
Quality of Educational Settings for Four-year-old Children in England¹

MARÍA-JOSÉ LERA CHARLIE OWEN & PETER MOSS

University of Seville
Spain

University of London
United Kingdom

SUMMARY *The purpose of this study was to describe the quality of different forms of provision for four-year-old children in England. A sample of local authority day nurseries, private day nurseries, nursery classes and playgroups were studied. Quality was assessed with the Early Childhood Environment Rating Scale (ECERS), child to adult ratio and group size. Results showed that the different settings presented important differences in their scores; nursery classes had higher scores on ECERS, whereas local authority day nurseries had better values of child to adult ratio and group size.*

RÉSUMÉ *Le but de cette étude est de décrire la qualité de différentes structures d'accueil pour les enfants de 4 ans en Angleterre. Un ensemble de garderies publiques et privées, de classes enfantines et de groupes de jeux a été étudié. La qualité a été évaluée à l'aide de l'ECERS, du ratio adulte-enfant et de la taille du groupe. Les résultats montrent que les différentes structures présentent des différences importantes. Les classes enfantines ont le meilleur score à l'ECERS, tandis que les garderies municipales sont meilleures au point de vue du ratio adulte-enfant et de la taille du groupe.*

ZUSAMMENFASSUNG *Ziel der Untersuchung war es, die Qualität verschiedener Betreuungsformen für vierjährige Kinder in Grossbritannien zu beschreiben. Untersucht wurden kommunale Tagesstätten, private Tagesstätten, Vorschulgruppen (an Schulen) und Spielgruppen. Die Qualität wurde mit Hilfe der Early Childhood Environment Rating Scale (ECERS) ermittelt; der Erzieher-Kind-Schlüssel und die Gruppengröße wurden ebenfalls erhoben. Die Ergebnisse zeigten, dass Kindergartenklassen höhere ECERS-Werte aufwiesen, wogegen die kommunalen Tagesstätten beim Erzieher-Kind-Schlüssel und der Gruppenprozesse höher bewertet wurden.*

RESUMEN *El propósito de este estudio ha sido describir la calidad de diferentes opciones para el cuidado de los niños de cuatro años en Inglaterra. Los contextos estudiados han sido una muestra de guarderías municipales, guarderías privadas, clases de preescolar y jardines infantiles de Londres. La calidad fue medida a través de una escala de evaluación de contextos infantiles (ECERS), el ratio (número de adultos por niño) y el tamaño del grupo. Los resultados indican que los distintos contextos tienen diferencias en su calidad; son las clases de preescolar las que puntúan más alto en la escala ECERS, y las guarderías municipales las que tienen mejor ratio y tamaño de grupo.*

Keywords: Quality; Education under fives; Ratio; group size.

Introduction

Early childhood services for children aged over three in the UK have features that make them distinctive compared with most of the rest of the European Union. Except for Luxembourg and the Netherlands, the UK is the only country in the European Union to start compulsory schooling below the age of six. The UK, Ireland and the Netherlands are alone in admitting children into primary school before compulsory school age. The system of nursery education in the UK is less developed than in most other countries; such provision as does exist is unusual because most children attend only on a part-time, shift system (in 1994, 90% of children in nursery schools and classes attended part-time) and only for a year. Most countries of the European Union are moving increasingly towards offering all children three years of nursery schooling or kindergarten, usually for a full school-day, from the age of three (such a system is already available in Belgium, France and Italy, and is soon to be achieved in Denmark, Finland, Germany, Spain and Sweden). However, children in the UK are likely to experience several environments between the age of three and compulsory school age at five; for example, playgroup, nursery class and then reception class. Finally, and partly as a result of its under-developed nursery education system, the UK is one of very few countries with an extensive provision of playgroups (European Commission Network on Childcare, 1996).

One consequence of the evolution of early childhood services in the UK is that there is a considerable diversity of services providing for three and four-year-olds rather than a single system of nursery schooling or kindergartens. For example, a national survey conducted at the end of 1990 reported that 42% of four year-olds attended playgroups, 54% nursery schools or classes, 9% day nurseries and 6% childminders (Meltzer, 1994).

Responsibility for this diversity of services is divided between two administrative and governmental systems. Nursery classes and schools, together with reception classes in primary school, are the responsibility of the education system; while playgroups, day nurseries (public and private) and childminders are the responsibility of the welfare system, usually social services departments.

Nursery classes and schools offer places for three to four year old children. These classrooms are conducted by a qualified nursery teacher and a nursery nurse. They usually attend two different groups of 25 children, one in the morning (9:00 until 11:30) and the other in the afternoon (12:30 until 3:00 PM). Nursery classes and schools are dependent on the public sector and, consequently free.

Day nurseries admit children under fives. They open from 8:00 in the morning until 6:00 in the afternoon. Children are divided according to their age, each group attended by one or two members of staff (depending on the number of children). The head of the nursery must have some qualification in childhood education but not necessarily the rest of the staff. Public Day nurseries are run by Social Services and parental fees are calculated according to their incomes. Private day nurseries are entirely dependent on fees.

Playgroups offer places for children aged three to five; often allocated to Community buildings (churches, community halls). Groups of 20 children are the norm, attended by two or three members of staff. The head must normally have some qualifications, but the rest of the staff may be parents or volunteers.

In spite of the enormous variation between provisions for children under five, few attempts to assess differences in quality have been carried out; a recent study in Scotland (Powney, Glissov, Hall & Harlen, 1995) and a report published by the Audit Commission (Audit Commission, 1996) are notable exceptions. In both studies differences in quality between the different types of provision were evident.

In this paper findings from a comparative analysis of quality in a sample of London Local Authority day nurseries, private day nurseries, maintained nursery classes and playgroups are presented. Their quality was assessed using the Early

Childhood Environment Rating Scale, ECERS (Harms & Clifford, 1980), the adult-child ratio, and group size. The paper is organised as follows: a description of the most common settings for children of 3-4 years old (excluding reception classes), including day nurseries (local authority and independent), playgroups and nursery classes; a comparison of adult-child ratio, group size, and global quality observed in the different settings.

Method

Sample

Two London boroughs were selected, one inner London and one outer. The boroughs were chosen to be typical, in terms of their levels of day care and educational provision (Department for Education, 1994; Department of Health, 1993). Selection of settings was made following a proportional stratified procedure, according to the number of three and four-year-olds attending each type of provision. The data were obtained by asking head teachers and managers how many three and four-year-old children were on the register (two part-time places were counted as one full-time place). Results showed that 40% of four year-olds attended nursery schools or classes, 25% playgroups, 18% private day-nurseries, 13% Local Authorities day nurseries, and 2% private nursery classes. The sample was chosen in such a way that the numbers of children in each type of setting were proportionate to the numbers of children attending that form of provision in London.

Forty-four centres were randomly selected from the lists provided by the local authorities, and invitation letters to participate in the study were sent out (these were followed up by a telephone call to confirm and make appointments). The sample was composed of: six local authority day nurseries, eight private day nurseries, 21 nursery classes and nine playgroups.

Measures

a) ECERS scale

One approach to measuring quality has been to use rating scales that assess multiple areas of quality. One of the best known such scales is the Early Childhood Environment Rating Scale, ECERS (Harms & Clifford, 1980). This scale was designed to give an overall picture of the environment for children and adults in preschool settings, including the use of space, materials and activities to enhance children's development, daily schedule and supervision. ECERS consists of 37 items, each can be rated from 1 (inadequate), through 3 (minimum), 5 (good) to 7 (excellent). These items have been grouped in 7 areas referred as subscales: personal care routines, furnishing and display, language and reasoning experiences, fine and gross-motor activities, creative activities, social development, and adult needs.

The first subscale, Personal Care routines is concerned with the health, comfort, and well being of children (e.g. rest provision and meals). The second subscale, Furnishing and Display includes items related to the management and use of furniture, storage shelves, and display space. The third subscale Language and reasoning deals with the use of materials, activities and interactions to help children communicate in words and to use relationships. The fourth subscale Fine and Gross Motor Activities assesses the use of materials, activities and exercises for control and development of small muscles (fine motor activity) and larger muscles (gross motor activity). The fifth subscale, Creative Activities judges the availability and the use of art materials,

music, dramatic play, sand and water, and blocks. The sixth subscale, Social Development, includes items related to the development of children's positive self-images, cultural awareness, and helping to establish interaction skills. Finally, the seventh area Adult Needs regards the provision of space and equipment for adults, both parents and staff.

The validity of the instrument was determined by its authors in the following way. First, seven recognised experts in early education were asked to rate each item on the scale in terms of its importance to early childhood programmes. Overall, 78% of the items were rated as highly important. Secondly, 18 classrooms were independently assessed by trainers (who had been working with the staff in those classrooms) and by expert observers in the use of ECERS. The rank order of correlation obtained was 0.76.

In establishing reliability, the authors were interested in determining if the ECERS scale tested environment consistently. Three measures of reliability were used: inter-rater reliability by classrooms, inter-rater reliability by items, and internal consistency. The reliability by classrooms was tested in three different samples, each classroom was rated by two independent observers; the correlation found was 0.86. The correlation in the reliability by item (following the same procedure) was 0.92. The test of internal consistency (Cronbach's Alpha) was 0.83 in the Total Scale.

The ECERS scale is, at the present moment, a very well known instrument for assessing quality of educational settings for under fives, composed of a number of items that cover the most relevant aspects related to quality and, supported by strong studies of empirical reliability and validity.

b) The ratio and group size

The ratio of teachers to children is considered an indicator of quality in the classroom (Ruopp, Travers, Glantz & Coelen, 1979). Its association with other aspects, such as better adult-child interaction and less anxiety among the teachers, has been frequently demonstrated (Howes, Phillips & Whitebook, 1992; McGurk, Mooney, Moss & Poland, 1995; Scarr, Eisenberg & Deater-Deckard, 1994). Nevertheless, establishing the 'best' ratio for three to four-year-old children requires consideration of other aspects, such as group size.

In day nurseries, Howes (1992) found that less than eight children per caregiver was associated with high quality centres, whereas ratios higher than 1:9 were associated with inadequate quality centres. In nursery classes (Sylva, Roy & Painter, 1986), when the ratio was between 1:5 and 1:7, children had twice as many conversations with adults and engaged in more intellectually challenging activities compared with children in groups with a ratio between 1:8 and 1:10. Therefore, a ratio of 1:8 or less might be considered more satisfactory than a ratio of 1:9 or higher.

Results from studies of the effect of group size on the education of children three to four years indicate that small groups are associated with more creative play, more interaction between peers, and higher quality in interactions with adults (Clarke-Stewart, 1991; Howes et al., 1992; Kontos & Fiene, 1987; Ruopp et al., 1979; Smith & Connolly, 1980; Vandell & Powers, 1983). Results indicate that groups of under 20 children are more appropriate to develop high quality peer and child-adult interactions.

Adult-child ratios and group size were observed in all the settings visited. The definition of number of adults included any staff members that spent time with the children for more than three hours per day; students, parents or half-time helpers were excluded and, consequently, were not included in the ratios. Numbers of children were defined as the group of children who shared the same space and activities. The number of children was observed and checked with the teachers as being typical of a normal day.

Procedure

Data collection required visiting the different settings during one or two typical mornings. Two observers, previously trained in the use of ECERS (two hours training session with video materials, and a session in a nursery classroom) assessed the quality of classes. The inter-rater reliability was estimated in a previous session; percentage agreement was 0.93.

Each classroom was visited for a whole morning (9-10 AM until 1 - 2 PM). One observer was responsible for administering the ECERS in 14 of the classrooms, and the other in the remaining 30 classrooms.

Results

Description of the settings

Average scores and Standard Deviation in ECERS

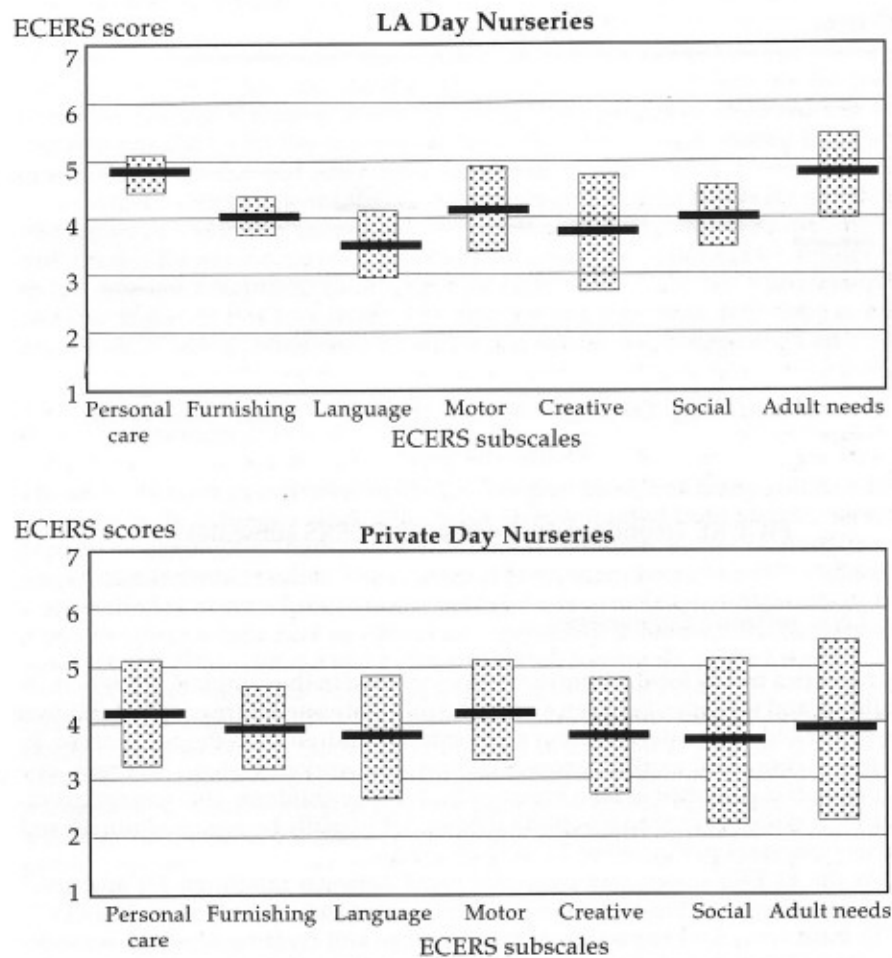


FIGURE 1: Average in ECERS subscales

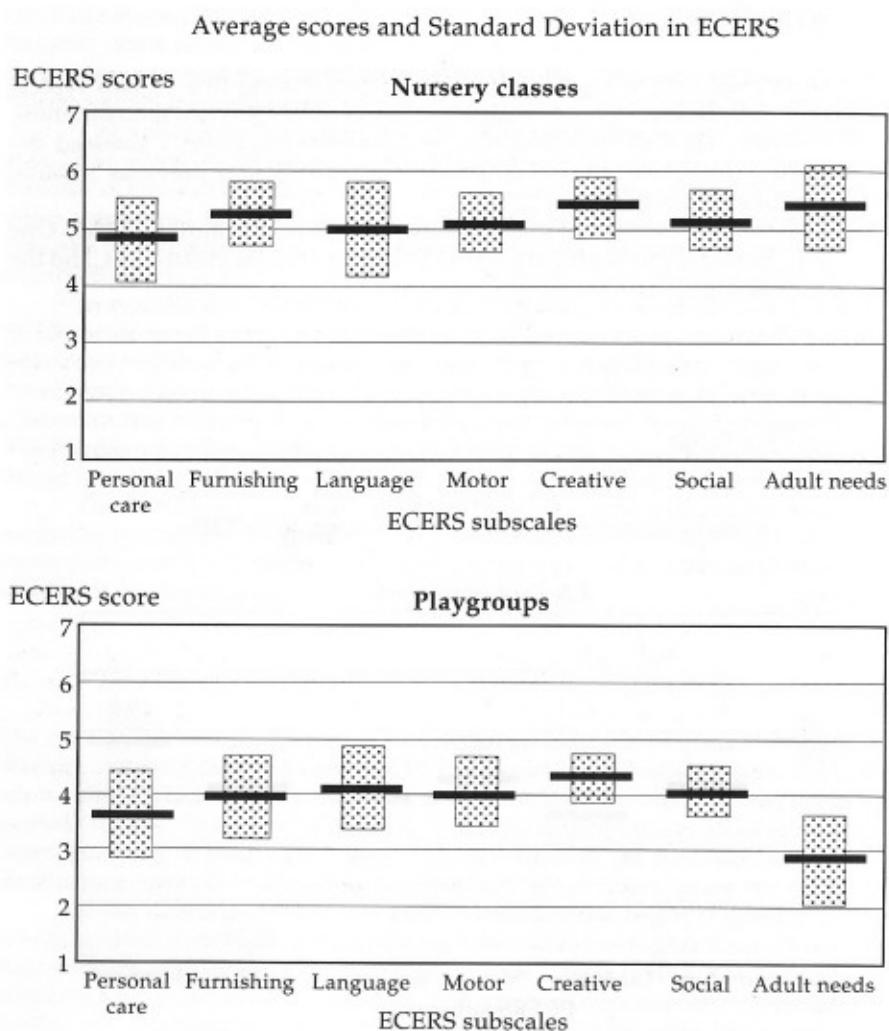


FIGURE 1(continued): Average in ECERS subscales

a) *Local authority day nurseries*

Six day nurseries run by local authorities were included in the sample. Each was in its own building and was open between 8 am and 5 pm. Only one centre enrolled children aged two year-old and under, whereas the rest took children from the age of three. In each nursery, the staff worked according to a key-worker system, whereby one member of staff is responsible for a group of four to five children. The average group size was 11, and the average adult-child ratio was 1:4 (usually two nursery nurses and one nursery assistant per group of 10 to 12 children).

On the ECERS scales, day nurseries rated between minimum (3) and good quality (5) (see Figure 1). The subscales personal care and adult needs scored best (4.79 and 4.75), both very close to good quality. Language and creative activities were the lowest rated (3.5 and 3.6), just above minimal quality. Furniture display, social development and fine-gross motor activities scored around four (3.96, 4.08 and 4.13).

b) *Private day nurseries*

Eight private day nurseries were included. They were all in large houses with several rooms available for the children. They opened for the whole day, from 8 am or 9 am until 5 pm or 6 pm. The average group size was 23 children. Two day nurseries had children aged under one year-old, two had children aged two years and up, and two had children aged three years and over. On average the adult-child ratio was 1:6, but in the two nurseries with the youngest children the ratio was 1:3. In the two with children aged two and over, it was 1:5, and in the four with children aged three and over, the average adult-child ratio was 1:8.

The ECERS scores of the private day nurseries (see Figure 1) showed more variation than those of the local authority day nurseries. The best private day nursery scored between good and excellent whereas the poorest scored below minimal quality on all the subscales. The average was around four, scoring under four on the subscales of social development (3.66), creative activities (3.69), language (3.71), adults needs (3.90) and furniture display (3.92); whereas fine/gross motor activities and personal care scored above four (4.18 and 4.25).

c) *Nursery classes*

21 Nursery classes were visited, they open during the normal school day, approximately 9 am to 3 pm, and during school terms. Most children attend part-time. Children were aged three to four. The average of group size observed was 20 to 25 children per class, and the adult-child ratio 1:12; classes were staffed by two adults, one qualified teacher and one nursery assistant.

The ECERS profile for the 21 nursery classes showed relatively little variation (see Figure 1). The averages on six sub-scales were high or above good quality; creative activities (5.39), adult needs (5.34), furniture display (5.31), fine/gross motor activities (5.15), social development (5.14) and language (5.08). Only one sub-scale (personal care) averaged below five (4.84). The best nursery class was very close to excellent quality on all scales, whereas the poorest one was above minimum on all.

d) *Playgroups*

The nine playgroups visited provided places part-time, and many children attended only two or three times a week. They were largely funded from parents' fees, held in church or community halls, with substantial variation in the support from local authorities and other bodies. The average of group size observed was 19 children. They were staffed by three adults (a mean staff-child ratio of 1:6), of whom one or two had a qualification in day care or education - generally from the Preschool Playgroups Association (PPA), and the rest of the staff often having no qualifications.

Average scores on ECERS were around four (see Figure 1), or between minimum and good quality. The best scores were in the subscales of creative activities (4.25), language (4.11), Social Development (4.05), and fine-gross motor activities (4.01). The lowest scores were in personal care (3.66) and adult needs (2.83). Playgroups were by far the worst in their provisions for adults, such as personal space and meeting rooms, reflecting their temporary use of buildings available for other purposes.

Comparison of settings

a) Ratio and group size

This section looks at the differences between the various settings in terms of adult-child ratio, and group size (see Table 1). The data show that in nursery classes the adult-child ratio was relatively low (1:9). In local authority day nurseries, private day nurseries and playgroups the ratios were more adequate (1:4, 1:6 and 1:7 respectively). Group size tended to be over 20 children in private day nurseries and nursery classes (23 and 28 children per group); whereas in playgroups and local authority day nurseries, group size was smaller (11 and 19 children per group).

TABLE 1: Ratio and group size in day nurseries, private day nurseries, nursery classes and playgroups

Structural Variables of quality	Day Nurseries A=6		Private Day Nurseries B=8		Nursery Classes C=21		Playgroups D=9		F	Differences LSD test (.05)
	M	SD	M	SD	M	SD	M	SD		
Ratio	4.2	0.9	5.9	3.1	9.3	2.4	6.6	1.7	8.7 ***	A<C,D C>A,B,D
Group size	11.3	3.3	23.1	4.2	28.5	8.4	19.2	4.4	12.1 ***	A>B,C,D, C<D

* $p < .05$, ** $p < .01$, *** $p < .001$

b) ECERS scores

The average of all 37 items was computed as a global ECERS score. The average for each setting was compared (see Figure 2). Nursery classes scored above good quality (5.18) with similar scores in the 21 settings assessed (SD 0.48); Local Authority day nurseries scored below good quality (4.13) and there are small variations between the six settings visited (SD 0.54); private day nurseries scored slightly above minimum quality (3.90) and differences between the eight settings visited were high (SD 0.97); finally, playgroups scored close to minimum quality (3.84), with small variations between the nine centres assessed (SD 0.44).

Discussion

These results suggest that the settings studied did not offer the same level of quality. Analysis of the ECERS scores showed that nursery classes scored above the rating of *good quality* but that local authority day nurseries, private day nurseries and playgroups on average failed to achieve ratings of *good quality*.

Differences in the ECERS subscales in local authority day nurseries, private nurseries and playgroups were observed. The six local authority day nurseries had similar scores: their highest scores were on personal care and adult needs, and they scored lowest in language and creative experiences for children. Private day nurseries showed more variation in their scores: whereas some of them achieved good quality,

TABLE 2: ECERS scores in day nurseries, private day nurseries, nursery classes and playgroups

ECERS subscales	Day Nurseries A=6		Private Day Nurseries B=8		Nursery Classes C=21		Play-groups D=9		F	Differences LSD test (.05)
	M	SD	M	SD	M	SD	M	SD		
1 Personal care	4.79	.48	4.25	.96	4.84	.78	3.66	.91	4.84**	A>D C>D
2 Furnishings/display	3.96	.49	3.92	.70	5.31	.54	3.95	.87	16.37***	C>A,B,D
3 Language/reasoning	3.50	.57	3.71	1.15	5.08	.78	4.11	.83	8.82***	C>A,B,D
4 Fine gross motor activities	4.13	.76	4.18	.86	5.15	.52	4.01	.70	9.05***	C>A,B,D
5 Creative activities	3.69	.40	3.69	1.07	5.39	.52	4.25	.49	16.7***	C>A,B,D
6 Social development	4.08	.53	3.66	1.47	5.14	.57	4.05	.62	8.63***	C>A,B,D
7 Adult needs	4.75	.80	3.90	1.60	5.34	.73	2.83	.81	15.3***	A>D B>D C>B,D
Total Score	4.13	.54	3.90	.97	5.18	.48	3.84	.44	15.9***	C>A,B,D

*p<.05, **p<.01, ***p<.001

Average scores and Standard Deviation
ECERS Total Scores

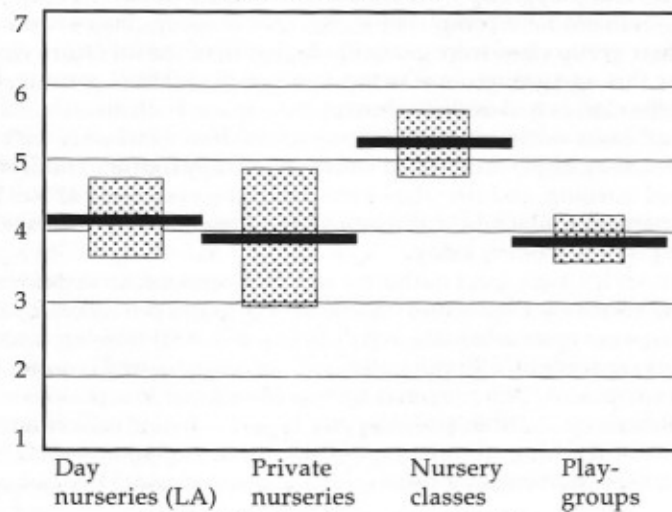


FIGURE 2: Total scores in ECERS

others were below minimal quality. Playgroups scored very low in the provision for adults, and personal care for children; however, they scored better in language and creative experiences for children.

Comparing these results with that recently reported in Scotland (Powney et al., 1995), both studies obtained similar results for nursery education (highest scores -over 5), and private day nurseries and playgroups (both scored between good and minimal quality), but differed with respect to local authority day nurseries. Whereas in the Scottish research, local authority day nurseries had similar scores to nursery classes, in the study presented here, day nurseries scored lower. It is possible that the sampling procedure carried out in the Scottish study affected their results: the three local authority day nurseries assessed were not randomly selected, but self-selected since they volunteered to participate in the project. Therefore, they may have scored above the average of day nurseries. In the study presented here, the six local authority day nurseries visited were randomly selected from the list provided by the Social Services. On the other hand, results here presented are very alike to those found by the Audit Commission (Audit Commission, 1996). They observed 15 nursery classes, 13 local authority day nurseries and nine playgroups. Once again, nursery classes scored the highest, whereas playgroups and local authority day nurseries had medium scores.

The differences observed in ECERS scores may be a reflection of different approaches taken by the different settings. For example, it was expected that there would be high scores in Personal care and Adult needs in day nurseries, and high scores in Language and Creative activities in playgroups. The different educational orientations of day nurseries and playgroups would explain these results: day nurseries traditionally have been oriented to the care of children, whereas the orientation of the playgroups is more towards encouraging children's development through play. Nursery classes, with trained staff and a strong educational orientation, had the highest scores on ECERS.

The different measures used to assess quality - ratio, group size and ECERS scores - were not correlated in this research. Nursery classes scored high on ECERS but also had high values for ratio and group size. Day nurseries had more adequate ratio and group size than the others settings, but their ECERS scores were low. To understand this result other variables, such as the staff training and wages, must be considered. As has been mentioned in other studies, ECERS scores correlate with staff training and wages (Burchinal, 1995). In the study here presented, staff training was different. In nursery classes teachers were higher qualified than in day-nurseries and playgroups (Moss et al., 1995). Wages were also different: nursery teachers have the highest salaries and playgroup workers the lowest ones (Moss & Penn, 1996).

The assessment here completed shows that nursery classes score the best on ECERS, yet their group sizes were generally higher than the literature would suggest is optimal for this age group, as was the number of children per member of staff. However, all the classes had exclusive use of their space, both inside and outside, and space was in all cases sufficient for the group of children. Staff were well qualified in child education, they displayed a broad knowledge of appropriate children's activities for playing and learning, and attendance was free. However, only 42% of the children could get a part-time place in a nursery class (long waiting lists are the norm), attending for just a few hours a day.

Day nurseries, both local authority and independent, scored poor on ECERS; although with relatively high scores on personal care and provision for adults. Ratio and group size were more adequate, nevertheless low staff training could be related to the low scores in some ECERS subscales, such as language and reasoning, creativity and social development. Day nurseries here assessed had low provision in terms of space and materials for children's development (e.g. books and educational games and toys), and also on teaching stimulation, including conversation with children. Children attended these nurseries for relatively long periods (more than six hours every-

day), and the implications of spending long days in centres of low quality must be seriously considered by the Local Authorities and the parents.

Playgroups did better on the more educational scales than did day nurseries, but they did very poorly in terms of space and materials. No playgroup had its own premises, many had no outside play space and materials were very limited. However, children spent the shortest time at playgroup, compared to the other settings, so that facilities for outdoor play, in that short time, might be less important than for a day nursery, where children spend much longer periods. In the few hours children spend in the playgroup, they may benefit from social interaction peers and adults, but the educational quality of the experience is limited compared to that in nursery classes.

Conclusions

Looking at the overall results, the different provisions for under fives in England are not comparable in terms of quality of space and materials, activities displayed, staff training, number of hours in the setting, and parental fees. Although this study has only been carried out in the London area, these preliminary results should be considered by both parents and authorities alike in assessing the value of various forms of child care in terms of outcome and educational development.

- [1] This investigation was carried out at the Thomas Coram Research Unit as part of a fellowship from the Commission of the European Communities under the Human Capital and Mobility Programme.

REFERENCES

- AUDIT COMMISSION (1996) *Counting to Five. Education of Children Under Five* (London, HMSO).
- BURCHINAL, M. (1995) *Child care quality: intercorrelations among process and structural measures*, paper presented at the Biennial Meeting of the Society for Research in Child Development, Indianapolis.
- CLARKE-STEWART, A. (1987) Predicting child development from child care forms and features: The Chicago Study, in: PHILLIPS, D. (Ed.) *Quality in Child Care: what does research tell us?* (pp. 21-41) (Washington DC, NAEYC).
- CLARKE-STEWART, A. (1991) Quality and consequences, in: MOSS, P. & MELHUISH, E. (Eds.) *Day care for young children* (pp. 47-60) (London, HMSO).
- DEPARTMENT FOR EDUCATION (1994) *Pupils under Five Years of Age in Schools in England - January 1993* (London, Department for Education).
- DEPARTMENT OF HEALTH (1991) *Children Act Guidance and Regulations, Volume 2: Family Support, Day Care and Educational Provisions for Young Children* (London, HMSO).
- DEPARTMENT OF HEALTH (1993) *Children's Day Care Facilities (A/F 93/6)* (DoH, Personal Social Services).
- EUROPEAN COMMISSION NETWORK ON CHILDCARE (1996) *A Review of Services for Young Children in the European Union 1990-1995* (Brussels, European Commission Network on Childcare).
- FARQUHAR, S. (1989) Assessing New Zealand Child Day Care Quality using the Early Childhood Environment Rating Scale, *Early Child Development and Care*, 47, 93-105.
- GOELMAN, H., & PENCE, A. (1987) Effects of Child Care, family, and individual characteristics on children's language development: the Victoria day care research project, in: PHILLIPS, D. (Ed.) *Quality in Child Care: What Does Research Tell Us?* (pp. 89-104) (Washington DC, NAEYC).
- HARMS, T., & CLIFFORD, R. (1980) *Early Childhood Environment Rating Scale* (New York, Teachers College Press).

- HARMS, T., & CLIFFORD, R. (1993) Studying Educational Settings, in: SPODEK, B. (Ed.) *Handbook of Research on the Education of Young Children* (pp. 477-492) (New York, McMillan Publishing Company).
- HOWES, C., PHILLIPS, D. & WHITEBOOK, M. (1992). Threshold of Quality: implications for the social development of children in center-based child care, *Child Development*, 63, 449-460.
- KONTOS, S., & FIENE, R. (1987) Child care quality, compliance with regulations, and children's development: the Pennsylvania Study, in: PHILLIPS, D. (Ed.) *Quality in Child Care: What does Research Tell us?*. (pp. 57-79) (Washington DC, NAYCE).
- LERA, M.-J. (1994) *Teachers' ideas and their educational practice: a preschool study*, unpublished PhD Thesis, Seville.
- McGURK, H., MOONEY, A., MOSS, P., & POLAND, G. (1995) *Staff-ratio and Education Services for Young Children* (London, HMSO).
- MELTZER, H. (1994) *Day Care Services For Children* (London, HMSO).
- MOSS, P., OWEN, C., STATHAM, J., BULL, J., CAMERON, C., & CANDAPPA, M. (1995) *Survey of Day Care Providers in England and Wales* (London, Thomas Coram Research Unit).
- MOSS, P., & PENN, H. (1996) *Transforming Nursery Education* (London, Paul Chapman Publishing Ltd).
- MUNTON, T., ROWLAND, L., MOONEY, A., & LERA, M.-J. (1995) Using the Early Childhood Environment Rating Scale (ECERS) to evaluate quality of nursery provision in England: Some data concerning reliability, *Educational Research* (In press).
- PHILLIPS, D., & HOWES, C. (1987) Indicators of Quality Child Care: Review of Research, in: PHILLIPS, D. (Ed.) *Quality in Child Care: What does Research Tell Us?* (pp. 1-19) (Washington DC, NAYCE).
- POWNEWY, J., GLISSOV, P., HALL, S., & HARLEN, W. (1995) *We are getting them ready for life* (Edinburgh, The Scottish Council for Research in Education).
- ROSSBACH, H.-G. (1990) Assessing the quality of kindergarten environments with the Early Childhood Rating Scale, in: PIETERS, J. M., BREUER, K. & SIMONS, P. R. J. (Eds.) *Learning Environments: Contributions from Dutch and German Research* (Berlin, Springer).
- RUOPP, R., TRAVERS, J., GLANTZ, F., & COELEN, C. (1979) *Children at the Center: Final Results of the National Day Care Study* (Cambridge, MA, Abt Associates).
- SCARR, S., EISENBERG, M., & DEATER-DECKARD, K. (1994) Measurement of Quality in Child Care Centers, *Early Childhood Research Quarterly*, 9, 131-151.
- SMITH, P., & CONNOLLY, K. (1980) *The Ecology of Preschool Behaviour* (Cambridge, Cambridge University Press).
- STATHAM, J., & BROPHY, J. (1992). Using the Early Childhood Environment Rating Scale in Playgroups, *Educational Research*, 34(2), 141-149.
- SYLVA, K., ROY, C., & PAINTER, M. (1986) *Childwatching at Playgroup and Nursery School* (London, Grant McIntyre).
- VANDELL, D., & POWERS, C. (1983) Day care quality and children's free play activities, *American Journal Orthopsychiatry*, 53, 493-500.

Correspondence about this paper should be addressed to:

Maria-Jose Lera
Dpto Psicologia Evolutiva y Educacion
University of Sevilla
Avda. San Francisco Javier
41005 Sevilla,
Spain