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A Comparative Exploration of the Pedagogical Quality of Parent-Led Child Care Centers and Regular Child Care in The Netherlands

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ABSTRACT

Research Findings: This small-scale study features the 1st comparative exploration of the pedagogical quality of parent-led child care and regular child care in The Netherlands. The quality of the interaction skills and the affective relationships between adults and children was evaluated and compared with those of regular child care centers. On average parents in parent-led child care had interactions with adequate to good sensitive responsiveness, respect for autonomy, structuring and limit setting, and verbal communication. Developmental stimulation and fostering positive peer interactions proved to be weaker areas. Parents' perceptions of the affective relationship with children in the group were characterized by a high level of closeness and a low level of dependency and conflict. Parents experienced a greater degree of closeness but also more conflict and in particular greater dependency with their own children than with the other children. A comparison between parent-led centers and regular urban child care centers revealed some small but significant differences in pedagogical quality. **Practice or Policy:** Parents can play a more active role in both the design and implementation of child care. It seems interesting to pilot new child care formats in which parents and professional staff collaborate more closely.

The child care system in many countries is centered on a mainstream model of professional child care suppliers with parents as consumers. However, in some countries, alternative forms of child care have emerged in the margins of this dominant model. For example, parental preschool cooperatives were introduced in Canada (Prentice, 2006) and the United States (Coontz & Esper, 2003) as early as 1915, serving as playgroups or socialization groups for children similar to church groups (Lewsader & Elicker, 2013; Sosinsky, Lord, & Zigler, 2007) or mixed-age homeschooling groups (Guterman & Neuman, 2018; Kunzman & Gaither, 2013). These cooperatives went on to inspire parents in European countries (Gofen & Blomqvist, 2014). In various European countries, forms of cooperative care date back more than 40 years, with parents actively participating in the management of, the coordination of, and/or interaction with the children in the group (see Pestoff, 2006; Vamstad, 2012), like the *crèches parentales* in France, the *oudercrèches* in Belgium, the *Eltern-Kita* in Germany, and some *försköle* in Sweden. In The Netherlands, parent-led child care (PLC) centers (*ouderparticipatiecrèches*), in which parents play an autonomous role, have offered an alternative to standard child care for 40 years. Offering child care services for younger children (0–4 years) in a center-based setting is a shared characteristic of Dutch PLC and regular child care, but a striking

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difference is that parents, instead of professional caregivers, care for the children in PLC. Furthermore, the composition of groups is different from that of regular day care groups, because the groups in cooperative child care include both parents' own children and children from other families.

Different forms of cooperative child care can be identified based on the degree of parental involvement in the design (i.e., management and pedagogical policy) and implementation (i.e., taking care of the children) of this public service (see Brandsen & Honingh, 2016). Cooperative care affords parents in different countries an individual role alongside that of other pedagogical professionals, such as the rural parent cooperatives in America (see Coontz & Esper, 2003), the parent-led service in New Zealand (Mitchell, Tangaere, Whitford, & Mara, 2006), and the Canadian cooperatives, in which only a small percentage of child care centers expect parental participation in the groups (Prentice, 2006), and in European examples of cooperative care, in which parents participate in regular activities and sometimes perform menial or cleaning tasks but work alongside professional staff (Vamstad, 2012).

In the Dutch context, the organizational model of PLC is autonomous and devoid of further involvement of pedagogical professionals. In Dutch PLC—in contrast to other international variants of cooperative care—parents bear complete responsibility for the management, daily coordination, and care of the group. They are involved in pedagogical policy; coordinate the daily running of the center; and take turns participating in the groups, which comprise both their own children and other parents' children. To use the terminology of Brandsen and Honingh (2016), the parents do not have a complementary role but have full control regarding both the design and implementation of the child care service. The Dutch PLC model therefore moves beyond other international forms of cooperative care.

The existence of alternative types of child care alongside mainstream child care in different regions of the world evokes the question of whether regular and alternative types of child care offer similar or different pedagogical quality to young children in the preschool period (0–4 years). The limited scientific publications on parental cooperative care have focused on describing the historical and social context of this care. The pedagogical quality of alternative types of child care has rarely been studied, despite its importance for the development of young children and, related to this, its relevance for the child care choice parents face. In this study, we evaluate the pedagogical process quality of Dutch cooperative care by conducting a comparative assessment of the quality of Dutch PLC and regular child care centers.

The Dutch context of PLC

The Dutch founders of PLC strongly believed that raising children in a group setting with various children and adults would stimulate children's development and socialization. Equally important, they emphasized the importance of parents sharing responsibilities regarding raising children, often indicated with collective upbringing (Bergwerff, 2015). Currently PLC is linked to the concept of the pedagogical civil society, which is characterized by citizens who are willing to provide mutual support in informal social networks (see Kesselring, de Winter, Horjus, van de Schoot, & van Yperen, 2012). The concept of the pedagogical civil society is concretized in PLC, as parents share child care responsibilities for their children and arrange child care for one another's children (Bergwerff, 2015).

All Dutch early childhood education and care (ECEC) settings, including PLC, are required to work according to four predefined general pedagogical goals: to provide children with a safe and caring environment, to support the development of children's personal competencies, to support the development of children's social competencies, and to transmit norms and values. However, there is no national curricular framework for regular child care centers or PLC centers (see Fukkink, 2017, for background information on Dutch ECEC). A typical daily program of a child care center in The Netherlands consists mostly of free play, with little time allotted to structured educational

activities (Organisation for Economic Cooperation and Development, 2006). Other parts of the program are lunch/snack, diapering, and transitions between group activities. Finally, as is the case with professional child care centers, PLC centers are recorded in a national register of child care centers and are subject to external supervision by the child care center inspection service (see also Lewsader & Elicker, 2013, for the supporting role of accreditation and external supervision in the context of faith-based child care).

In The Netherlands, formal child care in the preschool years goes from 3 months onward (when paid maternity leave ends) up to 4 years (when kindergarten starts). A total of 56% of 0- to 4-year-old children in The Netherlands attend formal child care (30% center-based care, 26% family day care) for an average of 19 hr per week. Compared to other Western countries this average attendance is relatively low (Organisation for Economic Cooperation and Development, 2016), a fact that can be explained by the high rates of part-time employment of Dutch mothers. More highly educated parents choose center care or family care more often (59%) compared to parents with medium (36%) and less (25%) education (Merens, Hartgers, & van den Brakel, 2012) because of the relatively high costs of formal day care. PLC is the choice for only a small minority of Dutch parents and is concentrated in only two large cities, Amsterdam and Utrecht.

Two dimensions of pedagogical quality: interactions and relationships

Empirical research has shown that teacher–child relationships and classroom interactions both contribute to the development of children in the preschool years and are important aspects of children’s early experiences in preschool settings (Jeon et al., 2010; Lippard, La Paro, Rouse, & Crosby, 2018).

Research has demonstrated that the process quality in the group, and primarily caregiver–child interactions, directly affects children’s well-being and later social-emotional development (see, e.g., Curby et al., 2009; Mashburn et al., 2008). Correlational and longitudinal studies have shown that caregiver interaction skills are a significant predictor of child development (see, e.g., Belsky, 2006; Helmerhorst, Riksen-Walraven, Vermeer, Fukkink, & Tavecchio, 2014). In their interactions with young children in the group, caregivers need to demonstrate a wide range of skills. They not only need to offer the children emotional support but also are responsible for organizing the group and stimulating children’s development (Domitrovich et al., 2009; Hamre, 2014; Hamre, Hatfield, Pianta, & Jamil, 2014; Helmerhorst et al., 2014).

Beyond their interactions with all children in the group, caregivers’ dyadic relationships with each child are an important context for children’s well-being and development (Howes, Phillipsen, & Peisner-Feinberg, 2000; Pianta, Nimetz, & Bennett, 1997). According to extended attachment theory, sensitive and stable caregivers can provide a secure foundation for young children. Studies based on this theoretical perspective often distinguish among three dimensions of the caregiver–child relationship: Closeness denotes the degree of warmth and openness, conflict reflects discordant and coercive interactions, and dependency refers to overly dependent and clingy behaviors exhibited by the child (Pianta, 2001). Caregiver–child relationships are important for children’s development in classrooms, even after group interactions are accounted for (Lippard et al., 2018). Hence, a focus on the affective relationship at the level of the dyad complements the focus on interactions between a caregiver and all children at the group level.

PLC parents play a key role in ensuring the well-being and development of all children, similar to pedagogical staff at regular child care centers. It is not yet known whether PLC caregivers can have an affective relationship with various children from other families in a group setting and whether the degree of closeness, conflict, and dependency varies between parents’ own children and other parents’ children. The fact is that a relatively large group of parents share the task of caring for the children, and hence PLC parents meet other parents’ children infrequently, whereas professional caregivers and children in regular child care meet one another on a regular basis. In the specific context of PLC, there are two types of in-group relationships: An adult can have a parent–child

relationship with his or her own child or a caregiver relationship with the children of other parents. In this specific context of PLC, it makes sense to distinguish between these two types of relations.

Predictors of pedagogical quality

Previous studies of professional child care have shown various predictors of pedagogical quality related to the professional development of staff (e.g., education level, in-service training, and work experience). We evaluate these variables also in this study. In the context of PLC with nonprofessional caregivers, we also explore alternative possible moderators of pedagogical quality at the level of the individual caregiver, including psychological and demographic characteristics. The five personality traits have proved to be indicative of how professionals perform in various professions (Hogan & Holland, 2003), including professions involving interpersonal interactions (Mount, Barrick, & Stewart, 1998), work in ECEC (Bullock, Caplan, & Bosacki, 2015; Smidt, Kammermeyer, & Roux, 2015), and also in the context of homeschooling (Guterman & Neuman, 2018). Meta-analytical research has also demonstrated modest yet significant links between the personality traits of the Big Five framework and parenting in the case of both fathers and mothers (Prinz, Stams, Dekovic, Reijntjes, & Belsky, 2009). To conclude, findings from studies in both professional and family contexts suggest that general personality traits may also predict differences in the pedagogical quality of caregiving in a PLC setting.

The present study

The unique position of Dutch PLC centers with the central role of parents as nonprofessional caregivers raises the question of whether they are able to provide adequate care at the group level. Several studies have underlined the importance of caregivers' professional development in both preservice and in-service contexts for process quality. Correlational studies have shown contradictory results for the association between teachers' education level and process quality (see Early et al., 2007). However, experimental studies have shown positive effects of intensive training and professional development on caregivers' interaction skills (see Egert, Fukkink, & Eckhardt, 2018; Fukkink & Lont, 2007; Werner, Linting, Vermeer, & van IJzendoorn, 2016). PLC makes it possible to explore the assumed relationship between professional development and pedagogical quality in a new setting with nonprofessional staff. Another unique feature of PLC is that parents care for both their own children and other parents' children. This unique group context raises the question of whether parents experience different affective relationships with their own children and with other parents' children.

To the best of our knowledge, this is the first study investigating the pedagogical quality of cooperative care. The key questions of this study are as follows: What is the pedagogical quality of Dutch PLC centers? And how does it compare to the pedagogical quality of standard child care centers? This question involves both the quality of caregivers' interaction skills at the group level and caregivers' perceptions of their affective relationships with individual children at the level of the dyad. Finally, we explore whether pedagogical quality (including both interaction skills and perceptions of affective relationships with children) is linked with individual characteristics of parents, including age, sex, emotional exhaustion (see Belsky, 1984; de Schipper, Riksen-Walraven, & Geurts, 2007), and general psychological traits.

Method

Participants

The PLC sample included all seven locations in The Netherlands: two locations from Amsterdam and five from Utrecht. These locations were independent at the operational and management levels

without active partnerships, although each PLC was a member of a national foundation that promotes PLC (*Stichting OOK-kinderopvang*). Six locations consisted of one group, and one location consisted of three groups, so a total of nine groups of children ages 0 to 4 years old were visited. Eight PLC groups offered children full-day care in the same way regular day care centers do, although it was possible to bring children for half a day. One PLC group was only open in the morning. Four groups had mixed-age groups (0–4 years old), and the five other groups had homogeneous age groups (about 1.5–4 years old), of which four groups welcomed children once they were able to walk and the other group required the children to be at least 2 years old.

A randomly selected group of six parents was involved per group. In total, 54 parents out of a total of 145 parents actively involved in all PLC centers were included in the survey sample (37% of the population). Two of the adults approached did not want to participate in the research and were subsequently replaced by a random selection of two other parents; nonresponse therefore remained modest (0% at the location level, 3.7% at the parent level). All participating parents (70.4% female) submitted questionnaires featuring background information; 49 also submitted questionnaires containing information about their perceptions of the quality of their affective relationships with their own child and other children of preschool age. A total of 157 children in PLC were involved (56.7% female), including 53 own children. On average children spent 2.88 days per week in the PLC group ($SD = 1.16$, range = 1–5).

In order to enable a comparison between PLC and standard child care centers, we evaluated pedagogical quality at a selection of seven regular child care centers in the same neighborhood (the majority of these centers were located within 500 m of one another, with a maximum of 1.5 km). All centers were located in the center of Amsterdam and Utrecht. These local districts were densely populated ($>5,000$ inhabitants per km^2), with relatively large proportions of Dutch-born persons (60%–75% for the Amsterdam neighborhood, 75%–90% for the Utrecht neighborhood) and relatively small proportions of poor households (8%–10% for the Amsterdam neighborhood, 8%–15% for the Utrecht neighborhood; see Centraal Bureau voor Statistiek, *n.d.*).

A total of 17 regular child care groups (two infant groups, 0–2 years old; six mixed-age groups, 0–4 years old; and nine preschool groups, 2–4 years old) with a total of 36 professional caregivers (97.2% female) were visited by the research team. On average children spent 2.69 days per week at the regular child care centers ($SD = 0.88$, range = 1–5); this figure was comparable to that of the PLC centers. At these centers, questionnaires regarding the background information of the professional caregivers and the quality of pedagogical relationships with individual children were completed by the professional caregivers for a total of 172 children (59.3% female). The PLC and regular child care samples comprised equal numbers of locations (seven) but different numbers of groups (17 regular groups vs. nine PLC groups). This composition reflects the different center organization in these two settings. The sample included a comparable number of caregivers and children and allowed for statistical testing of differences between PLC and regular child care with adequate power (see “Analyses”).

Procedure

A trained observer visited each group for a morning or afternoon. The observer recorded the parents (in the case of PLC) or the professional caregivers (at the standard child care centers) interacting with the children in the group so that the recordings could subsequently be assessed by an external coder using the Caregiver Interaction Profile (CIP) scales (see “Measures”). The parents and professional caregivers in the visited groups were filmed. The filmed parents and professional caregivers completed the Student Teacher Relationship Scale (STRS) for all children present in the group on the day of filming. However, we analyzed only data for children in the preschool period for this study.

Active informed consent was first obtained from all parents and pedagogical staff as well as for filming the group. The study was approved by the Ethics Committee of the Faculty of Social and Behavioral Sciences University of Amsterdam (file no. 2016-CDE-7015).

Measures

CIP scales

We assessed the caregiver interaction skills of both parents and professional caregivers using the CIP scales (for an extensive description of development and validation, see de Kruif et al., 2007, and Helmerhorst et al., 2014), which identifies six interaction skills: (a) Sensitive responsiveness refers to the extent to which a caregiver recognizes children's individual emotional and physical needs and responds appropriately and promptly to their cues and signals; (b) respect for autonomy refers to the extent to which a caregiver is nonintrusive and instead recognizes and respects the validity of children's intentions and perspectives; (c) structuring and limit setting refers to the ability of a caregiver to clearly communicate expectations to children and structure a situation accordingly and to set clear and consistent limits on children's behavior; (d) verbal communication refers to the frequency and quality of verbal interactions between a caregiver and children; (e) developmental stimulation concerns the degree to which a caregiver deliberately attempts to foster children's development (e.g., motor skills, cognitive development, and creativity); and (f) fostering positive peer interactions refers to the extent to which a caregiver guides or facilitates positive interactions between children in the child care group.

Each skill is rated on a single 7-point rating scale: 7 = very high, 6 = high, 5 = moderate/high, 4 = moderate, 3 = moderate/low, 2 = low, and 1 = very low. For example, for sensitive responsiveness, a caregiver scoring in the high range (6, 7) is described as follows:

Shows warm and genuine interest in the children and provides emotional support when needed. In general, the caregiver responds promptly and appropriately to the children's signals, thereby functioning as a "secure base" for the children. If unable to respond, she acknowledges having noticed the signal and provides a more complete response as soon as possible.

A caregiver scoring in the middle range (3, 4, 5) provides emotional support to children, but this support is inconsistent. The emotional support the caregiver provides may vary across children and/or across time. The caregiver sometimes misses signals, and his or her reactions are not always adequate. A caregiver scoring in the low range (1, 2) hardly provides emotional support to children. He or she misses many signals, or reactions are too slow or inadequate. The caregiver may show indifferent or detached behavior.

The behavior of the caregiver was evaluated based on four 10-min filmed episodes: free play, lunch/snack, diapering, and transition between group activities (i.e., a total of 40 min of film per parent or professional caregiver). For each caregiver, we calculated a mean score for each interaction skill by averaging across the four filmed episodes. A total CIP score was also determined, averaged over the six skills. Mean scores on the CIP scales are classified in the following quality levels: inadequate ($M < 3.5$), moderate ($3.5 \leq M < 4.5$), and adequate to good ($M \geq 4.5$).

Seven coders (all university students with an educational background) completed an extensive training comprising six sessions of an average of 4 hr. In total each observer scored 36 example videos 10 min in length during training. Interrater reliability was established with at least 80% agreement within 1 scale point with a consensus score provided by an expert. Following their initial training, all coders showed adequate levels of interobserver agreement with ratings from experts. After the training, the coders independently rated the videotaped episodes. In order to determine intercoder reliability following the training, a random selection of the videos for PLC (19%, $n = 10$) were coded by three independent observers. The average consensus, within 1 scale point, was 75%. The same procedure was followed for the recordings at the regular child care centers. A random selection of the videos (18%, $n = 6$) was coded with an average consensus, within 1 scale point, of 86%. Deviant scores were discussed until consensus was reached. In order to avoid contamination of observation assessments, the coders who rated the videos were different from the observers who made the videos.

The CIP scales have been used extensively in large-scale assessments of different types of child care (day care, family day care, playgroups) and with different populations of caregivers (i.e., preservice caregivers and in-service caregivers, male and female caregivers in early years child care). In a validation study, CIP scores were significantly related to scores on the Caregiver Interaction Scale and the Infant/Toddler Environment Rating Scale–Revised and Early Childhood Environment Rating Scale–Revised (particularly the Language and Interactions subscales), which supports the convergent validity of the CIP measure. Predictive validity is supported by a significant correlation between CIP scores and children’s competence scores as determined with the Brief Infant Toddler Social Emotional Assessment (see Helmerhorst et al., 2014).

STRS

We used the authorized Dutch translation of Pianta’s (2001) STRS (*Leerkracht Leerling Relatie Vragenlijst*; Koomen, Verschueren, & Pianta, 2007), which measures caregivers’ (teachers, pedagogical staff, and other educators in a group setting) perceptions of affective relationships with individual children in a group setting (see Pianta et al., 1997). The STRS was validated in the Dutch context and has previously been used in different Dutch studies, also with preschool children (see Roorda, Verschueren, Vancraeyveldt, van Crayeveldt, & Colpin, 2014). The questionnaire identifies three dimensions: closeness (with questions about affection, warmth, open communication, involvement, trust and safety; 11 items, Cronbach’s α = .86 and .81 for the PLC and child care centers, respectively), conflict (negativity, unpredictability, anger, compelling behavior, lack of effectiveness; 11 items, α = .86 and .86), and dependency (excessive help and demand for attention, strong response to separation; six items, α = .85 and .78). The scores for each dimension are rated on a 5-point scale ranging from 1 (*not at all applicable*) to 5 (*highly applicable*) and can also be converted into standardized scores for boys and girls. In the context of PLC, there are two types of dyadic relationships: (a) the relationship between the parent and his or her own child and (b) the relationship between the parent and the other children (see the introductory section). For PLC, we therefore distinguish between the affective relationships that parents perceive with their own child and with other children.

Big Five Inventory (Denissen, Geenen, van Aken, Gosling, & Potter, 2008)

The Big Five is an established model for studying personality in different cultures and languages, including English and Dutch (Hofstee, Kiers, de Raad, Goldberg, & Ostendorf, 1997). The results of factor analyses from Dutch studies have supported the theoretical distinction between the five distinguished personality traits (Denissen et al., 2008). The measure provides an indication of five general personality traits identified in psychological research: extraversion (α = .88 and .83 for the PLC and child care centers, respectively), agreeableness (α = .73 and .62), conscientiousness (α = .76 and .81), neuroticism (α = .82 and .80), and openness to ideas (α = .71 and .84). Scores range from 1 (*strongly disagree*) to 4 (*strongly agree*).

Utrecht Burnout Scale: Emotional exhaustion (Schaufeli & van Dierendonck, 2000)

This measure is the Dutch version of the Maslach Burnout Inventory (Maslach & Jackson, 1986). Participants indicate feelings of emotional exhaustion on a 7-point scale ranging from 0 = *never* to 6 = *always/daily*. The reliability of this scale was satisfactory (α = .71 and .90 for PLC and child care centers, respectively). The factorial validity of the Maslach measure has repeatedly been found across different occupational groups and nations (Schutte, Toppinen, Kalimo, & Schaufeli, 2000), including The Netherlands. The Dutch version of the Maslach Burnout Inventory has proven to be a valid measure for use with individuals with and without clinical burnout (Roelofs, Verbraak, Keijsers, de Bruin, & Schmidt, 2005).

Questionnaire on background characteristics

An online questionnaire was used to assess general demographic characteristics (including age, country of birth, language spoken at home, highest level of education completed, and type of

education), the child care experience (i.e., the number of hours the participant spent at the child care center each week and month), and the training (i.e., relevant pedagogical courses) of both the parents and pedagogical staff (see Table 1 for an overview).

Group size and caregiver–child ratio

Group size was defined as the total number of children present in the group during the visit. The caregiver–child ratio was defined as the total number of children divided by the total number of caregivers in the group during the visit.

Analyses

We used multilevel regression analysis (with the mixed procedure in SPSS) to assess the differences between PLC parents and pedagogical staff, taking into account the hierarchical nature of the data with individual caregivers (CIP scores) or children (STRS scores; Level 1) nested within locations (Level 2). For the comparison of the caregiver skills of PLC parents and professional staff, the six CIP scores were the dependent variables and type of child care (PLC or regular child care) was the predictor. Statistical power was adequate ($\beta = .85$) for medium to large effect sizes (ESs) with this analysis at the convenient alpha level of .05. For analyses of the affective caregiver–child relationship, closeness, dependency, and conflict were the dependent variables and type of child care (PLC or regular child care) was again the predictor. Statistical power for this analysis was good ($\beta = .99$) for

Table 1. Descriptive background information on PLC parents and professional caregivers.

Variable	PLC Parents (n = 54)		Professional Caregivers (n = 29)	
	M (SD)	%	M (SD)	%
Age (years)	38.63 (5.40)		34.39 (7.23)	
Hours with group per week	5.68 (2.28)		27.79 (6.68)	
Sex				
Male		29.6		2.8
Female		70.4		97.2
Country of birth				
The Netherlands		81.5		86.0
Other		18.5		14.0
Native language				
Dutch		83.3		86.0
Other		16.7		14.0
Highest level of education completed				
Low—vocational		1.9		
Intermediate—vocational		3.7		89.7
High—secondary		3.7		3.4
High—vocational		44.4		3.4
High—academic		46.3		3.4
Degree subject				
Pedagogical		7.4		100
Psychological		3.7		
Other		88.9		
Work experience in child care		16.7		100
Completed parenting or child care course		50.0		100
Big Five				
Extraversion	4.04 (0.67)		3.98 (0.69)	
Agreeableness	4.22 (0.48)		4.23 (0.44)	
Conscientiousness	3.86 (0.57)		4.26 (0.54)	
Neuroticism	2.13 (0.64)		2.16 (0.64)	
Openness to ideas	4.21 (0.47)		3.85 (0.62)	
Emotional exhaustion	1.63 (0.50)		2.35 (0.96)	
Structural quality				
Group size	8.21 (2.50)		10.86 (3.15)	
Caregiver–child ratio	0.26 (0.02)		0.21 (0.05)	

Note. PLC = parent-led child care.

testing medium effects and adequate ($\beta = .87$) for small to medium effects. For all multilevel analyses, a random intercepts model was selected.

Differences between PLC parents' affective relationships with their own children and with other parents' children were tested with a multivariate repeated measures analysis with the three STRS subscales as dependent variables, own children versus other children as a within-subjects factor, and child gender as a between-subjects variable. We averaged STRS scores of different parents for each individual child (e.g., either averaging the scores of a father and a mother for their own child or averaging scores of different parents for a child who was not their own) to enable a direct comparison between own versus other parents' affective relationships matched for individual children. Finally, an exploratory analysis of predictors of pedagogical quality (both CIP and STRS scores) was conducted with Pearson correlation coefficients (two-sided at $\alpha = .05$); statistical power was adequate ($\beta \geq .80$) for medium to large correlations ($r \approx .40$).

Results

Table 1 presents descriptive background information for parents and professional caregivers and information on group size and caregiver-child ratio in PLC and regular child care settings. The average group size was slightly smaller in PLC ($M = 8.21$, $SD = 2.50$) than in standard child care ($M = 10.86$, $SD = 3.15$). The caregiver-child ratio was 0.26 in PLC, indicating an average of 3.8 children per parent. In standard child care, the mean caregiver-child ratio was 0.21, indicating an average of 4.8 children per caregiver. PLC parents scored on average 1.63 ($SD = 0.50$) on a 6-point scale on the Utrecht Burnout Scale, indicating relatively low levels of emotional exhaustion. Also, professional caregivers showed relatively low levels of emotional exhaustion ($M = 2.35$, $SD = 0.96$).

Caregiver interaction skills

Table 2 shows that on average the PLC caregivers' scores were adequate to good for sensitive responsiveness ($M = 5.46$, $SD = 0.78$), respect for autonomy ($M = 5.15$, $SD = 0.74$), structuring and limit setting ($M = 5.30$, $SD = 0.94$), and verbal communication ($M = 4.71$, $SD = 0.91$). The average score for developmental stimulation ($M = 3.43$, $SD = 1.18$) was inadequate. PLC caregivers had the lowest score for fostering positive peer interactions ($M = 3.09$, $SD = 1.13$), which was in the inadequate category.

The majority (89%) of the PLC caregivers had a score of adequate to good for sensitive responsiveness. Nine percent of them were rated moderate for this quality, whereas 2% scored inadequate. For respect for autonomy, scores were 81%, 19%, and 0%, respectively; for structuring and limit setting, scores were 82%, 12%, and 6%. For verbal communication, 64% scored adequate to good, 27% scored moderate, and 9% scored inadequate. The results indicated that half of the caregivers of PLC groups scored adequate to good for developmental stimulation, whereas approximately a

Table 2. PLC parents' and professional caregivers' scores on Caregiver Interaction Profile scales with effect sizes for differences between PLC and regular child care.

Scale	PLC Caregivers (n = 54)			Professional Caregivers (n = 36)			ES_{PLC-CC}
	M	SD	Range	M	SD	Range	
Sensitive responsiveness	5.46	0.78	3.3–6.8	5.86	0.58	4.8–7.0	–0.56*
Respect for autonomy	5.15	0.74	3.8–6.8	5.63	0.58	4.5–7.0	–0.70*
Structuring and limit setting	5.30	0.94	3.0–7.0	5.65	0.93	2.5–7.0	–0.37
Verbal communication	4.71	0.91	3.0–6.8	4.88	0.92	3.0–7.0	–0.18
Developmental stimulation	3.43	1.18	1.0–6.0	3.60	1.34	1.0–6.8	–0.14
Fostering positive peer interactions	3.09	1.13	1.0–6.3	2.88	1.28	1.0–6.0	0.17

Note. Score < 3.5 = unsatisfactory, $3.5 \leq \text{score} < 4.5$ = adequate, score ≥ 4.5 = satisfactory to good. PLC = parent-led child care;

ES_{PLC-CC} = effect size for the mean difference between PLC and regular child care.

* $p < .05$.

quarter scored moderate and the other quarter inadequate. With regard to fostering positive peer interactions, 68% of the PLC caregivers were rated inadequate, 15% moderate, and 17% adequate to good.

All professional caregivers from the regular child care groups scored adequate to good for sensitive responsiveness and respect for autonomy. For structuring and limit setting, 91% scored adequate to good, 6% scored moderate, and 3% scored inadequate. The majority of the pedagogical staff (58%) scored adequate to good for verbal communication; 36% scored moderate and 6% inadequate. A quarter of the professional caregivers scored adequate to good for developmental stimulation, followed by 31% who scored moderate and 44% who scored inadequate. Finally, with respect to fostering positive peer interactions, the majority (61%) scored inadequate, followed by moderate (33%) and adequate to good (6%).

The difference between the PLC caregivers and the professional caregivers (see Table 2) was statistically significant for sensitive responsiveness and respect for autonomy in favor of the latter group: sensitive responsiveness, $F(1, 90) = 7.05$, $p = .009$; respect for autonomy, $F(1, 90) = 11.01$, $p = .001$. For the other skills, the differences between both groups were small and not statistically significant: structuring and limit setting, $F(1, 86) = 2.99$, $p = .087$; verbal communication, $F(1, 90) = 0.78$, $p = .379$; developmental stimulation, $F(1, 90) = 0.41$, $p = .522$; fostering positive peer interactions, $F(1, 90) = 0.72$, $p = .397$. In light of the fact that there were different percentages of men in the PLC and standard child care centers, we also analyzed whether there were significant differences between men and women, but no significant differences by gender were found.

Perceptions of affective relationships

The descriptive statistics for the STRS scales are shown in Table 3. PLC caregivers generally experienced a positive affective relationship with both their own child and other children with respect to closeness, dependency and conflict. Professional caregivers also had positive affective relationships with both boys and girls with respect to closeness, dependency, and conflict, according to standardized scores on the STRS instrument (see Koomen et al., 2007). Both the PLC caregivers and the professional caregivers reported experiencing average or above-average affective relationships with individual children.

Given the differing distributions of male and female participants in PLC and standard child care centers, we explored whether significant differences were evident between men and women. However, there were no statistically significant differences between men and women. There were also no significant differences between relationships with boys and girls for closeness, dependency, or conflict; no significant interaction effect of the gender of the adults and children was found either. However, there were significant multivariate differences between STRS scores for own children versus other children, Wilks's $\Lambda = .31$, $F(2, 29) = 21.24$, $p = .000$. The parents experienced a greater

Table 3. Means, standard deviations, and standardized scores for perceptions of PLC parents' and professional caregivers' affective relationships with their own children and other children, divided by sex.

Variable	PLC Caregivers				Professional Caregivers	
	Own Child		Other Children		Other Children	
	Boy (n = 13)	Girl (n = 20)	Boy (n = 68)	Girl (n = 107)	Boy (n = 45)	Girl (n = 87)
Closeness	4.82 (0.13)	4.80 (0.24)	4.20 (0.54)	4.30 (0.47)	4.41 (0.49)	4.60 (0.34)
Standardized score	Average	Average	Average	Average	Average	Average
Dependency	2.77 (1.04)	2.81 (0.75)	1.63 (0.60)	1.66 (0.66)	1.68 (0.56)	1.91 (0.70)
Standardized score	Above average	Above average	Average	Average	Average	Average
Conflict	1.95 (0.55)	2.11 (0.58)	1.62 (0.59)	1.61 (0.65)	1.44 (0.61)	1.40 (0.55)
Standardized score	Average to low	Average	Average to low	Average to low	Average to low	Average to low

Note. PLC = parent-led child care.

degree of closeness, more conflict, and greater dependency with their own children than with the other children: closeness, $F(1, 31) = 37.86, p = .000, ES_{\text{OWN-OTHER}} = 1.47$; conflict, $F(1, 31) = 5.84, p = .022, ES_{\text{OWN-OTHER}} = -0.67$; dependency, $F(1, 31) = 37.90, p = .000, ES_{\text{OWN-OTHER}} = -1.46$.

A comparison of STRS scores for the PLC parents and the professional caregivers—focusing solely on relationships with other parents' children and taking into account the gender of the children—revealed that the scores for closeness were significantly higher for children in standard child care centers than in PLC ($M = 4.26, SD = 0.49$, for PLC vs. $M = 4.48, SD = 0.50$, for regular child care, $p = .008, ES_{\text{PLC-CC}} = -0.45$). Also, dependency scores were higher for regular child care groups ($M = 1.65, SD = 0.64$, for PLC vs. $M = 1.90, SD = 0.66$, for regular child care, $p = .011, ES_{\text{PLC-CC}} = -0.44$). Scores for conflict were significantly lower for children in regular child care centers than in PLC ($M = 1.62, SD = 0.62$, for PLC vs. $M = 1.41, SD = 0.56$, for regular child care, $p = .032, ES_{\text{PLC-CC}} = -0.35$). The scores of the professional caregivers were slightly higher than those of the parents, but following conversion to standardized scores, there were no significant differences (see Table 3).

Predictors of pedagogical quality

In an exploratory analysis, we analyzed possible predictors of the pedagogical quality of PLC. No statistical relationship was ascertained among parents' interaction skills, parents' perceptions of affective relationships, and parents' background information (age, gender, having completed parental training or not, working hours in the group). However, three links with parents' psychological traits were evident. First, the mean score for interaction skills was positively correlated with parents' openness to ideas ($r = .29, p = .031$); further analysis at the univariate level demonstrated that this specifically was a predictor of verbal communication, developmental stimulation, and fostering positive peer interactions ($r_s = .29, .28$, and $.29$ with corresponding p values of $.031, .038$, and $.035$, respectively). Second, with regard to the affective relationship, parents' agreeableness was negatively related to less conflict ($r = -.42, p = .018$). Third, conscientiousness was also negatively correlated with conflict ($r = -.49, p = .005$).

Parents who experienced a greater degree of emotional exhaustion also indicated that they were more heavily impacted by children's dependency ($r = .39, p = .032$) and conflict ($r = .54, p = .002$). Emotional exhaustion thus emerged as a risk factor for the pedagogical relationship with regard to experienced conflict and dependency, whereas conscientiousness and agreeableness were positively related to perceptions of the affective relationship with regard to conflict.

The aforementioned significant predictors in the PLC context proved not to be indicative of pedagogical quality in standard child care centers. In the case of the latter, only staff neuroticism and emotional exhaustion proved to be negatively related to structuring and limit setting from the CIP measure ($r = -.41, p = .027$, and $r = -.46, p = .012$, respectively). There were no significant predictors of the affective relationship for professional caregivers.

Discussion

In different countries alternative types of child care exist alongside regular center-based ECEC, but their pedagogical quality is unknown. In this first empirical study of parent-led centers we evaluated the pedagogical quality of Dutch PLC, including interaction skills at the group level and perceived affective relationships between the caregiver and children at the level of the dyad. The comparison of PLC and standard child care centers primarily revealed convergent results for both interaction skills and affective relationships.

The interaction skills of caregivers in PLC were adequate to good for sensitive responsiveness, respect for autonomy, structuring and limit setting, and verbal communication. Developmental stimulation and fostering positive peer interactions were identified as weaker areas with scores in the inadequate range, but both PLC and regular child care centers achieved lower scores for the educational interaction skills. Earlier Dutch and international research has also indicated that

instructional quality is a weaker element of pedagogical quality in preschool child care (see, e.g., Helmerhorst, Riksen-Walraven, Gevers Deynoot-Schaub, Fukkink, & Tavecchio, 2015; La Paro et al., 2009). The weaker scores for instructional support for both the PLC and regular child care groups may reflect the emphasis on free play and socialization in Dutch child care. The fact is that relatively little time is devoted to educational activities in Dutch child care (see also the introductory section).

Furthermore, parents' perceptions of their affective relationships with their own child and other children in the group were—despite the relatively limited length of time that the parents were present in the group (i.e., limited stability)—characterized by a positive experience of closeness and a low degree of dependency and conflict. However, it should be noted that professional caregivers reported slightly more positive affective relationships with the children; the differences were small to medium in favor of professional caregivers.

To conclude, the comparison between PLC and regular child care showed statistically significant results in favor of professional caregivers in the domain of emotional support and affective relationships. However, differences were relatively small, with small to medium ESs, and the evaluation of PLC caregivers did not reveal inadequate pedagogical quality.

Finally, an exploratory analysis revealed significant predictors of pedagogical quality in the PLC context. The level of interaction skills was positively related to parental caregivers' openness to ideas, and affective relationships with children were related to agreeableness, conscientiousness, and emotional exhaustion. These psychological traits, which proved significant in the context of PLC, deserve further attention in future research on caregivers in different professional contexts.

A comparison with professional caregivers at standard child care centers demonstrated that the level of interaction skills of professional staff was slightly higher with regard to sensitive responsiveness and respect for autonomy. A possible explanation for the difference between PLC parents and professional caregivers in their level of interaction skills is that professional staff have a higher level of professional development and also more work experience; they also work on average more hours per week with children. A longitudinal Dutch study of preservice caregivers showed significant development of interaction skills during their vocational training. Sensitive responsiveness and respect for autonomy in particular showed adequate levels at the end of preservice training, whereas levels were lower for verbal communication, developmental stimulation, and fostering positive peer interactions. Also, work experience was related to interaction skills. An assessment of a nationally representative sample also showed that professional caregivers with 5 years of work experience had higher levels of interaction skills than their colleagues with less experience (Fukkink, Gevers Deynoot-Schaub, Helmerhorst, Bollen, & Riksen-Walraven, 2013).

The pedagogical differences between PLC parents and professional caregivers were relatively small. This raises the question of how results for two such different types of child care with highly divergent organizational forms can converge. The pedagogical quality of PLC and regular child care shows similarities, but the different configurations and structural quality of the two types of child care should be taken into consideration. A possible explanation is that PLC groups are relatively small, with a relatively favorable ratio of adults to children and relatively older children within the preschool period of 0–4 years old. The structural characteristics of the PLC groups were thus slightly more favorable than in the standard child care centers. This divergent pattern of structural characteristics is important, as group size, caregiver–child ratio, child age, and caregiver education level have proven to be predictors of pedagogical quality in child care research (see, e.g., Helmerhorst et al., 2015). Furthermore, PLC parents were well educated, and half of the parents had completed a parenting or child care course. All parents thus had some relevant work experience as they cared for the children in the PLC groups.

Limitations

This study is not without limitations. First, the sample size for the PLC centers with their parents and children was by definition small, and this allowed only a statistical test with adequate statistical power for medium to large differences between PLC and regular child care. Our sample comprised all Dutch PLC groups, but the sample size for regular child care was obviously small and may not have been representative of the national Dutch context. Second, regular child care centers were matched with PLC centers focusing on the urban district, and our procedure allowed for a comparison of local child care providers in the same urban area. However, we did not follow a strict matching procedure and had no background information (e.g., socio-economic status) on the parents of the children to confirm whether children in both forms of child care were indeed highly comparable. The fact is that matching PLC and regular groups is not a straightforward strategy, because PLC centers are a distinct type of child care group with different structural quality characteristics and caregivers with different qualifications. Finally, the findings of our comparative study relate to early childhood settings with a focus on play and socialization and with relatively small groups for PLC. We do not know whether the findings from our study may be generalized to other ECEC settings with different structural quality characteristics.

Conclusions

In countries with regular child care and cooperative care, two paradigms currently coexist: (a) a strong mainstream tradition of pedagogical professionalism with differing and clearly defined roles for professional child care providers and users and (b) a tradition of coproduction in child care provision in which parents also participate. Various types of preschool child care—such as day care, playgroups, and family care—coexist in many countries, with different historical traditions and organizational forms. From a philosophical perspective—drawing on Foucault's concept of heterotopia—Pattison (2015) argued in favor of taking an open and reflective perspective on educational diversity. Loosely translated to the PLC context, this notion means that an educational discourse needs to remain open to mainstream child care and alternative PLC. PLC should not be measured against mainstream child care as the only standard; PLC is a unique type of child care. In fact, the different types of child care (regular child care, cooperative care, PLC, family day care) illustrate an interesting multiplicity of child care arrangements with different (dis)continuities in family child care contexts.

This first study of Dutch PLC suggests that parents can play a more active role in both the design and implementation of child care (see Brandsen & Honingh, 2016). Although the large majority of Dutch parents may be satisfied with regular child care, some other parents may prefer a different type of care for their young children. Acknowledging both the adequate level of pedagogical quality of PLC and the slightly higher level of professional child care, it seems interesting to pilot new child care formats in which parents and professional staff collaborate more closely, in the context of both PLC and professional child care.

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