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OCCASIONAL PAPER 4 - Quality for babies and toddlers in early years settings
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Introduction

Demographic trends in contemporary societies mean that early childhood education and care (ECEC) services for babies and toddlers are here to stay. Social, economic and labour market dynamics across much of the Western world have seen participation rates of under-two years olds in out-of-home group-based early childhood services rise markedly creating a childhood where 'shared care' between home and group-based early childhood settings is increasingly the norm. At the same time, years of ideological debates and scientific study about the effects of early childcare (Vandell *et al.*, 2010) have given way to a growing consensus that good quality early childhood education and care benefits children, families as well as societies more generally. Reiterating these benefits, the OECD (2012) recently reminded us that these benefits are contingent on 'quality'. In other words, lack of quality is not neutral in its outcomes; rather, it results in long-lasting negative effects.

Defining quality for infants and toddlers in group early childhood settings

Achieving quality early childhood services and experiences for children and their families is an overarching goal for policy-makers as well as early years practitioners. Defining quality, however, is not straightforward. Three waves of childcare research, stretching back to the 1960s, alert us to the historical, cultural and paradigmatic embeddedness of the notion of quality and the need to critically evaluate attempts to define it in immutable and universalistic terms (Melhuish, 2001).

First wave research in the 1960s/1970s focused on answering the question of whether childcare was bad for children, especially those aged under 12 months. The eventual consensus that what matters for development is the quality of the children's experiences rather than out-of-home care itself, gave way to 'second wave' research aimed at identifying specific elements within the childcare setting that could be manipulated to produce high quality provision for children and families. In the United States, the National Day Care Study (Ruopp, *et al.*, 1979) identified three 'policy variables' as the 'iron triangle' of quality: group size; caregiver/child ratio; and caregiver qualifications. The variables were reported to impact both caregiver and child behaviour, with less positive interactions and less advanced development associated with larger groups in both centre-based as well as family day care services.

By identifying structural elements of quality that are amenable to policy intervention, second wave research was highly influential in the development of licensing regulations for ECEC services across jurisdictions. It also became the reference point in the development of tools to measure overall levels of quality in centres. This includes the *Early Childhood Environment Rating Scale* (ECERS) (Harms and Clifford, 1980) and later its equivalent for infant-and-toddler settings, the *Infant/Toddler Environment Rating Scale* (ITERS). The more recent *Classroom Assessment Scoring System* (CLASS) (Pianta, *et al.*, 2008) similarly references research from this period.

Third wave research in the late 1980s/early 1990s reflected a more ecological conceptualisation of quality. Research now focused on the connections between structural and process dimensions of quality - such as adult involvement in interactions with children - and their relationship to children's cognitive, linguistic and socio-emotional development (Howes et al., 1992).

Links to the socio-cultural context in which the early childhood experience occurred also became a focus of third wave research, leading to a new philosophical orientation that asked 'Who says what is quality?' (Moss and Pence, 1994; Woodhead, 1996). This positioned the notion of quality as multi-perspectival, contestable and multi-dimensional. An accompanying argument was that the scholarly base of ECEC needed to be expanded to include disciplines beyond child development (Lubeck, 1996). Others argued that quality measures, such as the ECERS, were based on particular values that were culturally derived (Rosenthal, 1999) and thus needed to be applied with caution. In this vein, Munton *et al.* (1995) proposed that, as there can be no agreed definition of quality, the best alternative would be to develop a conceptual framework for deconstructing it.

Research on the developmental impact of childcare experiences, meanwhile, maintained its momentum. In the late 1990s policy attention increasingly focused on the results from the prospective longitudinal *Study of Early Child Care* initiated in 1991 by the US National Institute of Child Health and Human Development (NICHD). The project aimed to settle the recurring controversies about the effects of childcare. Underlying the NICHD studies is a discourse of programme effectiveness and the notion that quality is that which makes a demonstrable difference to children's developmental outcomes.

Since the turn of this century two dominant lines of scholarly argument about ECEC quality have remained in discussion. One line follows the trajectory predicted by Melhuish (2001: 4): research paradigms that adopt 'hierarchical models of children nested within families, families within settings, settings within cultures (communities) etc.', using multi-level modelling and statistical analysis to untangle the impact of various childcare variables on child outcomes. The other line is concerned with critical, philosophical, and multi-perspectival debates about the meaning of quality (Cannella and Viruru, 2004; Prentice, 2009) and the importance of problematising the concept (Graue, 2005).

The complexity of quality practice with infants and toddlers

Early childhood practitioners working with infants and toddlers recognise the complexity of achieving high quality practice. Guided by curricula that frame quality ECEC around principles of positive relationships with children and their parents, responsiveness and respect as the basis for children's learning and development (e.g., the *Early Years Foundation Stage* in the UK; *Te Whāriki* in NZ)

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practitioners report that their daily roles involve complex negotiations of relationships with babies, parents and colleagues in a field that is fraught with professional and emotional tensions, not the least about the place of love, care, and appropriate attachment in day-to-day practice (Dalli, 2006; Moyles, 2001). Seeking ways to maintain a level of professional self-worth in the face of low pay and lack of training and support (Manning-Morton, 2006), to bridge values and beliefs across class and cultural differences (Brooker, 2010) and to exercise professional and personal agency in resisting societal and regulatory gazes (Osgood, 2006) are some other aspects of this complexity. Literature reviews on what constitutes quality ECEC for very young children, and how it might be achieved in practice (Dalli *et al.*, 2011; Mathers, *et al.*, 2014) have sought answers in research across a range of domains: child development and neuroscience; pedagogical work with infants and toddlers, and in findings about child outcomes from structural and regulatory dimensions of quality. As governments seek ways to stem the cumulative negative effects of growing poverty rates and to prioritise spending in constrained economic times, the results from early intervention studies with young children from at-risk backgrounds have also been of interest.

The rest of this paper identifies some key messages from research across these domains highlighting their implications for improving practice in infant and toddler settings.

Research and implications for practice

Child development and neurobiological research: Some of the most significant implications for infant and toddler practice arise from the huge advances over the last decade in neuroscientific inquiry into human brain functioning. Non-invasive techniques for measuring brain activity in children from birth have extended our knowledge of infants' competencies and shown that 'children learn more and learn earlier than previously thought' (Kuhl, 2011a: 128). In this way, many established understandings about child development have been confirmed. In particular, neurobiological research has clarified that the brain is not a discreet cognitive organ but a 'social brain' that is strongly connected to affective and other environmental conditions (Fox and Rutter, 2010). There is agreement that early experiences interact with genes to 'shape the architecture of the developing brain' and that the most powerful catalyst for learning is 'the *serve-and-return* nature of the children's engagement in relationships with their parents and other caregivers in their family or community' (National Scientific Council on the Developing Child, 2007: 1) .

Cross-disciplinary studies from psychology, neuroscience, machine learning and education have further confirmed that language is developmentally linked with cognition and social processes (Kuhl, 2011b). In learning about language, and in understanding causation, infants appear to use the three social skills of imitation, shared attention and empathetic understanding and to 'possess powerful computational skills' (Meltzoff, *et al.*, 2009: 284) to automatically detect statistical patterns in their environment (Kuhl, 2011a).

Children's stress levels have been found to be linked to the quality of their childcare experiences whether at home or elsewhere (Gunnar and Cheatham, 2003; Sims, *et al.*, 2006), with continuous elevated stress levels identified as a risk factor in infancy. When children have no control over their stressful environment and no access to adults who can soothe them, stress becomes toxic and can affect the immune system, emotional well-being (Watamura, *et al.*, 2002), as well as cognitive functioning (Shonkoff, 2010). By contrast, responsive caregiving buffers children against stress and wires up the brain for learning.

Emotionally attuned interactions help infants to learn about emotions and provide them with cues on how to modulate their own responses (Campos, *et al.*, 2004). When an infant does not experience emotionally attuned interactions, their ability to regulate emotions is impaired; the infant internalises negative patterns and does not learn socially acceptable behaviours.

The implications from these findings are clear: babies and toddlers are learners from birth; sensitive responsive caregiving and emotionally attuned interactions in low stress environments open up their brain for learning. Adults who have responsibility for very young children must understand the 'brain story' and base their pedagogical choices on this understanding. Achieving sensitive responsive care in group-based settings requires specific behaviours on the part of practitioners, as well as attention to a range of environmental and structural factors, as explicated in the following sections.

Research on pedagogy with infants and toddlers: Research on pedagogy in group-based settings for under-three-year-olds is a fast-growing field (Degotardi and Pearson, in press; Degotardi, *et al.*, 2013; Goouch and Powell, 2013; White and Johansson, 2011) with key findings converging on the notion of a 'relational pedagogy' (Papatheodorou, 2009). At the level of one-to-one interactions, relational pedagogy draws on the same concepts identified by neurobiological and child development research: for optimal development very young children require sensitive responsive caregiving that relies on attunement and intersubjectivity.

Johansson (2004: 11) wrote of intersubjectivity as 'a pedagogical encounter with the child's life world … approaching and trying to understand the child's whole being'. Intersubjectivity enables sensitivity and responsiveness (Cameron and Maginn, 2008), presence (Goodfellow, 2008) and intimacy and mutual knowledge (Vincze, 2007). Intersubjectivity is built on keen observation (Rinaldi, 2006) and the willingness to 'respond quickly, reliably and appropriately to the infants' signals once read and understood' (Rolfe, 2000: 10).

Translated into specific practices, relational pedagogy with infants and toddlers promotes behaviours such as: the use of language that is respectful and responsive; maintaining a steady stream of positive and warm communication; appropriate use of warm sensitive touch; responding to children as individuals; comforting and supporting children's emotions; inviting participation in activities rather than requiring it; offering choices; engagement in shared activities; daily routines that create a sense of safety and security; and minimising changes of staff (Gloeckler, 2006; Stephen *et al.*, 2003).

The use of a key person - or primary caregiver – system (Dalli and Kibble, 2010; Elfer, *et al.*, 2003; Vincze, 2007) is particularly advocated to provide a structure that supports positive intimate caregiver-child relationships. It enables individualised care within a group setting, allowing a caregiver to follow a child and their routine rather than a roster. When understood and implemented as a team approach, key person systems result in continuity of care for the child and the family thus assisting the caregiving adults in the complex role of sharing the care of very young children.

In its fullness, however, relational pedagogy extends beyond one-to-one interpersonal interactions and positions these as part of individual, historical, societal, and political discourses that need to be critically explored. The broader dimensions of relational pedagogy straddle the interpersonal sphere as well as the broader community and public spheres, recognising that while pedagogy is played out in the here and now, it also stretches out to the in-between spaces that connect us to the past as well as to the future. A key implication of this pedagogy is the imperative that practitioners remain reflective and critically engaged with their pedagogy and its potential for long-lasting impact.

Structural dimensions of quality: Research has continued to show that structural elements are only one part of the equation of quality ECEC, interacting with process dimensions and contextual features such as the philosophical beliefs of a setting, attitudes of staff towards children, the auspices of the centre, as well as its organisational structure (Goelman *et al.*, 2006; Raikes *et al.*, 2006).

The quality benchmark of adult-child ratios in settings for under-two-year-olds remains 1:3 (Expert Advisory Panel on Quality ECE and Child Care, 2009). However, on their own ratios are not sufficient to guarantee good outcomes; they interact with higher levels of staff satisfaction, which interact with factors like appropriate levels of remuneration.

Qualified staff with up-to-date understandings of very young children have positive effects, creating a case for both pre-service and in-service training (Munton *et al.*, 2002). The content of training must be relevant to the age group and reflect current knowledge about infant learning and development (Elfer and Dearnley, 2007; Hallam *et al.*, 2003; Macfarlane *et al.*, 2004). Specifically, it should include: critical reflection; a focus on understanding the diversity of children's and families' contemporary lives; and a research and evaluation focus (Nimmo and Park, 2009)

Mentoring of less experienced staff by more experienced practitioners (Fiene, 2002) enhances sensitivity to infants, and ongoing professional development with a component of on-site consultation benefits infant–toddler programmes overall, and inclusive practices specifically (Campbell *et al.*, 2005.

Higher level qualifications have been linked to a positive attitude towards infants and toddlers and their learning Kowalski *et al.*,) as well as with more inclusive pedagogical practices (Hestenes *et al.*, 2007) Having the possibility of a career structure, with high status that recognises the professional expertise of staff, is likewise seen as benefitting quality (McCain and Mustard, 1999).

Clearly research on structural elements of quality reveals a set of interrelated dynamics, with the key policy implication being that any changes to specific elements are likely to have repercussions beyond the immediate specific change itself. For practitioners, the main implications derive from findings about the importance of higher level and specialised training for work with infants and toddlers to ensure their knowledge of very young children remains current and in tune with the diversity that characterises contemporary life. The importance of favourable working conditions is a further implication as these facilitate low staff turnover and thus continuity of care for children.

Research on programmes for at-risk populations: The research base clearly shows that high quality early intervention programmes act as a buffer against the damaging effects of adverse life conditions. This is especially the case for children in multiple risk contexts such as: poverty, father absence, large household size, low maternal education, high maternal depression, and high life stress (Dearing *et al.*, 2009; McCartney *et al.*, 2007). Additionally, parents also benefitted indirectly from the support received by their child. The characteristics of effective early intervention programmes reflect those in mainstream high quality ECEC settings. In addition, they typically offer multiple services that target the child within the family context and are at least one year long. They are supported and funded by central governments and have clear programme protocols and community partnerships. Effective early intervention programmes combine centre-based intervention with home-visiting, provide transport to assist access, include focused curriculum experiences such as language enrichment interventions, and include meaningful evaluation alongside intervention strategies.

Longitudinal studies have also shown that 'some of the most important societal gains to be realized from early childhood programs may not be seen until late adolescence or early adulthood' (Campbell *et al.*, 2008: 464).

These messages point to the conclusion that high quality ECEC can make a lasting positive difference – and act as a protective factor for children at risk. This is an important message for practitioners and policy-makers alike.

Concluding thoughts

Defining quality ECEC in infant and toddler settings is complex and requires a multi-dimensional and cross-disciplinary approach. Achieving quality in practice is likewise complex. At the level of lived experience, very young children need warm responsive interactions with familiar adults who know them, can read their communicative bids and guide them in making sense of the world they live in and contributing to it. This kind of pedagogy requires teacher action as well as a supportive infrastructure within the immediate ECEC setting and the broader policy level.

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