for older children to model behavior and help younger peers who, in turn, become more capable of participating in increasingly challenging activities (Berry, 2004; Ertürk-Kara, 2018). Teachers' perceptions about the benefits of mixed-age groups support findings of

positive associations between such groups and children's social and learning outcomes (e.g., Kowalski et al., 2005).

Lastly, teachers also recognized the importance of ECE for children with lower socioeconomic status, believing they have an important role in these children's lives. Teachers' beliefs are supported by literature suggesting that teachers are primarily responsible for the quality of children's experiences in ECE (Hattie, 2015) and, consequently, for their educational outcomes (Snoek et al., 2011). Furthermore, there is evidence that high-quality experiences in the classroom may be particularly beneficial for the development of children living in socioeconomic disadvantage (Sylva et al., 2011; Watamura et al., 2011), by functioning as a buffer for the adverse effects of contextual risks (Clements et al., 2004). Relatedly, teachers' positive feelings regarding their work experiences with socioeconomic disadvantaged groups can be associated with teachers' motivation to work with these groups (Bullough et al., 2012), as teachers seem to be particularly moved by a will to help children succeed (Lin et al., 2012).

A Matter of Workload: Demands vs. Resources

Teachers' reports regarding the challenges associated with group composition suggest that perceptions of increased challenges may be largely associated with perceptions of increased workload. Therefore, results from this study can be discussed considering a work demands and resources perspective (Bakker & Demerouti, 2007). When the available resources to manage the perceived demands of the job are systematically considered insufficient by teachers, feelings of stress may exacerbate (OECD, 2020b) and, if not adequately addressed (Whitebook et al., 2016), teachers' engagement with teaching may decrease, while the risk of burnout (Bakker et al., 2003; Demerouti et al., 2001) and the desire to leave the field may increase (OECD, 2020b). In many instances, it seems participants in our study may be perceiving a mismatch

between increasing demands associated with group characteristics, and the availability of resources (personal and work-related) to help them manage those demands (Hakanen et al., 2006).

Groups with Children with Disabilities

Teachers found it particularly challenging to adequately support children with disabilities, without overlooking the needs of the other children in the group. Furthermore, congruently with evidence from previous studies, teachers noted that the challenges of serving children with disabilities can be enhanced when the group is larger (Pramling Samuelsson et al., 2015; Smith & Smith, 2000; Zabeli et al., 2020), when there are multiple children with disabilities in the group (Smith & Smith, 2000), and when children with disabilities display social difficulties and behavior problems (Smith & Smith, 2000; Zabeli et al., 2020). Moreover, according to teachers, frequent staff shortages can further compromise their ability to manage groups with children with disabilities (Zabeli et al., 2020). Therefore, it seems that an accumulation of less favorable conditions can negatively impact teachers' perceived ability to manage the workload (Bettini et al., 2017; Embich, 2001).

Of note were also remarks revealing that some teachers may feel unprepared to serve children with disabilities. Concerns about the preparedness of teachers to work with children with disabilities have been raised in multiple occasions (e.g., Avramidis & Norwich, 2002; Odom & Bailey, 2001). Successful inclusion requires that teachers receive adequate training to work with children with disabilities (e.g., Rheams & Bain, 2005), including hands-on training opportunities (Avramidis & Norwich, 2002; Burke & Southerland, 2004). Because in Portugal it is not mandatory for ECE teachers to have education and training regarding the inclusion of children with disabilities (European Commission/EACEA/Eurydice/Eurostat, 2014), teachers may be in need of

opportunities to develop more specific knowledge and competences in this area (Mitchell & Hedge, 2007).

Groups with Younger Children and Mixed-age Groups

As in the case of groups with children with disabilities, and resonating with previous findings, teachers reported that serving younger children is more demanding, because these children require greater individualized attention (Ertürk-Kara, 2018). As the number of younger children in the group increases, more supports may be needed; otherwise, teachers' perceptions of workload may increase (Bettini et al., 2017; Embich, 2001).

Furthermore, we note that participating teachers seemed to hold somewhat traditional or adult-centered beliefs regarding young children's education and behavior management (Dowsett et al., 2008), opposed to more progressive or child-centered beliefs (Driscoll & Pianta, 2010; Justice et al., 2008; Pianta et al., 2005). That is, some accounts seemed to value children's conformity (Shears & Robinson, 2010) to classroom rules and teachers' behavioral expectations, and children's ability to stay focused during learning activities directed by the teachers (McMullen et al., 2006; Pianta et al., 2005). This finding can be particularly relevant, considering previous evidence that the quality of interactions may be higher in classrooms of teachers with more child-centered beliefs (Pianta et al., 2005).

The challenges reported by teachers regarding their work with mixed-age groups are, again, consistent with evidence from previous studies indicating that teachers frequently experience increased difficulties in making the necessary accommodations (Greenman et al., 2008) and in planning activities for children of different ages and, thus, with a wider range of abilities (Berry, 2004; Ertürk-Kara, 2018; Manship et al., 2016). Indeed, while with age homogeneous groups teachers may be able to implement

practices more suitable for that age group, in mixed-age groups teachers may feel somewhat unprepared (Ertürk-Kara, 2018), if not provided with opportunities to develop the competences needed to make adaptations and implement more flexible practices (Beach, 2013).

Socioeconomic Disadvantaged Groups

Regarding groups composed mostly of children in socioeconomic disadvantage, the biggest challenge for participating teachers seems to be the management of emotional and behavioral difficulties, deemed as particularly prevalent in these groups, due to children's exposure to contextual stressors (Camilli et al., 2010; Heckman, 2006; Raver et al., 2008). Externalizing behavior problems, in particular, can be challenging and lead teachers to spend considerable time on behavior management tasks; consequently, important instructional time may be lost (La Paro et al., 2002). Given that children experiencing situations of socioeconomic disadvantage can be at higher risk of not achieving their learning and developmental potential, this is of concern (OECD, 2012).

Furthermore, teachers' reports appear to support suggestions that a cumulative effect may arise in groups with a high number of children exhibiting externalizing behavior problems (Buyse et al., 2008), meaning that teachers may feel overwhelmed and limited in their capacity to effectively manage behavior (Friedman-Krauss et al., 2004; Raver et al., 2015), if the necessary supports to help them do so more effectively are not available (Raver et al., 2008; Raver et al., 2009). Teachers may also lack training to build up their capacity to proactively manage group behavior, which could allow them to support children's positive behavior and reduce instances of aggression and disruptive behavior (Brotman et al., 2005; Webster-Stratton & Taylor, 2001).

Groups with Children who Speak a Different Language

It is noteworthy that teachers did not spontaneously share perceived challenges of working with groups with children who speak a language other than Portuguese. They did so only when specifically asked about the perceived challenges associated with group cultural and linguistic diversity. Hence, although teachers may seemingly face difficulties when working with these groups, it is possible that they perceived them as less demanding or easier to overcome, compared with challenges imposed by other group characteristics. Notwithstanding, according to teachers' accounts, serving groups with children who speak a language other than Portuguese can present challenges, especially when teachers are not familiar with the children's first language. As teachers' knowledge about children's first language can be associated with their capacity to effectively communicate with them and to use linguistic responsive practices (Fillmore & Snow, 2000), this finding was not unexpected. Teachers may not always be aware of the resources and practices with potential to support their interactions with children in these situations (Buyse et al., 2010).

Further, a main concern for teachers seemed to be that children who speak a different language learn Portuguese as quickly as possible, because they believed this contributes to inclusion. Some of the teachers shared a belief that the process of learning a new language can be optimized when children's parents speak Portuguese at home. These reports were congruent with previous investigations indicating that ECE teachers may feel responsible for teaching children a new language, but not for the development of their first language (Lee & Oxelson, 2006). Hence, teachers may endorse children's maximum exposure to the new language (Lee & Oxelson, 2006; Lian & Fontanéz-Phelan, 2001). However, these findings seem somewhat contradictory to teachers reports emphasizing the opportunities of cultural and linguistic diversity. It may be that teachers lack training regarding effective practices to support language development for

children who speak a different language (e.g., Buyse et al., 2010), thus leading to seemingly assimilationist views (e.g., Gkaintartzi & Tsokalidou, 2011).

Groups with More Boys than Girls

Similar to reports from previous studies, a few teachers noted that they preferred to work with groups with a more balanced gender composition (e.g., Sheridan et al., 2014; Williams et al., 2018). Such preference may result from prevalent beliefs among ECE teachers regarding differences between boys and girls (Nordberg et al., 2010), despite counteracting evidence that differences in behavior can be found as easily between children of the same sex (e.g., Davies, 2003). Aligned with findings from previous studies, these teachers believed that boys tend to be more active in the group, to display more dominant behaviors (Maccoby, 1998), including aggressive (DeSouza & Czerniak, 2002; Walker, 2004) and negative behaviors towards peers (Sundell, 2000), and to be more competitive (DeSouza & Czerniak, 2002). In turn, they viewed girls as quieter, more cooperative (Maccoby, 1998; Sundell, 2000), and submissive (DeSouza & Czerniak, 2002).

Larger Groups and Lower Adult-child Ratios

Besides group composition, teachers also perceived group size and adult-child ratio as potentially challenging. Specifically, larger groups and lower adult-child ratios were associated with increased demands, that can potentially compromise their ability to effectively manage teaching responsibilities (Whitebook et al., 2016). Again, these reports aligned with those of previous studies (on group size see Alvestad et al., 2013; Sheridan et al., 2014; Williams et al., 2018; on adult-child ratio see Rodriguez & McKee, 2021). With smaller groups, teachers may be able to spend more time in one-on-one interactions with children (Hagekull & Hammarberg, 2004) and behavior management can be less demanding (Wasik, 2008).

Increased Challenges for Older Teachers

Teachers' considerations about the impact of their own age on their ability to manage groups perceived as more challenging warrant reflection. Teaching young children is considered emotionally and physically demanding (Whitebook et al., 2016). Teachers' accounts seem congruent with previous evidence of a negative association between teachers' age and their capacity to respond to job demands, based on an interplay between perceived physical and psychological resources, and job-related resources and demands (van den Berg et al., 2009).

Note that teachers who reported increased challenges associated with their age were also the most experienced. Some studies found that more experienced teachers may hold a higher sense of self-efficacy, compared with less experienced teachers (e.g., Wolters & Daugherty, 2007). For example, one study found this to be true in dimensions such as instructional strategies and behavior management (Tschannen-Moran & Hoy, 2007). However, there are also studies that found no association (e.g., Pas et al., 2012; Tschannen-Moran & Johnson, 2011), and one study reported a nonlinear association between teachers' years of experience and self-efficacy beliefs, suggesting an increase from early to mid-career followed by a decrease (Klassen & Chiu, 2010). Together with age, psychosocial factors of the work environment may contribute to a decreased sense of efficacy to manage groups considered challenging (Klassen & Chiu, 2010), as teachers' personal characteristics and the characteristics of the classroom associate with teachers' self-efficacy beliefs (Guo et al., 2011).

Importantly, concerns raised by one participant regarding the health status of older teachers should not be overlooked, as these have been the topic of public discussions in Portugal for some time. We note that Portuguese law recognizes the high demands ECE teachers are exposed to and has in place measures to lessen the classroom load on older

teachers. Specifically, it allows for a reduction of five contact hours per week for teachers aged 60 and above, as well as dismissal of teaching for a period of one year for teachers who reach 25 and 33 years of service (Decree-Law 41/2012); during that time, teachers are still expected to perform school related activities, such as administrative work, which can also induce stress (OECD, 2020b).

Importantly, perceptions of increased challenges seem arise often from an interplay between group characteristics. Adding to this, some teachers emphasized that all groups can be potentially challenging, since the composition of each group is unique. As groups change from year to year, even if changes are small, teachers are required to constantly adapt their practices, which, in itself, may be a challenge (Ansari & Pianta, 2018). Therefore, to better comprehend the factors potentially associated with teachers' ability to establish high-quality interactions with children, focusing on a single feature of the classroom may be insufficient (Cryer et al., 1999; Slot et al., 2018a).

Limitations and Future Directions

These findings must be interpreted considering a few limitations. First, findings cannot be transferable to all ECE teachers since we only analyzed the views of teachers serving in public settings, located in a geographically delimited area. Secondly, we restricted our investigation to teachers' perceptions about challenges and opportunities associated with group composition. Consideration of teachers' practices to manage perceived challenges and of teachers' needs for support, would have contributed to a deeper understanding of the implications of group characteristics. Likewise, since we asked teachers to share their perceptions based on their global professional experiences, gathering more information about teachers' professional paths could have been advantageous. Importantly, we first asked teachers about challenges associated with group composition, which could have contributed to a deficit-orientation in the analysis,

emphasizing challenges above opportunities. Asking teachers about how group characteristics associate with their work in a more open way could have been advantageous. Moreover, the ecological scope of this study could be broadened by complementing teachers' reports with those of other key stakeholders, such as ECE coordinators and school directors. Also, the inclusion of other key stakeholders could help better understand how teachers' perceptions are shaped. Lastly, triangulation of data from teachers' interviews with assessments of process quality, could also contribute to a better understanding of how teachers' perceptions and practices in ECE may be connected.

Implications for Practice

Findings from this study seemingly support the importance of considering adjustments in the organization and size of groups in ECE, to prevent the accumulation of less favorable conditions for certain teachers (OECD, 2020b) and the children in their classrooms. Considering that teachers' perceptions of increased challenges can result from an interaction between group structure characteristics (Cryer et al., 1999; Slot et al., 2018a), it seems fitting that regulation mechanisms regarding group size and adult-child ratios consider the social composition of the group (Barth et al, 2004; Bennett, 2008; European Commission, 2021). Particularly in the case of groups with children with disabilities, groups with younger children, and groups with children in socioeconomic disadvantage, smaller group sizes and higher adult-child ratios, may contribute to lessen the load on teachers (Smith & Smith, 2000). Furthermore, the implementation of systematic screening mechanisms that consider the number of children with disabilities per group, and the type, and the severity of children's conditions, may be necessary (Smith & Smith, 2000).

Since costs associated with the employment of more teaching staff cannot be overlooked (European Commission/EACEA/Eurydice, 2019), teachers who serve larger groups and groups perceived as more challenging may benefit from training on group management and additional supports (OECD, 2020b). Providing teachers with initial education and professional development focusing on child-centered inclusive practices (European Commission, 2021), and creating the opportunities for informal learning, for example, through collaboration, discussions (OECD, 2020), and sharing of good practices, can increase teachers' feelings of competence (European Commission/EACEA/Eurydice, 2020) to work with groups of children with a wider range of abilities and needs (Reid et al., 2015).

Furthermore, for pre-service teachers, considering issues of diversity in the curriculum (European Commission, 2017) in addition to including opportunities for reflexivity and for practice in heterogeneous classrooms can contribute to increased effectiveness teaching programs (Forghani-Arani et al., 2019). In turn, for in-service teachers, professional development activities aimed at promoting knowledge and understanding of cultural diversity, intercultural communication competences, and implementation of culturally responsive pedagogies (April et al., 2018), can be especially useful (Forghani-Arani et al., 2019).

Lastly, given the strain and stress associated with teaching (Jeon et al., 2017; van Dick & Wagner, 2001), policies aimed at improving teachers working conditions and well-being (OECD, 2020b), can be particularly relevant for older teachers, who may require additional and specific supports to manage job demands associated with groups perceived as particularly challenging. Measures such as reducing time dedicated to teaching, while simultaneously ensuring that this time is not filled with other stress inducing tasks, such as too much administrative work (OECD, 2020b); promoting co-

teaching experiences (Jortveit & Kovač, 2021); and allocating older teachers to smaller groups (Clipa & Boghean, 2015), may have some potential.

Conclusion

Children's learning and well-being is closely related with the work experiences of teachers (OECD, 2012; Whitebook et al., 2016). Thus, research focused on the identification of microsystemic structure variables that ECE teachers perceive as challenging, can help inform policy makers about how to ensure more favorable working conditions for teachers (OECD, 2020b) and how to strengthen their capacity to establish stable (OECD, 2012), responsive, and stimulating (e.g., Mashburn et al., 2008; Votruba-Drzal et al., 2004) interactions with all children. As the benefits of high-quality ECE can be particularly relevant for children with disabilities, children in socioeconomic disadvantage, and children with a different culture and language (OECD, 2019), policies aimed at fostering more inclusive settings (Reid et al., 2015) can help mitigate social disparities (OECD, 2017). In sum, investments in high-quality ECE may involve strengthening teachers' capacity to work with children with a wide range of needs (OECD, 2019) and in providing them with consistent supports to manage groups perceived as more challenging (OECD, 2020b).

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