

Inkluderede studier I forskningsoversigten: Normeringer i dagtilbud

	Reference	Abstract
1	Barros, S. & Aguiar, C. (2010). Assessing the Quality of Portuguese Child Care Programs for Toddlers, <i>Early Childhood Research Quarterly</i> , 25(4), 527-535.	The purpose of this study was to describe the quality of toddler child care classrooms in the district of Porto, in the north of Portugal. One hundred and sixty classrooms for children between 1 and 3 years of age participated in this study. Results suggested the existence of poor average quality and absence of good-quality classrooms. Child-adult ratio was a statistically significant predictor of overall child care quality (with lower ratios associated with higher quality). The results of this study provide information on the applicability of ITERS-R to a new cultural and linguistic context, suggesting the need to enhance the quality of Portuguese programs serving toddlers. (Contains 4 tables.)
2	Bauchmüller, R., Gørtz, M. & Rasmussen, A.W. (2014): Long-run benefits from universal high-quality preschooling, <i>Early Childhood Research Quarterly</i> , 29(4), 457-470.	This paper investigates the role of preschool quality for children's school performance at the end of primary school. We construct five structural quality indicators based on unique Danish administrative register data. 30,444 children finishing primary school's 9th grade in 2008 and who attended a formal preschool institution in 1998 are used in the analyses. OLS analyses show that three out of five quality indicators, a higher staff-per-child ratio, a higher share of male staff, and a higher share of staff with formal preschool teacher training are associated with significant improvements in children's test results in Danish. Boys benefit more from preschool quality than girls. Ethnic minority children benefit from higher staff stability.
3	Blau, D.M. (1997). The Production of Quality in Child Care Centers. <i>The Journal of Human Resources</i> , 32(2), 354–387.	Using models subjected to extensive specification tests, analysis of data from the National Child Care Staffing Study found that group size, child-staff ratio, and staff education and training have only small impacts on the quality of care provided. (SK)
4	Blau, D.M. (1999): The Effect of Child Care Characteristics on Child Development, <i>Journal of Human Resources</i> , 34(4), 786-822.	The effect of group size, staff-child ratio, training, and other characteristics of child care on child development was estimated using National Longitudinal Survey of Youth data containing measures of the home environment. Child care characteristics had little association with child development. (SK)

5	Blau, D.M. (2000): The production of quality in child-care centers: Another look, <i>Applied Developmental Science</i> , 4(3), 136-148.	Data from the Cost, Quality, and Outcomes Study (S. W. Helburn, 1995) are used to examine the effects of group size, staff-child ratio, and teacher qualifications on the quality of child care provided in day care centers (for infants and toddlers). The Cost, Quality, and Outcomes data are from a representative 4-state sample of day care centers with a design that makes it possible to control for unobserved differences across centers that could cause biased estimates of the effects of interest. The empirical results indicate that group size has small and statistically insignificant effects on child-care quality. A higher staff-child ratio appears to have beneficial effects on child-care quality when unobserved differences across centers are not accounted for. These effects become much smaller when unobserved differences are accounted for. The effects of teacher education and training are also generally not robust, but some measures of education and training have quantitatively and statistically significant effects even accounting for unobserved differences across centers. The implications of the results for future research on the determinants of child-care quality and for public policy are discussed. (PsycINFO Database Record (c) 2016 APA, all rights reserved)
6	Bowne, J., Magnuson, K., Schindler, H., Duncan, G., & Yoshikawa, H. (2017). A Meta-Analysis of Class Sizes and Ratios in Early Childhood Education Programs: Are Thresholds of Quality Associated With Greater Impacts on Cognitive, Achievement, and Socioemotional Outcomes? <i>Educational Evaluation and Policy Analysis</i> , 39(3), 407-428.	This study uses data from a comprehensive database of U.S. early childhood education program evaluations published between 1960 and 2007 to evaluate the relationship between class size, child-teacher ratio, and program effect sizes for cognitive, achievement, and socioemotional outcomes. Both class size and child-teacher ratio showed nonlinear relationships with cognitive and achievement effect sizes. For child-teacher ratios 7.5:1 and lower, the reduction of this ratio by one child per teacher predicted an effect size of 0.22 standard deviations greater. For class sizes 15 and smaller, one child fewer predicted an effect size of 0.10 standard deviations larger. No discernible relationship was found for larger class sizes and child-teacher ratios. Results were less clear for socioemotional outcomes due to a small sample.
7	Brodin, J., & Renblad, K. (2014). Early Childhood Educators' Perspectives of the Swedish National Curriculum	There is today an increasing global interest in early childhood education, especially with regard to curriculum and quality work. The

<p>for Preschool and Quality Work. <i>Early Childhood Education Journal</i>, 43(5), 347–355.</p>	<p>aim of this article is to study preschool teachers’ and child care workers’ views on the revised national curriculum for preschool in Sweden (Lpfö 98, rev. 2010), and if the educators perceive that they can conduct quality work based on the curriculum. This article is based on a web-based questionnaire distributed to all municipal preschool teachers and child care workers (in this study called educators) employed in a small municipality (n = 111). The questionnaire consisted of eight questions with 54 sub-items with five reply alternatives, including ‘don’t know’. The reply frequency was 58.6 % (n = 65). Data were compiled and processed in a computer based program. The results showed that the preschool educators were positive to the curriculum and regarded it as a tool for improving the quality in preschool. The most important factors for increasing the quality were, according to the results, the educators’ attitudes, the number of children in the group and the teacher-to-child ratio.</p>
<p>8 Bull, R., Yao, S., & Ng, E. (2017). Assessing Quality of Kindergarten Classrooms in Singapore: Psychometric Properties of the Early Childhood Environment Rating Scale—Revised. <i>International Journal of Early Childhood</i>, 49(1), 1–20.</p>	<p>The early childhood sector in Singapore has witnessed vast changes in the past two decades. One of the key policy aims is to improve classroom quality. To ensure a rigorous evaluation of the quality of early childhood environments in Singapore, it is important to determine whether commonly used assessments of quality are valid indicators across different national and community contexts. This study investigated the validity of the Early Childhood Environment Rating Scale—Revised (ECERS-R) in Singapore focused on three major aspects: response process, structural, and criterion validity. Data were collected from 108 classrooms of the main providers of kindergarten programs in Singapore. Initial analyses showed that the quality indicators in most of the ECERS-R items were disordered, which indicated problems with the hypothesized response process underlying the standard ECERS-R scoring system in which high-level indicators are only rated if low-level indicators are met (stop-scoring). To deal with the problem of the “stop-scoring” method, we used the data from a full-scoring method (in which every indicator on every item was rated) in subsequent factor analyses to investigate the internal structure of the ECERS-R. Twenty-two of the 34 items were retained and found to load</p>

		<p>on two factors, one relating to activities/materials and the other related to language/interactions. Both of the identified subscales and the combined scale showed good internal consistency. The factor score on the combined scale mirrored the ECERS-R full score and could discriminate between classrooms in the top and bottom quartiles of quality scores. Findings on the relationship between the identified factors to the teacher–child ratio and to an alternative measure of classroom quality provided further evidence for criterion validity of the ECERS-R. Implications for the future development and use of the ECERS-R are discussed. (PsycINFO Database Record (c) 2017 APA, all rights reserved) (Source: journal abstract)</p>
9	<p>Burchinal, M., Roberts, J., Riggins, J., Zeisel, S., Neebe, E., & Bryant, D. (2000). Relating Quality of Center-Based Child Care to Early Cognitive and Language Development Longitudinally. <i>Child Development</i>, 71(2), 339–357.</p>	<p>How quality of center-based child care relates to early cognitive and language development was examined longitudinally from 6 to 36 months of age in a sample of 89 African American children. Both structural and process measures of quality of child care were collected through observation of the infant classroom. Results indicated that higher quality child care was related to higher measures of cognitive development (Bayley Scales of Infant Development), language development (Sequenced Inventory of Communication Development), and communication skills (Communication and Symbolic Behavior Scales) across time, even after adjusting for selected child and family characteristics. In addition, classrooms that met professional recommendations regarding child:adult ratios tended to have children with better language skills. Classrooms that met recommendations regarding teacher education tended to have girls with better cognitive and receptive language skills. These findings, in conjunction with the growing child-care literature, provide further evidence that researchers and policymakers should strive to improve the quality of child care to enhance early development of such vulnerable children. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)</p>
10	<p>Børne og Socialministeriet (2018). Personale i daginstitutioner – normering og uddannelse : Velfærdspolitisk Analyse. København.</p>	

11	<p>Carlsson, M. A., Samuelsson, I. P., & Kärrby, O. G. (2001). <i>Strukturella faktorer och pedagogisk kvalitet i barnomsog och skola : en kunskapsöversikt</i> . Skolverket.</p>	<p>I boken redovisas forskningsläget vad gäller sambandet mellan strukturella faktorer och pedagogisk kvalitet i förskolan och grundskolans första år. De strukturella faktorer som belyses är barngruppens storlek och sammansättning samt personaltäthet och personalens utbildningsnivå. Inläst ur Skolverket, 2001</p>
12	<p>Christoffersen, M. (2015). Stresshormoner hos børn i børnehaver med ændrede normeringer: Notat.</p>	<p>Belastninger af børn og voksne viser sig bl.a. ved udskillelse af noradrenalin og især adrenalin. En svensk undersøgelse udnyttede dette faktum og kunne vise, at der skete en reduktion af børnenes stress, når man øgede antallet af voksne i børnegruppen, uden at børnetallet blev øget. Ved forskellige metoder kan man direkte måle det fysiologiske stressniveau hos et individ blandt andet gennem udsondringen af hormonerne adrenalin og noradrenalin i spyt og i urinen. I 1974 var det første gang, stressniveau på denne måde blev målt hos børn. Dette blev foretaget blandt 3-årige børnehalebørn som led i et forsøg, hvor normeringerne blev ændret eksperimentelt ved et randomiseret forsøg i en svensk børnehave (Cederblad & Höök, 1980). Undersøgelserne af børnenes adrenalinudskillelse baserede sig på omkring 6.000 urinprøver taget over 30-40 forskellige dage. Den første prøve blev taget efter middagssøvnen og ved den efterfølgende legeperiode. I forsøget blev også kontrolleret for en række andre forhold, som måtte kunne antages at have indflydelse på børnenes trivsel og udvikling. I analyserne inddrages disse faktorer blandt andet for at undersøge, om de fundne sammenhænge mellem personaletætheden (normeringen) og børnenes stressbelastninger var robuste, når man inddrog andre faktorer som fx gruppestørrelse, belastninger i hjemmet og personalets indbyrdes relationer.</p>
13	<p>Christoffersen, M., & Højen-Sørensen, A.-K. (2013). <i>Børnehavens normeringer.: En forskningsoversigt over opgørelsesmetoder</i>. SFI - Det Nationale Forskningscenter for Velfærd.</p>	<p>Debatten om normeringer i børnehaven har bølget frem og tilbage i de seneste år. For hvor mange – eller hvor få – voksne skal der være i børnehave for at hjælpe vores børn godt på vej? Denne rapport handler om, hvordan man opgør normeringer i børnehaver – altså metoder til at bestemme forholdet mellem antal børn og voksne i børnehaver. Rapporten er en forskningsoversigt der beskriver, hvordan man har opgjøret normeringen i en række forskningsprojekter om 3-6-åriges udvikling og trivsel. Undersøgelsen viser, at der er stor forskel på,</p>

		<p>hvordan man opgør normeringen: Er normeringen eksempelvis bestemt ud fra antal indskrevne børn, via et spørgeskema til forældre og ledere, eller på baggrund af observationer på en stue? Tæller studerende med i normeringen? Er der taget højde for fravær blandt personale og børn? Forskerne konkluderer derfor, at man skal være meget opmærksom, når man vælger metode til at beskrive normeringen i en børnehave. De påpeger også, at det kan være vanskeligt at sammenligne normeringer på tværs af undersøgelser. Undersøgelsen er bestilt og finansieret af Social-, Børne- og Integrationsministeriet.</p>
14	<p>Christoffersen, M., Højen-Sørensen, A.-K., & Laugesen, L. (2014). Daginstitutionens betydning for børns udvikling: En forskningsoversigt. SFI - Det Nationale Forskningscenter for Velfærd.</p>	<p>Igennem de seneste årtier er der sket en omfattende udvidelse af antallet af daginstitutioner. Denne forskningsoversigt opsamler nationale og internationale forskningsresultater om effekterne af daginstitutionens betydning for børns udvikling. Forskningsoversigten viser, at ændringer af de strukturelle parametre såsom normering, gruppestørrelse, personalets uddannelse osv. har indflydelse på dagpasningens kvalitet og børnenes udvikling. Flere forskere konkluderer, at det er interaktionen mellem børn og voksne, der er det allervigtigste for kvaliteten i daginstitutionerne. Derfor har normeringer og gruppestørrelser betydning. Pædagogisk uddannet personale spiller også en væsentlig rolle for børnenes udvikling. Børnehaver, der brugte legeaktiviteter til at udvikle sociale, følelsesmæssige, kognitive og kreative færdigheder, fik de bedste resultater. På længere sigt viser forskningen også gode resultater. De børn, der har gået i vuggestuer og børnehaver af høj kvalitet, klarer sig bedre i skolen og får bedre uddannelse og job. Færre kommer på overførselsindkomster eller ender i kriminalitet. Forskningen viser også, at det især er sårbare eller socialt udsatte børn, der har størst gavn af de universelle tilbud, som daginstitutioner tilbyder. Denne rapport er udarbejdet med økonomisk støtte fra BUPL, Børne- og Ungdomspædagogernes Landsforbund.</p>
15	<p>Clarke-Stewart, K. A., Lee, Y., Allhusen, V.D., Kim, M.S. & McDowell, D.J. (2006). Observed Differences between Early Childhood Programs in the U.S. and Korea: Reflections of "Developmentally Appropriate Practices" in</p>	<p>Ninety children from South Korea and 119 children from the United States were observed in early childhood programs, and differences in classroom environments and teachers' and children's behavior in the two countries were identified. In both countries, there was evidence that preschool education is guided by ideas about "developmentally</p>

	Two Cultural Contexts, <i>Journal of Applied Developmental Psychology</i> , 27(5), 427-443.	appropriate practice". However, in Korea, education was also influenced by Asian values. In line with developmentally appropriate practice, in the U.S. child-teacher ratios were lower, teachers were more personally involved with individual children, more opportunities for peer interaction were provided, there were more varied materials for gross motor activities and sociodramatic play, and children were judged to be more socially competent and to have fewer emotional and behavior problems. In Korea, teachers expressed more traditional attitudes toward educational practices, children spent more time in skills and drills, there were more varied materials for math and music, children exhibited greater self-reliance and sustained attention, and the classroom climate was more harmonious.
16	Dalsgaard, C., & Jordan, A. L. T. (2016). <i>Udvikling i personaleforbrug i daginstitutionerne: Normeringer og pædagogandele i kommunerne 2010-2014</i> . KORA.	
17	Dalsgaard, C., Jordan, A. L. T., & Petersen, J. S. (2016). <i>Dagtilbudsområdet – kortlægning af kommunernes personaleforbrug og strukturelle vilkår</i> . KORA.	Der er forskel i kommunernes personalenormeringer og pædagogandele på daginstitutionsområdet. Hver voksen skal passe knap halvandet børnehavebarn mere i nogle kommuner end i andre. Økonomisk velstående kommuner har typisk lidt højere personalenormeringer. Mens det ser ud til, at normeringen i institutionerne er nogenlunde den samme i kommuner med mange sårbare børn som i kommuner med få sårbare børn.
18	de Schipper, E., Riksen-Walraven, J. M. & Geurts, S.A.E. (2006). Effects of Child-Caregiver Ratio on the Interactions between Caregivers and Children in Child-Care Centers: An Experimental Study, <i>Child Development</i> , 77(4), 861-874.	To investigate the effects of child-caregiver ratio on the quality of caregiver-child interaction in child-care centers, 217 caregivers (ages 18-56 years) from 64 child care centers were observed during two structured play episodes: one with a group of three children and one with a group of 5 children. As predicted, a child-caregiver ratio of 3:1 produced a significantly higher quality of caregiver-child interaction than a ratio of 5:1 and particularly for younger children. Significant and meaningful effects were found for both the interactive behaviors of the caregivers and the children's well-being and cooperation. Significant correlations with caregiver-child interaction during lunchtime and throughout the remainder of the morning confirmed the ecological

		validity of the caregiver-child interactions observed during structured play episodes.
19	Deater-Deckard, K., Pinkerton, R., & Scarr, S. (1996). Child Care Quality and Children’s Behavioral Adjustment: A Four-Year Longitudinal Study. <i>Journal of Child Psychology and Psychiatry</i> , 37(8), 937–948.	Studies of extensive, full-time child care in infancy and early childhood have shown negative, positive, and no effects on children's social-emotional development. The current study explored the prediction of children's behavioral adjustment 4 years after assessments of daycare center quality (e.g. caregiver–child interactions, caregiver-to-child ratios) and of the home and family environment (e.g. parental stress, discipline). Participants included 141 school-age children (73 girls) and their employed mothers (91% Euro-American) who had made use of full-time child care when the children were toddlers or preschoolers. Home environment factors and earlier behaviors were predictive of individual differences in adjustment 4 years later, particularly for maternal ratings of child behaviors. By contrast, indicators of center quality were generally unrelated to mother and teacher ratings of behavioral adjustment. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)
20	Degotardi, S., Han, F. & Torr, J. (2018): Infants’ experience with ‘near and clear’ educator talk: Individual variation and its relationship to indicators of quality, <i>International Journal of Early Years Education</i> , 26(3), 278–294.	This study investigated the quantity of audible and intelligible (‘near and clear’) educator talk directly experienced by under-two-year-old infants attending early childhood education and care (ECEC) programmes and examined whether the quantity of educator talk was related to characteristics of quality in their ECEC room. Participants were 57 infants attending separate infant rooms in and around the Sydney metropolitan area, Australia. Each infant was observed for 3 h, wearing a small, custom-designed digital language processor (DLP) which digitally recorded and generated measures of ‘near and clear’ adult talk, unclear talk and infant vocalisations. Structural quality indicators include educator qualification, group size and educator-infant ratios, and Interaction Quality was assessed using the ITERS-R Interaction and Listening and Talking subscales. Infants’ experience with ‘near and clear’ talk was predicted by Interaction Quality, the presence of a degree-qualified teacher and group size. ‘Near and clear’ talk was also significantly and positively related to the quantity of infant vocalisation and, negatively, to their level of exposure to unclear

		talk. Findings are discussed in terms of conceptualisations of quality in infant ECEC rooms, as well as the potentials and limitations of the 'near and clear' talk measure for use in future studies of language development in this context. (PsycINFO Database Record (c) 2018 APA, all rights reserved) (Source: journal abstract)
21	Doherty, G., & Stuart, B. (1997). The Association between Child Care Quality, Ratio and Staff Training: A Canada-Wide Study. <i>Canadian Journal of Research in Early Childhood Education</i> , 6(2), 127-38.	Examined the association between kindergarten-level child care quality and legislated requirements regarding staff-to-child ratio and staff training, across eight Canadian provinces. Found that classrooms in provinces with the highest requirements for staff education levels had the highest quality ratings. Association between staff to child ratio and regulatory requirements was not as consistent. (JPB)
22	Dowsett, C., Huston, A., Imes, A., & Gennetian, L. (2008). Structural and process features in three types of child care for children from high and low income families. <i>Early Childhood Research Quarterly</i> , 23(1), 69-93.	We use observations from the NICHD Study of Early Child Care and Youth Development (SECCYD) to compare structural and process characteristics of child care centers, family child care homes (nonrelative care in a home setting) and care by relatives for 2-, 3- and 4.5-year-old children. Type of care differences in structural and caregiver characteristics were consistent across ages: centers had higher child-to-adult ratios and bigger groups; centers had caregivers with better education, more training in early childhood, and less traditional beliefs about child rearing. Children in centers experienced more cognitive stimulation, less frequent language interactions with adults, less frequent negative interactions with adults, and less television viewing than did those in other types of care. In centers and family child care homes compared to relative settings, children engaged in more positive and negative interactions with peers and spent more time in transition and unoccupied. Curvilinear associations were found between structural features of care and family income, particularly for caregiver education and training. In contrast, process measures of caregiving rose monotonically with family income. Children from high-income families experienced more sensitive care, more cognitive stimulation, and fewer negative interactions with adults than did those from low-income families. We interpret the findings by linking the structural features and caregiver training to the cognitive and social processes observed in different types of care. Future research designed

		to understand the influences of child care on children's behavior might benefit from using this more nuanced description of child care experiences. Published by Elsevier Inc.
23	Dunn, L. (1993): Ratio and group size in day care programs, <i>Child & Youth Care Forum</i> , 22(3), 193-226.	Reviews literature on the influences of ratio and group size (GS) on children's development in day care. When measured separately, ratio and GS are sometimes, but not always related to children's development. When included as variables in quality clusters, ratio and GS are more likely to be related to developmental outcomes. GS more consistently influences development in the expected direction than ratio. This suggests the need for increased attention to GS in the policy arena. Regardless of methodology, ratio and GS explain a relatively small portion of the variance in children's development. Ratio and GS have been found to have both direct and indirect effects on development, indicating that they are potentially valuable as proxy measures of children's experience in day care programs. (PsycINFO Database Record (c) 2016 APA, all rights reserved)
24	Field, T.M. (1980): Preschool play: Effects of teacher/child ratios and organization of classroom space, <i>Child Study Journal</i> , 10(3), 191-205.	Results indicated that a classroom with a low teacher/child ratio and partitioned special play areas facilitates peer interactions and fantasy play among middle-class, preschool children. (Author/DB)
25	File, N. & Kontos, S. (1993): The relationship of program quality to children's play in integrated early intervention settings, <i>Topics in Early Childhood Special Education</i> , 13(1), 1-18.	Examined associations between 3 types of program quality indicators (structural, global, and dynamic/process) and children's play behavior. 14 children with disabilities and 14 without disabilities (aged 33–73 mo) were observed during free play periods in integrated early childhood programs. Teachers' interactions with both groups of children were similar, and the children's play differed only in level of societal play. Teachers were more involved in supporting children's play in classrooms with better teacher–child ratios and when a greater proportion of them had specialized training in early childhood education. Teachers' interactions with children were not related to children's cognitive play level but were related to their social play level. (PsycINFO Database Record (c) 2016 APA, all rights reserved)
26	Fuller, B., Holloway, S., Bozzi, L., Burr, E., Cohen, N., & Suzuki, S. (2003). Explaining Local Variability in Child	The uneven availability of child-care centers for different kinds of families has been detailed in recent years. Much less is known about the distribution of center quality across communities. Nor do we

<p>Care Quality: State Funding and Regulation in California. <i>Early Education and Development</i>, 14(1), 47–66.</p>	<p>understand the role that local contexts or state policies may play in shaping quality levels. This paper describes several quality indicators, based on reports of 170 center directors situated in three California counties. We found that most centers in lower-income and working-class communities displayed at least moderate levels of quality along structural measures, such as class size, the ratio of children per staff member, and staff education levels. About one in six failed to meet recommended quality standards. Some quality indicators were lower for centers located in communities with lower supply of center enrollment slots per capita, possibly due to excess family demand for center-based care. Center quality was not consistently influenced by community conditions such as poverty levels, ethnic composition, or maternal employment rates. Quality was higher among centers receiving stronger flows of public subsidies. We discuss the success of state agencies in advancing quality among centers and remaining policy challenges. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)</p>
<p>Goelman, H., Forer, B., Kershaw, P., Doherty, G., Lero, D. & LaGrange, A. (2006): Towards a Predictive Model of Quality in Canadian Child Care Centers. <i>Early Childhood Research Quarterly</i>, 21(3), 280-295.</p>	<p>This paper reports on the design, methodology, and results of a study of quality in 326 classrooms in 239 Canadian child care centers. This study, the largest and most extensive ever undertaken in Canada, used the Caregiver Interaction Scale (CIS) to rate the adult-child interactions in the classrooms and the Infant-Toddler Environment Rating Scale (ITERS) and the Early Childhood Environment Rating Scale-Revised (ECERS-R) to measure the quality of classroom learning environments. The observed staff members completed questionnaires on wages, working conditions, and satisfaction levels, and the center directors also completed questionnaires on center operations and finances. Path analyses revealed that in the infant/toddler rooms the number of adults in the observed classroom and the education level of the observed staff member were direct predictors of quality. In addition, there were three indirect predictors: parent fees, adult:child ratio, and use of the center as a student teacher practicum site. There were five significant direct predictors in the preschool classrooms: wages, education level, number of staff in the observed room, staff satisfaction, and whether the center</p>

		<p>received free or subsidized rent or utilities. The three indirect predictors were auspice, adult:child ratio, and parent fees. The interaction of distal and proximal factors is interpreted and applied to the development and implementation of public policy initiatives that can provide much-needed improvement to the overall mediocre levels of child care quality in Canada.</p>
28	<p>Gordon, R., Fujimoto, K., Kaestner, R., Korenman, S., & Abner, K. (2013). An assessment of the validity of the ECERS-R with implications for measures of child care quality and relations to child development. <i>Developmental Psychology</i>, 49(1), 146–160.</p>	<p>The Early Childhood Environment Rating Scale-Revised (ECERS-R) is widely used to associate child care quality with child development, but its validity for this purpose is not well established. We examined the validity of the ECERS-R using the multidimensional Rasch partial credit model (PCM), factor analyses, and regression analyses with data from the Early Childhood Longitudinal Study Birth Cohort. The PCM identified rating category disordering, indicating previously unrecognized problems with the scale's response process validity. Factor analyses identified neither a single factor nor the ECERS-R six subscales, replicating prior research regarding the scale's structural validity. Criterion validity results were mixed, with small effect sizes for regressions predicting child outcomes and moderate effect sizes for regressions predicting teacher-reported quality. Our results lend empirical support to recent critiques of the ECERS-R, and we discuss implications for its future use and for the development of future measures. (Contains 5 tables, 1 figure and 6 footnotes.)</p>
29	<p>Hartman, S. & Manfra, L. (2016): Change in child behaviour concerns associated with childcare quality features among a sample of low-income Latino children. <i>Early Child Development and Care</i>, 186(9), 1378-1391.</p>	<p>This study explored the relation between childcare quality (staff–child ratio and staff–child interactions) and behavioural development between the beginning and the end of the childcare year among a sample of 44 low-income Latino four-year-olds in 14 childcare programmes. Neither staff–child ratio nor staff–child interactions were related to children's behaviour at the beginning of the childcare year. Further, staff–child ratio was not significantly related to changes between the beginning and the end of the childcare year in children's behaviour skills. However, staff–child interactions characterised as warm and involving direct instruction related to the development of positive social skills (e.g. taking turns, solving peer conflicts) were significantly associated with decreases in children's behaviour concerns</p>

		<p>from the beginning to the end of the childcare year. Staff-child interactions characterised negatively (e.g. overly controlling, strict scheduling) were also associated with decreases in children's behaviour concerns. Implications for improving behaviour skills of low-income Latino children by adjusting non-familial childcare features and measurement of childcare features are discussed. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)</p>
30	<p>Hartman, S., Warash, B., Curtis, R., & Day Hirst, J. (2016). Level of structural quality and process quality in rural preschool classrooms. <i>Early Child Development and Care</i>, 186(12), 1952–1960.</p>	<p>Preschool classrooms with varying levels of structural quality requirements across the state of West Virginia were investigated for differences in measured structural and process quality. Quality was measured using group size, child-to-teacher/staff ratio, teacher education, and the Early Childhood Environmental Rating Scale-Revised (ECERS-R; Harms, T., Clifford, R. M., & Cryer, D. (2005). "The early childhood environment rating scale-revised." New York, NY: Teachers College Press). Thirty-six classrooms with less structural quality requirements and 136 with more structural quality requirements were measured. There were significant differences between classroom type, with classrooms with more structural quality requirements having significantly higher teacher education levels and higher environmental rating scores on the ECERS-R subscales of Space and Furnishings, Activities, and Program Structure. Results support previous research that stricter structural state regulations are correlated with higher measured structural and process quality in preschool classrooms. Implications for preschool state quality standards are discussed.</p>
31	<p>Hestbæk, A.-D., & Christoffersen, M. (2002). Effekter af dagpasning. SFI - Det Nationale Forskningscenter for Velfærd.</p>	<p>Arbejdsrapport opsamlende hovedresultater fra forskningen, national såvel som international, om effekterne af børns dagpasning. Forskningsopsamlingen koncentrerer sig om effekterne af dagpasningstilbud målrettet de 0-5-årige. Undersøgelser af dagpasningens betydning for børn viser, at kvaliteten kan være så dårlig at pasningen forstærker den sociale arv. Omvendt kan en høj kvalitet fremme udvikling af kompetencer hos børnene, der kan give børnene et løft i skolen. I vurderingen af dagpasningens kvalitet indgår oplysninger om normeringer, gruppestørrelse, personaleudskiftning,</p>

		fysiske omgivelser samt mere bløde mål som omsorgskulturen og personalets kvalifikationer.
32	Hestenes, L., Kintner-Duffy, V., Wang, Y., La Paro, K., Mims, S., Crosby, D., Scott-Little, C., & Cassidy, D. (2015). Comparisons among quality measures in child care settings: Understanding the use of multiple measures in North Carolina's QRIS and their links to social-emotional development in preschool children. <i>Early Childhood Research Quarterly</i> , 30, 199–214.	Quality Rating and Improvement Systems (QRIS) include the assessment of classroom quality as one component of how early childhood programs are monitored and licensed in many states across the United States. However, varying measures and foci of quality exist and have led to challenges in accurately depicting program quality across programs and improvement efforts. The current validation study explores several measures of classroom quality and their associations with components and overall star ratings of the North Carolina QRIS and preschool children's social-emotional outcomes within center-based child care programs. Data for this study were collected in 2009, 10 years after the start of North Carolina's QRIS. Results indicate that individual levels of star ratings did not generally represent distinctive levels of classroom quality, but did differentiate classrooms at the lower and higher levels of quality. Structural features of the environments such as teacher education and teacher–child ratio were associated with classroom quality across these measures in the expected directions; however, teacher experience was not. Further, children's social-emotional outcomes were predicted to a varying degree by star levels and different aspects of classroom quality as represented by these various measures. Results are discussed in terms of the differing levels of quality and teaching processes in classrooms. Future directions for research are presented to contribute to an increased understanding of QRIS and children' experiences in early care and education programs. (PsycINFO Database Record (c) 2019 APA, all rights reserved) (Source: journal abstract)
33	Howes, C. (1997). Children's experiences in center-based child care as a function of teacher background and adult:child ratio, <i>Merrill-Palmer Quarterly</i> , 43(3), 404-425.	Two studies examined impact of teacher background and teacher/child ratio on child and teacher behavior in a child care environment. Both studies indicate more effective performances produced by teachers with higher degrees. One study suggests lower ratios are more effective. No interactive effect of ratio and background was noted. (MT)
34	Howes, C., Phillips, D.A. & Whitebook, M. (1992). Thresholds of Quality: Implications for the Social	Examined thresholds for two aspects of child care: adult-child ratio and group size. Investigated associations among different levels of these

	<p>Development of Children in Center-Based Child Care, <i>Child Development</i>, 63(2), 449-460</p>	<p>variables and with quality of care and children's social development. Findings suggest that meeting licensing standards for ratios and groups has a positive effect on ratings of the quality of care provided for children. (GLR)</p>
35	<p>Hu, B., Fan, X., Wu, Y., & Yang, N. (2017). Are structural quality indicators associated with preschool process quality in China? An exploration of threshold effects. <i>Early Childhood Research Quarterly</i>, 40, 163–173.</p>	<p>In this study, the generalized additive modeling (GAM) was used to explore possible threshold effects on multiple program structure quality indicators (class size, child-to-teacher ratio, teaching experience, teacher salary) in relation to the classroom teacher-child interaction quality indicators as measured by the Classroom Assessment Scoring System (CLASS) in a sample of Chinese kindergarten classrooms. One hundred eighty classrooms in 60 preschools were selected for the study, based on a stratified sampling procedure. The results were mixed, and revealed threshold effects on some structural indicators. The findings are discussed in the context of Chinese early childhood education practice. As the first study of its kind in a Chinese context, the findings could have some implications for early childhood education policy and practice despite some limitations of the study. Future research may consider better design and more representative sample for studying these issues.</p>
36	<p>Hu, B., Mak, M., Neitzel, J., Li, K., & Fan, X. (2016). Predictors of Chinese early childhood program quality: Implications for policies. <i>Children and Youth Services Review</i>, 70, 152–162.</p>	<p>This study explores the relationship between structural variables and program quality in early childhood programs across economic, sociocultural, and policy contexts in Zhejiang, China. Using the Chinese Early Childhood Environment Rating Scale (CECERS), researchers collected data in 162 randomly selected classrooms representative of the sociocultural and economic conditions of Chinese early childhood programs. The findings showed that a set of program structural variables accounted for 60% of the variance in overall program quality. Similar findings were shown for two specific program quality indicators: structural quality ('Provisions for Learning') and process quality ('Teaching & Interaction'). Results suggest that policy makers in early childhood education in China should offer more benefits and training for teachers, recognize teachers' professional qualifications, and maintain lower child -to -teacher ratio to improve Chinese ECE programs. (C) 2016 Elsevier Ltd. All rights reserved.</p>

37	<p>Hu, B., Song, Z., Wang, S., & LoCasale-Crouch, J. (2019). Global quality profiles in Chinese early care classrooms: Evidence from the Shandong Province. <i>Children and Youth Services Review, 101</i>, 157–164.</p>	<p>The Chinese implementation of the second child policy has resulted in a dramatic need for infant and toddler early care programs, yet little research exists to guide how to weigh quality options. This study utilizes an internationally validated assessment instrument—Infant and Toddler Environment Rating Scale-Revised—to explore program quality in 79 Chinese early care classrooms. Three profiles emerged to reflect the variation in quality observed. Further, teacher and classroom characteristics were explored to understand differences in observed quality. Results indicated that child-to-teacher ratio, class size, certification, teacher salary and school property successfully differentiated the three profiles, while teachers' years of teaching, degree and time allocated for free play did not. Findings are discussed in light of previous literature and the Chinese sociocultural context. (PsycINFO Database Record (c) 2019 APA, all rights reserved) (Source: journal abstract)</p>
38	<p>Iluz, R., Adi-Japha, E., & Klein, P. (2016). Identifying Child–Staff Ratios That Promote Peer Skills in Child Care. <i>Early Education and Development, 27</i>(7), 1077–1098.</p>	<p>Research Findings: Early child care policy and practice are grounded in a growing understanding of the importance of the first years of life. In earlier studies, associations between child-staff ratios and peer skills yielded inconsistent findings. The current study used data from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development (N=1,364) to test the existence of curvilinear associations between child-staff ratios and observed peer skills at the ages of 3 and 4.5years in order to derive optimal ratios featuring higher levels of peer skills. The findings indicated curvilinear associations between child-staff ratio during the first 3 and 4.5years and the frequency of positive and negative peer interactionsespecially positive peer interactions. Furthermore, these curvilinear associations characterized positive play with a friend at 4.5years. Optimal child-staff ratios featuring higher levels of peer skills were somewhat lower for positive play with a friend than for the frequency of positive peer interactions. Practice or Policy: Curvilinear associations that point to an optimal value of child-staff ratio may be used to validate child care standards. Optimal child-staff ratios found in the current study coincided with recommended early care standards.</p>

39	<p>Kohl, K., Bihler, L., Willard, J., Agache, A., & Leyendecker, B. (2019). Linking Quantity and Quality of Early Childhood Education and Care to Children's Socio-Emotional Adjustment: A German Cross-Sectional Study. <i>Early Education and Development, 31</i>(2), 177–199.</p>	<p>This study examined how quantity and quality of early childhood education and care (ECEC) are related to the socio-emotional adjustment of children born in Germany (30–48 months old, N = 395). Previous research focused on a small set of ECEC features, used broad measures, and yielded inconclusive results. We assessed ECEC quantity (age at entry, hours per week), process quality (CLASS Pre-K), structural quality (child-teacher ratio), and classroom composition (percentage of immigrant children). Controlling for child, family, and teacher characteristics, we tested main and interaction effects in regression analyses. Research Findings: More hours per week predicted lower adjustment only on specific indicators (hyperactivity, conduct problems) and only in classrooms with a high percentage of immigrant children or a high child-teacher ratio. In addition, a higher child-teacher ratio predicted more conduct problems, but only for children who entered ECEC at a very young age. Process quality did not predict adjustment. Practice or policy: In sum, this implies that German ECEC does not pose a major risk for children's socio-emotional adjustment, as only certain aspects of quantity and structural quality are linked to very specific socio-emotional outcomes under very specific circumstances. (PsycINFO Database Record (c) 2019 APA, all rights reserved) (Source: journal abstract)</p>
40	<p>Kohl, K., Willard, J., Agache, A., Bihler, L., & Leyendecker, B. (2019). Classroom Quality, Classroom Composition, and Age at Entry: Experiences in Early Childhood Education and Care and Single and Dual Language Learners' German Vocabulary. <i>AERA Open, 5</i>(1), 1-16.</p>	<p>We examined independent and interactive links among three central characteristics of children's experiences in early childhood education and care and the German receptive vocabulary of single language learners and dual language learners (DLLs). We allowed for possible differential effects depending on children's language background. Our sample included 2,231 children (n = 1,555 single language learners, n = 371 DLLs from families in which German was frequently spoken, n = 305 DLLs from families in which German was less frequently spoken). Children attended 177 classrooms in 95 early childhood education and care centers and were 30 to 80 months old. We found that classroom process quality predicted German vocabulary only for DLLs with low exposure to German in the family. An earlier age at entry was linked to a larger German vocabulary for all children, but the link was stronger</p>

		for DLLs from families with low exposure to German. Classroom composition did not predict German vocabulary.
41	Kontos, S. & Wilcox-Herzog, A. (1997): Teachers' Interactions with Children: Why Are They So Important? <i>Research in Review, Young Children, 52(2)</i> , 4-12	Reviews research demonstrating a positive relationship between children's quality interactions with teachers and their enhanced cognitive, socio-emotional, and language development. Discusses most frequently studied aspects of teacher behavior including roles, sensitivity/detachment, involvement and teacher talk. Describes influences on interactions including child characteristics, training, ratio, group size and curriculum. Summarizes implications for teachers, and lists recommended adult-child ratios. (AMC)
42	Le, V.-N., Perlman, M., Zellman, G.L. & Hamilton, L.S. (2006): Measuring Child-Staff Ratios in Child Care Centers: Balancing Effort and Representativeness, <i>Early Childhood Research Quarterly, 21(3)</i> , 267-279.	Child-staff ratios are an important quality indicator. They are often collected by observing one randomly selected classroom several times during a 2-h period on a single day. However, it is unclear whether these measures represent the ratios that children actually experience during most of their time in care. This study compared ratio data collected from a single classroom during a 2-h period on a single day with data collected from multiple classrooms in the same center during 8-h periods over 10 days. Analysis of data from 77 child care centers found moderate correlations between the two measurement methods. Ratios measured during a 2-h period from a single classroom on a single day tended to underpredict ratios measured from multiple classrooms and multiple days. Results suggest that the representativeness of ratio measurements can be improved by lengthening the observation period and especially by measuring ratios in multiple classrooms.
43	Løkken, I., Bjørnstad, E., Broekhuizen, M., & Moser, T. (2018). The relationship between structural factors and interaction quality in Norwegian ECEC for toddlers. <i>International Journal of Child Care and Education Policy (Seoul), 12(1)</i> , 1–15.	The purpose of this study was to investigate the relationship between two structural factors of quality: organisation form (stable groups versus flexible groups) and staff-child ratio, in relation to interaction quality in toddler groups in Norwegian early childhood education and care (ECEC). Data were collected from 206 kindergarten groups in the period from 2013 to 2015. Interaction quality was measured through the infant/toddler environment rating scale-revised subscales, Interaction, listening and talking, and program structure. A two-way MANOVA revealed that organisation form with small, stable groups

		were related to higher interaction quality, while the staff-child ratio and interaction quality varied depending on different content dimensions. These findings have clear implications for policy and the training of ECEC staff.
44	NICHD Early Child Care Research Network. (2002). Child-Care Structure → Process → Outcome: Direct and Indirect Effects of Child-Care Quality on Young Children's Development. <i>Psychological Science</i> , 13(3), 199–206.	Used NICHD Study of Early Child Care data to test paths from child care quality through process indicators to child outcomes. Found that maternal caregiving quality was strongest predictor of cognitive and social competence. Nonmaternal caregiving quality related to cognitive and social competence. Nonmaternal caregiving quality mediated relationship between caregiver training and child-staff ratio to cognitive and social competence. (Author/KB)
45	Nielsen, A. A., & Christoffersen, M. (2009). Børnehavens betydning for børns udvikling: En forskningsoversigt. SFI - Det Nationale Forskningscenter for Velfærd.	Denne forskningsoversigt er bestilt af BUPL. Den giver et overblik over de nyeste danske og internationale forskningsresultater på dagpasningsområdet og perspektiverer til tidligere resultater på området. Forskningsoversigten følger således op på SFI's tidligere udgivelse: Effekter af dagpasning – en redegørelse for nationale og internationale forskningsresultater fra 2002. Rapporten belyser, hvordan kvalitetsforskelle i dagpasningstilbud kan påvirke børns kognitive, emotionelle og sociale udvikling. Rapporten redegør blandt andet for, at pasning af høj kvalitet – målt ved gode normeringer, relevant uddannet personale, ordentlige plads- og hygiejneforhold, stimulerende aktiviteter og en god kontakt mellem institution og hjem – gavner børn kognitivt, socialt, helbreds- og følelsesmæssigt både på kort og lang sigt. De bliver blandt andet mere intelligente, selvsikre og nysgerrige i forhold til at lære og dermed mere skoleparate og dygtige i skolen. Der er i særdeleshed dokumentation for, at børn fra belastede familier klarer sig bedre, hvis deres pasning har været af høj kvalitet. De bliver fx mindre kriminelle, får en højere uddannelse, får højere indtjening og har et bedre helbred. Der er altså store samfundsøkonomiske gevinster ved at investere i børnepasning af høj kvalitet.
46	Palmérus, K. (1991). The impact of ratio of children/caregiver on social interaction and activity pattern	Examined the effect of child-caregiver ratio on social interaction and activity pattern in day-care centers. Two employees were observed in a day care center during 2 periods. There were 18 children (aged 1–12

	<p>in a day care center, <i>Early Child Development and Care</i>, 71, 97-103.</p>	<p>yrs) in each time period; however, in the 1st period there were 4 staff members available, and in the 2nd period there were 3 staff members. An analysis of 711 observed intervals from the 1st period compared with 652 intervals from the 2nd period showed that the decreased ratio of children per caregiver was used in such a way that the staff reduced the amount of time spent alone with the children and instead worked as 2-3 caregivers together. In general, more staff in the unit was associated with a larger proportion of educational activities and a smaller proportion of basic care activities. (PsycINFO Database Record (c) 2016 APA, all rights reserved)</p>
47	<p>Palméus, K. (1995). Child-caregiver ratios in day care center groups: Impact on verbal interactions, <i>Early Child Development and Care</i>, 118, 45-57.</p>	<p>Explored the effect of caregiver:child ratio on verbal interactions in 6 public day-care center groups for preschool children in Sweden. Detailed records of verbal interactions were studied in one group where the number of children/caregiver had changed from 4.25 to 5.67. Caregivers were the main target for observation. Audio-recorded verbal communications were coded and analyzed. Data were collected on 3 occasions in Year 1 and on 3 occasions in Year 2. With a high ratio (≥ 4 present children/caregiver), the proportion of child-initiated verbal activities to the caregivers decreased, the proportion of adult-initiated verbal activities increased, and the amount of verbal interaction between caregivers decreased. The fact that the same caregivers and same children were observed in the 2 different periods suggest that the reported effects are due to differences in ratio, not in the style of caregivers. (PsycINFO Database Record (c) 2016 APA, all rights reserved)</p>
48	<p>Palméus, K. & Hägglund, S. (1991). The impact of children/caregiver ratio on activities and social interaction in six day care centre groups, <i>Early Child Development and Care</i>, 67, 29-38.</p>	<p>Observed the social interactions and activities of 20 caregivers from 6 day-care centers. Staff interview data and parent-completed questionnaire data were also gathered. Variations in observed patterns of activities and social interactions could not be explained only by referring to variations in child/staff ratio. More adults per child increased child-oriented activities and close interaction with the children only if the staff agreed on goals and methods in their work. Results agree with the view that the roles of, activities of, and relationships between teachers, children, and parents are influenced by</p>

		<p>the manner in which each person defines and experiences the ratio of adults to children in the day-care center. A model is presented in which child-caregiver ratio is related to group characteristics, adult working styles, and concordance. (PsycINFO Database Record (c) 2016 APA, all rights reserved)</p>
49	<p>Perlman, M., Fletcher, B., Falenchuk, O., Brunsek, A., McMullen, E., & Shah, P. (2017). Child-Staff Ratios in Early Childhood Education and Care Settings and Child Outcomes: A Systematic Review and Meta-Analysis. <i>PloS One</i>, 12(1), 1-24.</p>	<p>Child-staff ratios are a key quality indicator in early childhood education and care (ECEC) programs. Better ratios are believed to improve child outcomes by increasing opportunities for individual interactions and educational instruction from staff. The purpose of this systematic review, and where possible, meta-analysis, was to evaluate the association between child-staff ratios in preschool ECEC programs and children's outcomes. Searches of Medline, PsycINFO, ERIC, websites of large datasets and reference sections of all retrieved articles were conducted up to July 3, 2015. Cross-sectional or longitudinal studies that evaluated the relationship between child-staff ratios in ECEC classrooms serving preschool aged children and child outcomes were independently identified by two reviewers. Data were independently extracted from included studies by two raters and differences between raters were resolved by consensus. Searches revealed 29 eligible studies (31 samples). Child-staff ratios ranged from 5 to 14.5 preschool-aged children per adult with a mean of 8.65. All 29 studies were included in the systematic review. However, the only meta-analysis that could be conducted was based on three studies that explored associations between ratios and children's receptive language. Results of this meta-analysis were not significant. Results of the qualitative systematic review revealed few significant relationships between child-staff ratios and child outcomes construed broadly. Thus, the available literature reveal few, if any, relationships between child-staff ratios in preschool ECEC programs and children's developmental outcomes. Substantial heterogeneity in the assessment of ratios, outcomes measured, and statistics used to capture associations limited quantitative synthesis. Other methodological limitations of the research integrated in this synthesis are discussed. (PsycINFO Database Record (c) 2017 APA, all rights reserved) (Source: journal abstract)</p>

50	<p>Pessanha, M., Peixoto, C., Barros, S., Cadima, J., Pinto, A., Coelho, V., & Bryant, D. (2017). Stability and change in teacher-infant interaction quality over time. <i>Early Childhood Research Quarterly</i>, 40, 87–97.</p>	<p>Given that an increasing number of infants spend part of the day in center-based childcare in many countries, understanding infants' education and care experiences in these settings is essential. The aims of this study are to examine change in teacher-infant interaction quality over time, and to determine the extent to which teacher and classroom structural characteristics are associated with change in teacher infant interaction quality. Ninety infant childcare classrooms from the greater metropolitan area of Porto, Portugal, participated in this study. Each classroom was observed twice (6-month interval between Time 1 and Time 2) by trained and reliable observers using the Infant/Toddler Environment Rating Scale Revised (ITERS-R; Harms et al., 2006), the Classroom Assessment Scoring System Infant (CLASS-Infant; Hamre et al., 2014), and the Caregiver Interaction Scale (CIS; Arnett, 1989). Additionally, teachers provided demographic information about themselves and structural characteristics of the classroom. Overall results indicated that the quality of teacher-infant interactions changed over time, with a general trend toward lower quality at Time 2. The increase in infant:adult ratio from Time 1 to Time 2 was an important predictor of process quality levels at Time 2, after controlling for prior quality and other structural characteristics. These findings can be informative for policymaking as group size and number of adults per classroom are regulated features of childcare in many countries, including Portugal. (C) 2016 Elsevier Inc. All rights reserved.</p>
51	<p>Petrogiannis, K. (2002). Greek day care centres' quality, caregivers' behaviour and children's development, <i>International Journal of Early Years Education</i>, 10(2), 137-148.</p>	<p>Evaluated the 'global' quality of the caregiving environment for young infants and toddlers in day care centers in Athens, investigating the role quality characteristics play in the course of child development. Factors evaluated included the 'structural' and 'dynamic' features in terms of group size, adult-child ratio, caregiving style, and interaction patterns developed between the caregivers and children. Children were 60 18-mo olds experiencing full-time (more than 20 hrs/wk) day care provision, and for at least 6 mo out-of-home care, while attending 25 day care centers. Children's assessments included measures of cognitive, language, and socio-emotional development. Interviews and observational techniques were used to assess the quality of the day</p>

		<p>caregiving environment and the interaction processes between caregivers and the children. Children's development was considered in terms of the quality of out-of-home care experience. It was found that the course of development could be predicted by the overall day care center quality index as measured by the Infant/Toddler Environment Rating Scale, with the separate contribution of some other variables according to the examined developmental aspect. (PsycINFO Database Record (c) 2016 APA, all rights reserved)</p>
52	<p>Phillips, D., McCartney, K. & Scarr, S. (1987). <i>Child-care quality and children's social development</i>, <i>Developmental Psychology</i>, 23(4), 537-543</p>	<p>This study examined the influence on children's social development of variation in the quality of their child-care environments. The sample consisted of 166 children attending representative child-care centers that varied widely in quality. Possible relations associated with age, child-care experience, and family background were controlled using hierarchical multiple regression. Both global estimates of child-care quality and specific program features, such as director experience, ratios, and verbal interactions, were obtained from observational measures and staff questionnaires. Measures of social development were derived from parent and caregiver ratings of the children. Of greatest importance is the finding that overall quality, caregiver-child verbal interactions, and director experience were each highly predictive of the children's social development in child care. Family background measures were also significantly predictive of several of the social outcomes, whereas child-care experience showed few significant effects. The implications for social policies and future research in child care are discussed. (PsycINFO Database Record (c) 2016 APA, all rights reserved)</p>
53	<p>Phillips, D., McCartney, K. & Scarr, S. (1988): Child-care quality and children's social development, <i>Annual Progress in Child Psychiatry & Child Development</i>, 145-161.</p>	<p>(This reprinted article originally appeared in <i>Developmental Psychology</i>, 1987, Vol 23[4], 537-543. The following abstract of the original article appeared in <i>PA</i>, Vol 74:31040.) Examined the influence on children's social development of variation in the quality of their child-care environments. The sample consisted of 166 children attending representative child-care centers that varied widely in quality. Possible relations associated with age, child-care experience, and family background were controlled using hierarchical multiple</p>

		<p>regression. Both global estimates of child-care quality and specific program features, such as director experience, ratios, and verbal interactions, were obtained from observational measures and staff questionnaires. Measures of social development were derived from parent and caregiver ratings of the children. Of greatest importance is the finding that overall quality, caregiver-child verbal interactions, and director experience were each highly predictive of the children's social development in child care. Family background measures were also significantly predictive of several of the social outcomes, whereas child-care experience showed few significant effects. (PsycINFO Database Record (c) 2016 APA, all rights reserved)</p>
54	<p>Phillips, D., Mekos, D., Scarr, S., McCartney, K. & Abbott-Shim, M. (2000). Within and beyond the classroom door: Assessing quality in child care centers, <i>Early Childhood Research Quarterly</i>, 15(4), 475-496.</p>	<p>Analyzed data from study of typical center-based child care and children's development in three states. Found confirmation of prior evidence regarding importance of ratios, teacher training, and group size for high quality classroom practices; also demonstrated more significant contribution of teacher wages and parent fees. Quality varied with center's location in states with more or less stringent child care regulations. (Author/KB)</p>
55	<p>Pianta, R., Howes, C., Burchinal, M., Bryant, D., Clifford, R., Early, D., & Barbarin, O. (2005). Features of Pre-Kindergarten Programs, Classrooms, and Teachers: Do They Predict Observed Classroom Quality and Child-Teacher Interactions? <i>Applied Developmental Science</i>, 9(3), 144-159.</p>	<p>This study draws from the National Center for Early Development and Learning's Multi-State Pre-Kindergarten Study to examine the extent to which program, classroom, and teacher attributes of the program ecology predict observed quality and teacher-child interactions in a sample of 238 classrooms representing 6 states' pre-kindergarten programs. Quality was assessed observationally at the global level and for specific teaching practices. Quality was lower in classrooms with more than 60% of the children from homes below the poverty line, when teachers lacked formal training (or a degree) in early childhood education, and held less child-centered beliefs. Program and teacher attributes were statistically significant, albeit quite modest, predictors of observed quality. Location of the program in a school building, child:staff ratio, and length of day had no relation to quality. State-level factors not attributable to the teacher, program, and classroom factors examined accounted for the majority of explained variance in observed quality. Results suggest that the association between distal features of</p>

		<p>programs and teachers and quality in pre-kindergarten is more similar to elementary school settings than to child care settings and that quality appears most closely related to proximal teacher and child characteristics. (Contains 7 tables.)</p>
56	<p>Rentzou, K. & Sakellariou, M. (2011). The Quality of Early Childhood Educators: Children's Interaction in Greek Child Care Centers, <i>Early Childhood Education Journal</i>, 38(5), 367-376.</p>	<p>Though quality in early childhood education and care has attracted last decades enormous research interest there is still not a unanimous agreement about its definition. Yet, almost all definitions attempted include interaction, group size, adult:child ratio and early childhood educators' level of education, as important indices of quality. Relationships are key resources for young children. There is agreement among researchers that the quality of caregiving by professional caregivers in child care centres has been established as an important influence on various aspects of child development. Thus, structural characteristics have been proven to affect programs' quality of services provided. The purpose of this research study was twofold: (1) to explore the quality of interaction between Greek early childhood educators and children; and (2) to record the structural characteristics of Greek child care centres. Correlations among structural characteristics and type of interaction were also examined. Research data indicate that Greek early childhood educators are positive but at the same time detached and permissive during their interaction with children, a finding that disputes their positive interaction. Thus, Greek child care centres have been found to adopt, based on Greek legislation, high ratios and group sizes, a finding which raises questions about the effects on children's well being and development. Limited correlations have been found between the type of interaction and the structural characteristics. Research data highlight the need for further research to undergone and for changes in Greek legislation, concerning the operation of Greek child care centres.</p>
57	<p>Russell, A. (1990): The effects of child-staff ratio on staff and child behavior in preschools: An experimental study, <i>Journal of Research in Childhood Education</i>, 4(2), 77-90.</p>	<p>Manipulated numbers of children in 27 preschools to produce a low child-staff ratio (7.7:1), an average ratio (9.2:1), and a high ratio (11.2:1). Observations were carried out so that only 1 person (child or staff) was observed at any given time. Results showed a greater effect of ratio on individual child behavior than on individual staff behavior.</p>

		<p>Children annoyed and teased others more and were less absorbed in what they were doing under higher ratios. When the behavior of the whole group was considered, it was evident that (1) staff were confronted with a substantial increase in problematic child behaviors as the ratio went up (even by 2:1) and (2) the child's access to staff on an individual or tiny group basis was considerably reduced with the high ratios. (PsycINFO Database Record (c) 2018 APA, all rights reserved)</p>
58	<p>Salminen, J., Lerkkanen, M.-K., Poikkeus, A.-M., Pakarinen, E., Siekkinen, M., Hannikainen, M., Poikonen, P.-L. & Rasku-Puttonen, H. (2012). Observed Classroom Quality Profiles of Kindergarten Classrooms in Finland, <i>Early Education and Development</i>, 23(5), 654-677.</p>	<p>Research Findings: The aim of the present study was to examine classroom quality profiles of kindergarten classrooms using a person-centered approach and to analyze these patterns in regard to teacher and classroom characteristics. Observations of the domains of Emotional Support, Classroom Organization, and Instructional Support were conducted in 49 Finnish kindergarten classrooms utilizing the Classroom Assessment Scoring System (R. C. Pianta, K. M. LaParo, & B. K. Hamre, 2008). In addition, questionnaire data on classroom and teacher characteristics, as well as Early Childhood Classroom Observation Measure (D. Stipek & P. Byler, 2004) observational ratings, were used in the analyses. Latent profiling analysis was utilized to identify different profiles of classroom quality. Four latent profiles of classroom quality were identified that differed from one another most clearly in the domain of Emotional Support. Profile 1 represented a generally high level and Profile 4 a generally low level of classroom quality compared to the other profiles, whereas the medium-quality Profiles 2 and 3 showed varying levels of support in the assessed dimensions of quality. Only a few differences emerged among the profiles in classroom and teacher characteristics: The teachers in Profile 4 provided the least literacy instruction and had the least amount of work experience of all of the teachers. The findings using the Early Childhood Classroom Observation Measure indicated that child-centered practices were predominant among the profiles of higher classroom quality. Practice or Policy: The results of this study can be used to recognize kindergarten teachers' professional strengths and weaknesses and to support teachers' professional development with the aid of pedagogical interventions. (Contains 4 tables.)</p>

59	<p>Scarr, S., Eisenberg, M. & Deater-Deckard, K. (1994). Measurement of quality in child care centers, <i>Early Childhood Research Quarterly</i>, 9(2), 131-151.</p>	<p>Assessment of quality of care (QOC) in 363 classrooms with infants, toddlers, and preschool children was conducted in 120 child care centers in 3 states. Assessment measures included Infant and Toddler Environment Rating Scale, Early Childhood Environment Rating Scale, and the Assessment Profile for Early Childhood Programs. Regulatable aspects of quality of child care included ratio of caregivers to children, group size, teacher training in child development or child care, teacher education, highest wage paid to a center teacher, and staff turnover. Process measures proved to be highly redundant, both internally and with each other. Much smaller sets of items, drawn randomly from the instruments' item pools, were found to be perfectly acceptable measures of QOC. Regulatable measures did not prove to be acceptable measures of QOC, except for teachers' wages, which were highly correlated with process measures of quality. (PsycINFO Database Record (c) 2018 APA, all rights reserved)</p>
60	<p>Sheridan, S. (2001). Quality evaluation and quality enhancement in preschool: A model of competence development, <i>Early Child Development and Care</i>, 166, 7-27.</p>	<p>Examined the effects of a competence development intervention on pedagogical quality of preschools, and presents a competence development model. In Exp 1, an external evaluation of quality was conducted of 20 preschool units using the Early Childhood Environment Rating Scale (T. Harms & R. Clifford, 1980, ECERS). In Exp 2, 9 preschool units of 16–22 preschool students completed a competence development intervention; collected data included ECERS self-evaluations provided at baseline and following program completion. In Exp 3, an external evaluation of quality of the preschool units of Exp 2 was conducted, using the ECERS. In Exp 4, 27 pedagogues completed questionnaires concerning the model of competence development. Results show that the intervention enhanced the pedagogical quality, from an average of 4.50 to 4.98 on the ECERS. The intervention enhanced quality despite a lower staff–child ratio, compared to control schools. It is concluded that preschool quality can be enhanced through competence development at the same time as there are organizational changes and financial cutbacks. (PsycINFO Database Record (c) 2016 APA, all rights reserved)</p>

61	<p>Sheridan, S. & Williams, P. (2016). RAPPORT 433 2016 Barngruppers storlek i förskolan En kartläggning av aktuell pedagogisk, utvecklingspsykologisk och socialpsykologisk forskning. Stockholm: Skolverket.</p>	<p>Frågan om vad som är en lämplig storlek för barngrupper i förskolan är komplex och behöver ses i ett socialt och kulturellt sammanhang. Forskningen visar att några avgörande faktorer att ta hänsyn till är personalens kompetens, personaltäthet, barngruppens sammansättning och den fysiska miljön.</p>
62	<p>Sheridan, S., Williams, P., & Pramling Samuelsson, I. (2014). Group size and organisational conditions for children's learning in preschool: a teacher perspective. <i>Educational Research</i>, 56(4), 379–397.</p>	<p>Background: There is a limited amount of research about group size in preschool, and how it impacts on teachers' working conditions and their ability to support children's learning and knowledge development in line with curriculum intentions. Purpose: From a perspective on quality, this article examines the organisational conditions for children's learning in preschool in relation to group size. The questions at issue are: how do teachers explain how they organise the child group and the learning environment in preschool, and why? Sample: The sample consists of 12 preschools from different parts of Sweden. The preschools selected for the study are stratified in order to represent small and large group sizes in Swedish preschools as defined by the Swedish National Agency for Education. The sample contains both urban and rural regions and represents districts that differ geographically, demographically, ethnically, and which include varied socioeconomic structures. The 12 preschools had children in three age groupings: 1-3, 3-5 or 1-5. The number of children in the participating preschools ranged from 12 children to 45 children, with seven of the preschools having more than 30 children in their groups. Design and method: The article is based on interactionist perspectives, Bronfenbrenner's ecological systems theory, a critical ecology of the early childhood profession, theories of children's learning, and four dimensions of pedagogical quality. Together, these theoretical perspectives contribute to an understanding of the relationships between policy issues, educational goals, group size and teachers' competence in organising and creating conditions for children's learning. Semi-structured interviews were conducted with two teachers from each of the 12 preschools. The interviews lasted between 40-60 minutes and were recorded and transcribed verbatim. The analytical process was conducted in three steps and can be described as an</p>

		<p>analytical process of abduction. The four dimensions of pedagogical quality were used as analytical lenses to discern and understand critical aspects related to the teachers' understanding of group size. Result: Irrespective of group size, most of the children participate in different group constellations throughout the day, some organised by the teachers and some by the children themselves. Teachers' competence to organise the children in such ways that good conditions for learning were created, differed between preschools, and depended on the teachers' approach, which can be described as either intentional or unintentional learning. Conclusion: Teachers' organisational approaches influence the quality of the preschool and conditions for children's learning in distinct ways.</p>
63	<p>Shim, J., Hestenes, L. & Cassidy, D. (2004). Teacher Structure and Child Care Quality in Preschool Classrooms, <i>Journal of Research in Childhood Education</i>, 19(2), 15-143.</p>	<p>The present study examined the relationships between teacher structure, teacher behaviors, and child care quality. Participants included 72 female teachers from 44 preschool classrooms. Both a global measure of quality and a measure of teacher-child interaction were utilized. Results showed that a co-teacher structure was associated with higher quality child care and more positive teacher behaviors than a hierarchical two-teacher structure or a single-teacher structure. Comparisons between lead and assistant teachers in a hierarchical structure also revealed that teacher behaviors of lead teachers and assistant teachers were very similar, although their education levels were significantly different. Lower ratios and smaller group size were associated with more positive teacher behaviors. Implications for professionals and future research areas are discussed. (Contains 4 tables.)</p>
64	<p>Sims, M. & Waniganayake, M. (2015). The Role of Staff in Quality Improvement in Early Childhood, <i>Journal of Education and Training Studies</i>, 3(5), 187-194.</p>	<p>There is international recognition of the importance of high quality services for young children with a consensus that three pillars contribute to quality improvement: adult: child ratios, staff qualifications and group size. In Australia over the past 5 years, early childhood policy has attempted to drive improvements in early childhood service quality through national regulations for both adult: child ratios and qualifications. However, a review of early childhood history demonstrates that service quality in the past tended to depend</p>

		<p>more on the dedication of staff who were expected to be emotionally rewarded through their caring roles rather than from the pay and status associated with their work. The current political direction in Australia is now tending again towards this latter position. We review the literature associated with both positions in relation to quality improvement and flag our concerns for the future.</p>
65	<p>Slot, P., Leseman, P., Verhagen, J., & Mulder, H. (2015). Associations between structural quality aspects and process quality in Dutch early childhood education and care settings. <i>Early Childhood Research Quarterly</i>, 33, 64–76.</p>	<p>The relationship between structural quality and process quality in early childhood education and care (ECEC) has been addressed in several studies. However, the findings are not conclusive. The present study was conducted in the Netherlands, which has a strongly regulated mid-quality ECEC system regarding structural aspects, with still considerable variation in process quality. The study employed a multi-method approach and extended the existing research in two ways. First, both observations of teacher-child interactions as well as teacher-reported developmental and educational activities were included as indicators of comprehensive emotional and educational process quality constructs. Second, to examine the relation between process quality and structural quality, commonly studied structural quality characteristics were complemented by less frequently studied measures of the professional development activities and education programs implemented at the centers. Results indicate that group size and child-to-teacher ratio are not related to emotional and educational process quality in the Dutch ECEC system. Teachers' formal pre-service education has a positive, but small association with emotional process quality. The use of an education program and professional development activities at the center show the strongest associations with emotional and educational process quality. Implications for policy and practice are discussed. (C) 2015 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).</p>
66	<p>Sundell, K. (2000). Examining Swedish profit and nonprofit child care: The relationships between adult-to-child ratio, age composition in child care classes, teaching and</p>	<p>Examined the effects of program auspice (nonprofit vs. profit child care), adult-to-child ratios (1:4.6–1:8.7), and age span of the child care class on teaching and children's social and cognitive achievement. The sample included 394 children (aged 3–5 yrs) from 32 child care</p>

	children's social and cognitive achievements, <i>Early Childhood Research Quarterly</i> , 15(1), 91-114.	centers. Results show that the profit child care centers had larger child groups than nonprofit child care centers, a lower adult to child ratio, and a positive staff attitude toward teaching goals. Age, gender, social background, and age span of the child care class were significant predictors of children's social and cognitive achievements. Adult-to-child ratio and teaching style did not prove to be good predictors of children's social or cognitive achievements. (PsycINFO Database Record (c) 2018 APA, all rights reserved)
67	The Effects of Group Size, Ratios, and Staff Training on Child Care Quality: Research into Action. (1993). <i>Young Children</i> , 48(2), 65–67.	Discusses the effects of group size, staff-child ratios, and staff training and qualifications on the quality of child care. (BB)
68	Tobin, J. (2005): Quality in Early Childhood Education: An Anthropologist's Perspective, <i>Early Education and Development</i> , 16(4), 421-434.	I use examples from my ethnographic work on early childhood education and care settings in Japan and France to demonstrate that quality standards are cultural constructs and to question the universality of such core U.S. standards of quality in ECEC as low student-teacher ratios and multicultural curricula. My argument is that quality standards should reflect local values and concerns and not be imposed across cultural divides. In a heterogeneous society such as the U.S., notions of quality should arise out of conversations in local communities among early childhood educators and parents. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)
69	Tobin, J., Wu, D., & Davidson, D. (1987). Class size and student-teacher ratios in the Japanese preschool. <i>Comparative Education Review</i> , 31(4), 533–549.	Japanese preschool teachers and administrators watched and commented on videotapes of Japanese and U.S. preschools. In contrast to American notions of home-school continuity and the mothering role of the preschool teacher, Japanese educators saw their large preschool classes (of approximately 30 students) as teaching overly individualistic, pampered Japanese preschoolers to become responsible members of a group. (SV)
70	Vermeer, H., van IJzendoorn, M., Cárcamo, R., & Harrison, L. (2016). Quality of Child Care Using the Environment Rating Scales: A Meta-Analysis of International Studies. <i>International Journal of Early Childhood</i> , 48(1), 33–60.	The current study provides a systematic examination of child care quality around the globe, using the Environment Rating Scales (ERS). Additional goals of this study are to examine associations between ERS process quality and structural features (group size, caregiver–child ratio) that underpin quality and between ERS and more proximal

	<p>aspects of child care quality (caregiver sensitivity). Furthermore, we consider possible differences in ERS associations arising from scale characteristics (infant vs early childhood version, original version vs revised scale, full version vs shortened version). The reported meta-analysis combines results of ERS child care quality reported in 72 studies from 23 countries across five international geographic regions. Group center care appeared to be of average quality with higher quality levels in Australia/New Zealand and North America. Our results suggest that: (1) ERS characteristics are not associated with differences in ERS scores and (2) ERS scores are related to indicators of proximal quality of care (caregiver sensitivity) and, to a lesser degree, structural quality of care (caregiver–child ratio). The meta-analysis provided cross-cultural comparisons on child care quality on a common instrument as a means to advance discussion on child care quality internationally. (PsycINFO Database Record (c) 2017 APA, all rights reserved)</p>
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