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Child and Adult Perspectives on Implementing a Quality Improvement Strategy in ECEC Settings

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Abstract

This article presents findings from a mixed methods research project which sought to include the voices of young children in an ongoing evaluation of a government funded community-based prevention and early intervention programme in Ireland. The main objective of the intervention programme is to measurably improve the lives of children (pre-birth to six years) and their families through universal and targeted services in an urban community which experiences high levels of socio-economic deprivation. A key aspect of the programme is an Early Childhood Education and Care (ECEC) strategy which involves the delivery of a suite of Early Years quality improvement measures to seven ECEC centres (both crèche and preschool rooms) in the catchment area.

The core elements of the quality improvement strategy focused on language supports for practitioners (Hanen Learning Language and Loving It™ training), curriculum enhancement (HighScope™ curriculum training), onsite mentoring for practitioners, and an Environment Enhancement Fund for each centre. The project evaluation utilised a mixed methods approach including pre and post programme Environmental Rating Scale (ERS) assessments (ECERS-3) at seven early years centres. Post programme implementation ERS results show significant improvements in many areas, in particular scores related to adult-child interactions. Using participatory research guided by a children's rights framework and informed by UNCRC Article 12, children's voices are being included in the project evaluation through participatory research methods including photo-voice and talk and

draw methods. The article presents findings from post-intervention ECERS-3 assessments and qualitative interviews with early years' practitioners which were merged with the findings in the children's data to improve the overall implementation of the programme.

Introduction

This article will present findings from a mixed-methods research project which is part of an ongoing evaluation of a government funded community-based prevention and early intervention programme in Ireland. The main objective of the programme is to measurably improve the lives of children (pre-birth to six years) and their families through universal and targeted services in an urban community which experiences high levels of socio-economic deprivation. Nugent (2015) states, Communities and nations that value families and create environments where children are supported to achieve their full potential, perform better across a range of health and social indicators'. This programme has sought to deliver evidence-based programmes and activities set firmly in the context of existing early childhood services, enhancing the service provision of local practitioners, sustainably meeting locally identified needs and delivering services within an inter-disciplinary framework (Buckley & Curtin, 2018, p.21).

Research into prevention and early intervention programmes highlight how such initiatives can break the intergenerational cycle of poverty and disadvantage that can have life-long positive effects on outcomes for children and young people (Prevention and Early Intervention Network (PEIN), 2019; Camilli *et al.,* 2010). Such programmes are most effective when they are implemented with fidelity and are adapted to meet the local needs of communities. Capacity building, integration and quality improvement have been identified as three interconnected approaches which are essential to drive any successful local intervention (Hutchings and Gardner, 2012). High-quality care and education, particularly for children aged 0 to 6 years, has been found to significantly influence development and learning later in childhood (OECD, 2011; HighScope Educational Research Foundation, 2019). Recent findings also show the importance of early years practitioner training plans within the voluntary and non-profit sectors which have been found to impact positively on service quality (Melhuish & Gardiner, 2019).

The main focus of the quality improvement strategy in this study was on process quality (Slot 2015) with a particular focus on curriculum improvements and the quality of children's experiences and *et al.,* relationships in the settings. This article will explore how the findings from post-intervention ERS assessments and qualitative interviews with early years' practitioners can be merged with findings in the children's data to improve the overall

implementation of a community-based prevention and early intervention programme. This paper will outline the development of the ECEC quality improvement strategy, the research methodologies employed, the results and the merging of child and adult data, and a discussion of the findings and the value of including child-centred participatory research when evaluating intervention programmes to shape practice and to ensure that children remain at the centre of such programmes.

Developing the ECEC Quality Improvement Strategy

A key element of the prevention and early intervention programme is an Early Childhood Education and Care (ECEC) strategy which involves the delivery of a suite of early years quality improvement measures to all ECEC centres (both crèche and preschool rooms) in the catchment area. Between 2015 and 2018, a programme to support quality improvement in early years settings in the community was developed and implemented in seven ECEC settings. These settings were diverse in their pedagogical approach and context, and included a Montessori centre, a primary school Early Start centre, a targeted early intervention centre, and a community preschool using a play-based approach. The strategy was guided by an Early Years Co-ordinators Group and aligned to the national early years curriculum and quality frameworks of *Aistear (2015) a*nd *Síolta.*

The core elements of the strategy are focused on language supports (Hanen Learning Language and Loving It^{TM} training for practitioners), curriculum enhancement (High/Scope curriculum training), onsite mentoring for practitioners provided by the ECEC Specialist Mentor and an environment enhancement fund for individual centres. Implementation of the suite of ECEC quality improvement measures was coordinated by members of an inter-disciplinary team which included an ECEC Strategy Co-ordinator, an ECEC Specialist Mentor, and a HighScope facilitator. Speech and Language Therapists also called 'Oral Language Officers' were responsible for delivery of the Hanen Language Programme to ECEC practitioners (Weitzman, Girolametto, & Greenberg; 2006). The implementation was overseen by a local ECEC Strategy Coordinator, who was also the manager of one of the local settings and this contributed significantly to successful implementation of the initiative.

The ECEC Specialist Mentor was an independent ECEC Policy and Education Specialist who was contracted to provide onsite mentoring and

coaching to ECEC practitioners which will be further discussed. There were also some supports of structural quality including a grant for each setting for environment enhancement. The implementation of a Mentoring Programme involved weekly site visits by the ECEC Specialist Mentor specialist onsite mentor in which the implementation of curriculum content and the suggested environmental changes and teaching strategies were overseen and supported (Buckley, Martin and Curtin, 2020).

Rationale

Among recommendations stemming from the process evaluation was the need for outcome and impact studies in order to document and realise the full potential of the intervention programme, as well as the need to capture the perspectives of the youngest in the community (Buckley & Curtin, 2018). How to measure this impact and where the space for children's voices existed was considered. A collaborative participatory research project sought to include the voices of young children involved with the early years' quality improvement initiative. The inclusion of practitioner and child voices in the evaluation design allows for triangulation of results and multiple voices and perspectives to be included in the programme evaluation. One common challenge of evaluating a quality improvement programme is the tendency to focus on quantitative outcomes. This article will explore how the findings from post-intervention ERS assessments and qualitative interviews with early years' practitioners can be merged with the findings in the children's data to improve the overall implementation of the programme.

Methodology

Supported by an integrated research and evaluation process, a process evaluation of the intervention programme was conducted three years after implementation to ensure transparency and accountability, and to share learnings about how a community-based programme can be a mechanism to translate evidence and science into prevention and early intervention practice (Buckley & Curtin, 2018). A mixed methods approach was adopted to evaluate the early years quality improvement strategy.

Data Collection

Quantitative Data

Quantitative research comprised of analysing pre and post improvements using Environmental Rating Scales (ERS) assessments at seven early years centres. Qualitative research included the collection and analysis of early years' practitioners' perspectives and experiences of the processes of the quality improvement strategy. ERS assessments have been used extensively in order to measure quality in ECEC settings internationally and the measures have high levels of inter-rater reliability (Melhuish & Gardiner, 2019). For example, this has been used to measure process quality in ECEC settings in the largescale Study of Early Education and Development (SEED) longitudinal study in the UK study (Melhuish, and Gardiner, 2019).

In January 2015, prior to the roll out of the quality improvement strategy, independent evaluators, A+ Education, were contracted to conduct baseline ERS assessments in the seven early years centres in order to quantitatively measure the quality of early years settings and service provision prior to the implementation of the suite of quality improvement measures. The Early Childhood Environment Rating Scale – Revised (ECERS-3) was designed to evaluate quality of provision for children aged 2½ to 5 years in centre-based settings and measure quality in a broad sense and examine seven broad dimensions of quality: space and furnishings, personal care routines, language and literacy, learning activities, interaction, programme structure and finally an overall quality rating.

Qualitative Data

Alongside ECERS-3 quantitative data, assessors provided qualitative descriptions of the quantitative findings. Additional qualitative data collection took place post-intervention including small groups interviews conducted with Early Years practitioners (n=9), a focus group conducted with Early Years Managers (n=5), and a one-to-one interview with the onsite Early Years Specialist Mentor.

Data Analysis

Quantitative Data

Post ECERS-3 assessment scores were analysed and compared by A+ Education independent assessors. The assessor assigned a descriptive value on a scale of 1 to 7 (1=inadequate and 7=excellent) to describe the quality of specific items within the early childhood environment for each of the seven subscales within the ECERS-3 tool. MS Excel was used to generate descriptive charts to illustrate results.

Qualitative Data

Guided by the Framework for Programme Evaluation in Public Health (CDC, 2013), qualitative data was subject to thematic analysis guided by The Framework Method (Richie & Lewis, 2003) which provided a systematic and flexible guide to conducting data analysis which focussed on commonalities, differences and relationships between the data (Buckley & Curtin, 2018). NVivo 12.0 was used to collate qualitative data for thematic analysis. Data were categorised, coded and expanded into themes. Reflexive dialogue ensured codes and themes were driven directly from the data set of the lived experiences of the Early Years practitioners, managers and ECEC Specialist Mentor. Sub and overarching themes were repeatedly refined through the analysis of patterns across the data set and direct quotes were used to group and illustrate themes. Early Years practitioner data appear in the results section as italicised quotations and qualitative ECERS descriptions appear in the results as non-italicised quotations.

Children's Data

In 2018, child-centred research was conducted with children at one of the seven centres. Using participatory research guided by a children's rights framework and informed by UNCRC Article 12, children's voices are being included in the project evaluation through participatory research methods including photo-voice and talk and draw methods. For the research with children, the study used visual, story and picture-based materials and prompts to introduce the study to children in their preschool settings (Clark and Moss, 2011; Einarsdottir, 2014). Children were offered the opportunity to share their views with the researcher through a variety of participatory rights-based approaches including drawing, photography, and conversations (Dockett *et al.*, 2012). Photovoice methodologies were used which involved the children being supported to take their own photos within their preschool setting and these

photos were used as a motivation and basis for conversations with the researcher (O'Connell, 2011; Woodgate *et al,* 2017) (see Martin & Buckley, 2018 for full discussion of these methods). Alaca *et al.* (2017) found that Photovoice methodology is a very effective research tool with children aged three to five years in preschool settings as it supports and encourages their expression. Photovoice methods allow children to exercise power during data gathering as they choose and take the photographs themselves and the subsequent interviews and conversations with children will revolve around the images which they have photographed allowing them to direct the interview process (Martin and Buckley, 2018).

Ethical Considerations

Child-centred research methodology was guided by the DCYA *National Guidance for Developing Ethical Research Projects Involving Children (*DCYA, 2012) and ethical approval was granted by the Social Research Ethics Committee in University College Cork. One of the key ethical issues arising through this research was ensuring that specific people, settings and families are not identified and that any sensitive issues arising, perhaps relating to individual children and family circumstances, are anonymised. A strict policy of confidentiality and anonymity was adhered to throughout the research process. The research adhered to child protection guidelines already in operation in the preschool settings. Parental consent for their child's participation in the study was sought and all issues related to the study were explained to parents both through the study information sheet and verbally by the preschool practitioners in the Centre. Informed consent was sought from the children through two steps: informing and consenting. To inform the children about the study the researcher developed a picture book about the research project, which introduced the researcher and explained the purpose of the study in a visual and child friendly way following a 'non-narrative-fiction' approach identified by Mayne *et al.* (2016). The storybook was developed in conjunction with the preschool practitioners to make sure it is appropriate to the children's age and cultural understanding. Once the informing step was complete consent was sought from the children verbally and children could also answer yes or no or give a thumbs up and thumbs down sign. The children's ongoing assent was monitored by the researchers and by the preschool practitioners who were very familiar with the children

and work with them on a daily basis. For the adult-centric research, fully informed consent was obtained prior to all interviews and focus groups. All participants were provided with an information sheet which included details about the study and the researcher's contact details.

Study Limitations

The study has a number of limitations and challenges. Family voice is not included in the programme evaluation reported in this article and this is currently being addressed in the on-going evaluation. Some aspects of Structural Quality including practitioner qualifications and child-adult ratios was not collected at the time of the study partly to protect the anonymity of the settings within the community; this obviously has some implications for comparisons between settings in relation to the study outcomes. A further limitation of the research is that the participatory research with children was only conducted in one of the ECEC settings in the programme and it is important to replicate the opportunities for child-participatory research in each of the seven participating centres and embed it into on-going programme evaluation.

Results

The article will explore how the findings from post-intervention ECERS-3 assessments and qualitative interviews with Early Years practitioners can be merged with the findings in the children's data to improve the overall implementation of the intervention programme. Both quantitative and qualitative findings indicate that the quality within the seven early years centres improved significantly following the implementation of quality improvement measures. Areas within pre-school rooms that experienced most notable improvements included programme structure, language, literacy and interaction. Post programme implementation ECERS-3 data have shown significant improvements in many areas, in particular scores related to adult-child interactions. Notably, a number of key themes and commonalities emerged between post-intervention adult-level qualitative data and the findings from the participatory research with children.

Quantitative Findings: ECERS-3 Results

Results from ECERS-R assessments are presented in Figure 1 and demonstrate that at baseline (pre-intervention) the overall quality of the pre-school rooms across the seven sites was rated to be an average of 3.5 out of 7 on the ECERS-3 scale, a 'sub-optimal' score on the ERS ratings scale. On average, the seven sites rated below a score of four out of 7, indicating that there was opportunity for improvement in general across all areas of childcare in each of the seven ECEC centres. Follow-up (post-intervention) ECERS-3 scores revealed significant improvements for 'programme structure' (+2.3) and 'personal care routines' (+1.8). Pre-ECERS-3 (pre-school) assessments recorded an average score of 3.5. Post-ECERS-3 assessment recorded an average score of 6.0, thus pre-school rooms across seven ECEC centres experienced an overall improvement of 2.5 in childcare quality.

Figure 1: Overall Pre and Post ECERS-3 Results by Sub-scale

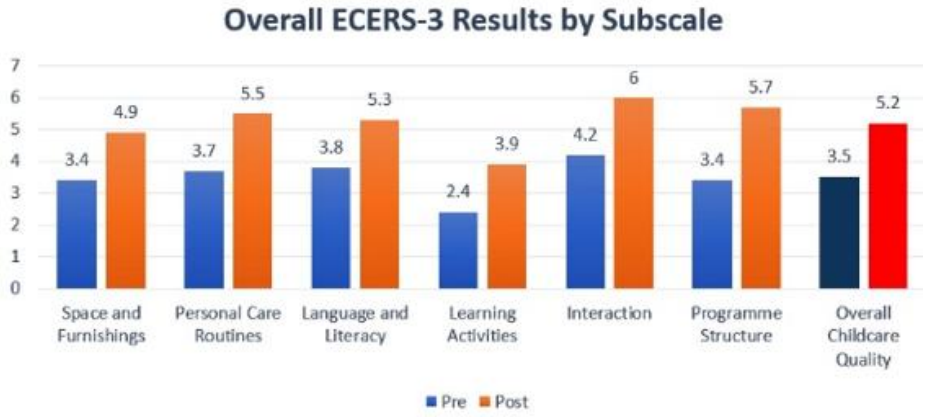


Table 1 provides a detailed breakdown of Early Years centre's pre and post ECERS-3 results by sub-scale. 'Programme Structure' experienced the greatest impact across six ECEC centres, three centres in particular recording significant results: centre A increased from a pre ECERS-3 score of 1.0 to a post score of 5.4 (+4.4); centre C increased from a pre-ECERS-3 score of 2.4 to a post score of 5.7 (+3.3); and centre D increased from a pre-ECERS-3 score of 1.6 to a post score of 5.7 (+4.1).

Table 1: Pre and Post ECERS-3 Results by Sub-scale

Overall ECERS-3 (Pre-school) Results												
	Centre A		Centre B		Centre C		Centre D		Centre E		Centre F	
Sub-scale	*Pre*	*Post*	*Pre*	*Post*	*Pre*	*Post*	*Pre*	*Post*	*Pre*	*Post*	*Pre*	*Post*
Space and Furnishings	3.6	5.0	3.5	4.6	2.0	3.9	3.3	5.2	4.0	5.5	3.8	5.2
Personal Care Routines	3.3	5.8	4.3	5.5	4.0	4.3	2.7	5.7	4.5	5.5	3.5	6.0
Language and Literacy	2.6	4.4	5.4	5.8	2.6	5.2	3.3	4.9	4.2	5.4	4.4	5.8
Learning Activities	2.1	4.4	1.8	3.3	2.3	2.5	2.2	3.9	2.6	4.2	3.4	5.1
Interaction	3.0	4.6	5.4	6.6	3.2	6.6	3.1	5.3	5.0	6.2	5.2	6.4
Programme Structure	1.0	5.4	3.7	5.7	2.4	5.7	1.6	5.7	6.0	5.0	5.4	6.4
Overall Childcare Quality	**2.6**	**5.0**	**4.1**	**5.3**	**2.8**	**4.7**	**2.8**	**5.2**	**4.4**	**5.3**	**4.3**	**5.9**

The results indicate overall improvement in childcare quality across the seven ECEC centres following the implementation of the ECEC quality improvement programme. These areas are further analysed in the children's data.

Main Findings from Interviews with Early Years Practitioners, Managers and ECEC Specialist Mentor

Interviews with Early Years practitioners identified a number of key themes and supported the findings of the ECERS-3 assessments. Capacity building through curriculum and language trainings, supported by the specialist ECEC Specialist Mentor, was found to have benefitted practitioner knowledge and service delivery. Early Years practitioners observed direct impacts of this upskilling on children attending the Early Years centres. Practitioners felt empowered and were found to have fostered an increased sense of confidence and stronger sense of being valued. In addition, some felt that they had an improved relationship with Early Years centre managers. Managers interviewed also noted that participation had positively impacted on service delivery. They described observed improvements in child behaviour outcomes and noted that the environmental enhancement fund and onsite mentor support were central to effective implementation of the quality improvement programme. In particular, onsite mentoring was identified as being a core factor in improving quality within the settings. The ECEC Specialist Mentor delivered her observations to settings via presentation with

photographs and video clips and follow up emails which practitioners identified as being effective, clear and practical.

Merging the Child and Adult Data

The following section will explore how findings from the post-intervention ECERS-3 and the qualitative interviews with Early Years practitioners can be merged with the findings in the children's data. The section will examine some of the key themes from the children's data in light of the findings from the overall project evaluation (see Buckley & Curtin, 2018, for full report on evaluation).

Evidence of Positive Adult-Child Interactions in Practitioner and Child Data

Qualitative descriptions of ECERS-3 quantitative findings show that Early Years practitioners were found to be 'calm, kind, warm, and fully involved' and that 'children were encouraged, accepted, valued and respected'. In the area of *Listening and Talking,* practitioners were found to 'talk very easily to children, both conversationally and as part of learning' and to 'show warmth and respect towards the children and this is reflected in children's positive behaviour'. These findings are reflected in the children's data through an overwhelmingly positive view of early years practitioners observed in children's photography and imagery descriptions. A very positive view of practitioners based in their preschool room was observed on several occasions. Photographs of children with their key worker show the practitioners interacting with the children in a positive, child centred approach such as playing with children on the ground, table top activities with staff and children or hugging the children. Strong adult-child relationships are observed in photos where children are smiling, hugging and taking numerous selfies with their key workers.

Importance of 'Circle-Time' and Focus on the Relational Aspects of Care

Children also took photos of the early years practitioners demonstrating positive socio-emotional regulation through the use of the puppets and engaging in circle time activity with them. In the interviews and focus groups,

practitioners noted the visible the improvements on child learning, development and behaviour, noting children's increased sense of independence through a more child-led approach to learning, *"a*lthough sessions are more structured now it *i*s much more child-led, they are so much more independent now. They love making their own plan and choosing what to do". Practitioners also frequently referred to children's increased responsibility in cleaning up after themselves and placing objects in their correct places, "because of all of the labelling we have a new approach to tidying up and the children take more responsibility now". Children took a number of photos of the circle time mat and activities related to socio-emotional regulation and appeared to be comfortable articulating the language and techniques, which the practitioners had been using to support socio-emotional development and conflict resolution in the setting. Early years practitioners noted, "we learned how to talk to children, how to find out what the problem is and how to deal with it". Friendship and peer relations was a key theme in children's data, this emphasises the centrality of relations with peers for the children involved. A large number of photographs of the practitioners emerged; many of these showed the staff interacting with the children in a very positive, and child centred way such as playing with children on the ground, table-top activities with practitioners and children or hugging the children.

Language and Literacy

Improvements in language and literacy were reported in the quantitative data and in the qualitative post ECERS-3 data, for example in the pre-intervention report practitioners were asked to reflect on 'the range of books accessible to children and opportunities for them to access books supported by staff'. Evidence from the children's photographs demonstrated the children were engaged with books within their setting and six of them took photos of books within their setting including story time. The children were enthusiastic describing the books to the researchers and many picked a particular book that they had been focusing on in the setting as one of their favourite photo subjects. Children took photos of practitioners during story time. There is evidence then in the children's data that literacy was an important part of their daily experience in the setting which does reflect the findings from the adult-centred data.

Evidence of Improved Programme Structure in Staff and Child Data

In post-intervention evaluation interviews, the EY staff reported improved programme structure and while the children were not explicitly asked about this, there is evidence from the children's data that they were aware of key activities and transition times such as tidying-up and moving from one activity to another. These events appeared in their photos and several children spoke about these transitions in their PhotoVoice interviews indicating they could articulate what was happening during these periods. This reflects the post-intervention ECERS-3 findings that "transitions and routines are explained visually and verbally by interactive use of the timeline of the session. Children are actively engaged in the use of this". An increased sense of responsibility and independence in children was observed by early years practitioners post-intervention, "they are so much more independent now, they love making their own plan and choosing what to do", and some of the children did discuss their responsibilities such as tidying and the *child of the day* jobs which they undertook in their conversations with the researchers. Also in relation to programme structure, post ECERS-3 qualitative descriptions found "children spent most of their time in free play and there are plenty of materials to use" and this is reflected in the large number of photos that children took of the materials which were freely available to them and the different play spaces where they had plentiful access to materials in their setting. Children frequently took photos of materials they liked playing with such as mask making materials, paint and Lego, and the children's photographs demonstrated good provision of materials for fine motor development. The children's data did reflect post-intervention ECERS-3 findings which refer to the "many interesting materials for children to choose in all rooms".

Evidence of Positive Peer Interactions

In terms of interactions within the early years centres, post intervention ECERS-3 assessments found that "children's peer interactions are supported and staff encourage them to play together and to be considerate towards others". This was reflected in the participatory research with the children. The issue of peers and friendship was the most common theme in the children's

data and was observed frequently within their photographs. Children were very positive about their relationship with their peers and most identified a close group of friends in the setting which were frequently the subject of their favourite photographs. Among interview responses, one early years practitioner described how the HighScope curriculum had increased conflict resolution and considerate play among the children, "before they would have just hit each other and walked away, now they try to talk about what's bothering the". This finding appears to be reflected in the PhotoVoice data as a number of children mentioned issues of conflict with their peers in their conversations with the researchers.

Access to Spaces within the Setting

Children's data presented some interesting findings regarding their perceived access to spaces within the setting and what was perceived as adult or child only spaces. They took photos of the stairs leading to a playhouse on a platform but there were no photos inside of the playhouse. Children may have felt this was one private space which was not subject to an adult gaze as it is a difficult space for adults to physically access and tends to be a children's only space. Children took a small number of photos of the kitchen area and comments on the rules in this space. For example, one child commented that "a child went in there last week but he wasn't allowed he is too small and she (the Chef) caught him". Post-intervention ECERS-3 findings highlight that there was practitioner recognition of the outside area as being an equally important part of classroom, but this was not reflected in the children's PhotoVoice data. While four children picked outdoor play spaces as their favourite places in the Photo-elicitation session and there was some discussion of outdoor space in the Talk and Draw session. There was almost no discussion or photos of outdoor space in the PhotoVoice sessions. Children seemed to restrict themselves to taking photos in their classroom and the kitchen and did not use the photos to take photos of the outdoor spaces. The conversations in the Photovoice sessions tended to focus on the concrete objects or areas that the children photographed, and this meant there was very little discussion of outdoor spaces as these were absent from the children's photos.

Discussion

Overall similar themes emerge in the child and adult data, and in particular there is strong evidence on improvement in peer and child-adult relations across both sets of data as well as improvements in programme structure. Kernan & Singer (2010) describe how children within early years care and education settings seek, in adult caregivers and peers, the emotional bonds and feelings of security that they first established with family members. Friendship and peer relations was a key theme in the child generated data, and this emphasises the centrality of relations with peers for the children involved.

Children's early years are critical for development and a strong, responsive relationship between children and their carers are important in facilitating children's communication development (Brebner, 2015). Findings from the children's data also highlight the very positive views they hold of the practitioners in the early years setting, in particular the very positive views of their key workers. The key workers are featured extensively in the children's photographs which is particularly positive given the research evidence on the role of a key person in ECEC settings promoting positive attachment and attunement for young children (French, 2019). Triangulation of data in this study provides evidence to indicate that the implementation of a quality improvement strategy within early years centres can encourage responsive child-adult relationships. Highlighting the significance of such relationships, McKelvey *et al.,* (2015) describe how caregiver-child relationships form the proto-type for subsequent relationships throughout the course of a child's lifespan, and the quality of this attachment has significant impact on future physical and health outcomes.

Findings from the adult and child data demonstrate improvements in socio-emotional regulation such as the emphasis on circle time space evident in the children's data. Previous research has pointed to the negative impact of poor quality ECEC on children's socio-emotional regulation. For example, Melhuish and Gardner (2019, p.12) noted that children with "more reactive temperaments are both more likely than other children to exhibit behavioural problems when exposed to low quality ECEC and are also more likely to exhibit good levels of socio-emotional skills when exposed to high quality ECEC". Supporting children's socio-emotional regulation is an important aim of the overall programme and it is affirming to see evidence of positive socio-emotional regulation in the findings.

The positive impact of the intervention on language and literacy in the settings is reflected in both adult and child data. The quality improvement

strategy had a strong focus on literacy, implementing the Hanen Learning Language and Loving It™ training which views a child's development of language, social skills, and emergent literacy within the context of the early caregiver-child relationship and interactions. Previous research has demonstrated the impact of Hanen Learning Language and Loving It™ on educators' ability to support children's peer interactions and increase opportunities for children's successful language-based social interactions (Girolametto, Weitzman and Greenberg, 2006) and results from this current study reflect similar findings.

The improvements in quality which are evidenced by the improved post-intervention ECERS-3 scores are demonstrative of the positive impacts of supporting practitioner training and development in ECEC settings. This reflects findings from other research such as that of Melhuish and Gardiner (2019) who contend that improving both practitioners qualifications and in-service professional development are central to any attempts to improve quality in ECEC provision. The role of the ECEC Specialist Mentor was identified by the adult participants as being particularly important for the successful implementation of the quality improvement strategy and the importance of supporting capacity building has been identified as essential for supporting successful interventions (Hutchings and Gardner, 2012).

Interrogating the adult findings in light of the children's data also helps the programme focus on areas where there may be a disconnect between adult and child perceptions of how they experience the ECEC setting. The findings draw attention to potential discontinuities between indoor and outdoor settings and the need to address these (Fabian, 2005). For example, the focus on outdoor space in the environmental enhancement aspect of the early years quality improvement strategy of the programme is not reflected in the children's data. The children's data draws attention to the children's experiences of transitions in the settings and the need to further support children to feel a sense of ownership and belonging in all areas of the settings.

Conclusion

The quality improvement strategy implemented in this study was complex for a number of reasons including both the diverse types of ECEC setting in the programme and the complex child development and family support needs identified within the wider community (Buckley and Curtin, 2018). However, despite these complexities the results from the study demonstrate some very

positive outcomes in relation to quality improvements after programme implementation. A key challenge for the programme will be ensuring that gains in quality improvements in the ECEC settings are not lost due to ongoing sectoral issues with staff retention in the ECEC sector (Thorpe *et al.,* 2020) and new and unprecedented challenges emerging due to the Covid -19 pandemic. For example, the positive findings related to friendship and peer interactions might be impacted by the extended closures of the settings, as emerging international research is showing that lack of direct interaction with friends and other family members due to the pandemic is likely to have a significant impact on children (Darmody, Smyth and Russell, 2020).

The inclusion of child-centred participatory research in the ongoing evaluation work of an intervention programme was an opportunity to allow children's voices to contribute to the evaluation and to challenge adult-centric data which emerged from predetermined measures. It is also an important tool in supporting a children's rights approach in ECEC. It will furthermore allow for opportunities for children's voices to shape how practice in the programme can move forward and ensures that children remain central to the programme.

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