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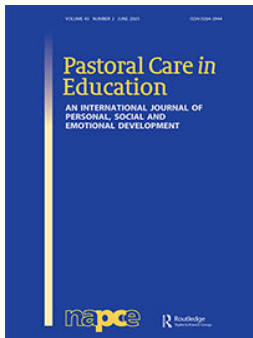
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Developing a mapping tool to support connection and loving relationships in early years settings

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ABSTRACT

Loving relationships between children and adults in early childhood education and care support children to settle more quickly into new environments, form other attachments, improve language acquisition and progress in reading and grammar. A positive, loving relationship with an adult can also provide a secure base for development and learning and a template for trusting relationships with adults. There is a lack of guidance and support for how to foster such relationships. To address this, a sociogram-based relationship mapping tool was developed to explore relationships between teachers and young children in their care. The relationship mapping tool was developed and tested with a group of teachers of children aged 4–5 years. The teachers met over a school year, discussed their practice and mapped their relationships with the children in their class. The study highlights three key findings of the benefits of using the relationship mapping tool: it made all children in the class visible to the practitioner; enabled the practitioners to learn about relational practice; it helped the practitioners to create stronger connections with children as this implicit area of practice became explicit. The mapping process enabled the participants to co-construct their understanding of the relationships in the classroom and to critically reflect on the factors that impacted on their relationships. We discuss the professional development potential for relationship mapping for teachers to have the space to collectively reflect on relationships over time and support teachers' understanding and self-awareness regarding their relationships with children.

Introduction

The longstanding tradition of care in early years practice, including the importance of early attachment (Bowlby, 1969), is reflected in statutory guidance and within the Early Years Teacher Standards in England (DfE, 2013). Interest in the quality of relationships in the early years has heightened since the Covid pandemic. The relational support for young children's personal, social and emotional development has been highlighted as a way of addressing the negative impacts of the pandemic on young children's development (Nelinger et al., 2021). This adds to a growing body of academic work on loving

relationships between practitioners and children in the context of Early Childhood Education and Care (ECEC). Recent developments in this area have explored relationships through the lens of 'professional love' (Page, 2018). This term has increasing currency as a way of defining the strong, warm relationships between ECEC practitioners and the children in their care.

The relationship between educator and child is highlighted in statutory frameworks for those working in ECEC in England, the site for the study reported in this paper. The English Early Years Foundation Stage (EYFS) Statutory Framework (DfE, 2024) covers the education and care of children aged 0–5 years. It highlights the importance of 'strong, warm and supportive relationships' (DfE, 2024, p. 9) between children and adults and requires every child to have a Key Person in the setting to build a relationship with the child and their family. Despite this requirement and the growing interest in the impact and benefits of loving relationships in ECEC, there is little guidance on how these are to be achieved. Tools that make relationships visible and explicit can support ECEC practitioners' reflection on the nature and quality of the relationships they have with children in their care. Here, we describe the development of such a tool – the relationship mapping tool. This tool combines a sociogram with guidance on its use and was developed in this study to map relationships in reception classes across the academic year. Our approach extends the use of sociograms in other educational contexts to examine relationships and to make connection and closeness visible (see below). However, as far as we are aware, the use of relationship mapping we report here is distinctive in being undertaken in a context outside the USA, the focus on reception teachers, and sustained use over time as a professional development tool.

After further explaining the rationale for developing the tool, we describe the design and developmental process with a small group of ECEC teachers (see also Pearse, 2021 for further details of the study). In this case, these are English reception class teachers. Reception is the first year of statutory schooling in England and also the last year of the Foundation Stage.

The study drew on participatory research methods to create a collaborative space where this implicit area of practice could be discussed explicitly, and a tool developed that would potentially aid this process. The engagement of the participants in developing the mapping tool resonates with research which challenges current practice and in which researchers and practitioners work together to understand the complexity of practice (Moss, 2014).

The teachers met over the course of a school year, discussed their practice and mapped their relationships with the children in their class. We describe how the relationship mapping tool was effective in supporting practitioners' understanding of ways in which they were enacting relationships and ensured that each child was considered individually at several points across the year. The potential for the use and further development of the tool beyond this study are discussed.

Loving relationships in early childhood education and care

Early childhood education and care (ECEC) educators identify loving relationships as a key aspect of their practice, despite explicit discussion in early years training and practice

being relatively rare. A range of studies show that these relationships support young children's learning and development.

Researchers have explored the role of caring in ECEC revealing that care is regarded as a core aspect of teaching and one that reflects teachers' beliefs about their role (Goldstein, 1998; Goldstein & Lake, 2000; O'Connor, 2008). One approach to conceptualising the importance of relationships is through the ethics of care (Noddings, 1988, 2001) as applied to ECEC (Vaughn, 2024). Warm, supportive and positive relationships between teachers and children support children's adjustment to the school environment, help develop a positive view of school and impact attainment in areas such as language acquisition, reading and grammar (Hamre & Pianta, 2001; Murray et al., 2008; Pianta & Stuhlman, 2004; Schmitt et al., 2012). The same research indicates a potential link between conflicted and dependent relationships and socio-emotional difficulties. As these positive relationships can improve child outcomes, they can also be used as a measure of the quality of the ECEC provision (Burchinal et al., 2021; Paschall et al., 2023).

Positive attachment to preschool teachers can improve children's school readiness and the ability to make best use of the learning environment (Commodari, 2013). Furthermore, Uusiautti and Määttä (2013) consider the role of early childhood teachers as love-based leaders in the Finnish context and the positive impact this could have on children's wellbeing and outcomes. They argue that there is significant evidence that children respond to love-based leadership that consistently demonstrates love, forgiveness and trust with 'engagement, productivity, and satisfaction' (p. 112).

Page (2011, 2018) has explored the concept of 'professional love', mainly in relation to practitioners in day care settings, and proposes that professional love is characterised by three key principles: a reciprocal feeling between the educator and the child; shifting the focus from the educator's needs to those of the child; and the educator investing emotionally in the relationship (Page, 2018).

The small-scale nature of some of these studies and a lack of consistency between children's and adults' perceptions of the quality of their relationships (Murray et al., 2007) highlights that this is an area that requires further research particularly focused on means to help practitioners reflect on the nature and quality of the relationships they have with the children in their care.

The fact that these studies indicate that warm relationships support adjustment to the school environment is important for the study of relationships between teachers and children in the English Reception class context, as this is the first year of statutory schooling.

Sociograms and relationship mapping

The concept of visual sociograms as a means of representing complex social relationships originated in the work of Moreno (1953). Moreno proposed that the social atom comprised the personal relationships essential to the individual's daily life (Buchanan, 1984) and this is the smallest unit of humanity, not the individual. Moreno argued that every individual is born into a set of relationships, and these expand as the child grows and moves into wider society and then dwindles in old age as members of the social atom die and are not replaced. The social atom is linked to other social atoms that form social molecules or subcultures, and these come together to form cultures (Buchanan, 1984). To

explore social atoms, Moreno developed the sociogram to visualise social relationships between individuals. A sociogram for an individual would typically show the person represented by a shape and their name at the centre with people who they have significant relationships with surrounding them. The basic sociogram can be enhanced by using distance to represent degrees of closeness and other symbols to show whether individuals have positive or negative responses to each other (see Tubaro et al., 2016). Moreno argued that the sociogram was not simply a means of presenting data, it is 'first of all a method of exploration' (Moreno, 1953, cited in, p. 95; Tubaro et al., 2016, p. 3), and this is how it has been used in this study.

Concentric circle sociograms, also called target sociograms (Tubaro et al., 2016), are used to explore personal networks and focus on levels of intimacy (Hogan et al., 2007). The concentric circles provide a flexible scale to compare relative levels of intimacy and connection. This supports reflection on the level of intimacy in their relationships, supports personal insight and can provide rich data about the relationships.

When used in research, sociograms empower participants as they enable them to gain a more global view of relationships that is visual and accessible and that would not emerge spontaneously through an interview (Tubaro et al., 2016). The use of a concentric circle model enables participants to map their relationships in a visual way that allows both themselves and the researcher to see the different levels or intensity of relationships within a specific network (Van Waes & Van den Bossche, 2019).

Additionally, sociograms allow for relationship tracking over time (Tubaro et al., 2016). Sociograms can be used both to capture data about social connection and to provide a visual representation to aid participants' reflection and understanding of their relationships. This positions professionals as researchers of their own relationships and their practices. In this study, the maps were used to capture the relationships in the classroom over time and support reflections and discussions about the complexities of love and care in educational contexts.

Sociograms have been used to research relationships within the field of education and to map teacher–child, child–child and child–family relationships and as a tool for teacher reflection and professional development (see Table 1 for examples). The use of sociograms as part of a professional development programme for teachers (Carnes, 2019; Lyle, 2003) indicates that they generate discussion and reflection and support professional learning and teacher community. In previous use, this has focused on teacher understanding of child–child relationships in secondary schools in Wales and how this effects relationship to peers and learning (Lyle, 2003) and to develop middle-grade teacher

Table 1. Participants.

Participant	Description
P1	A reception teacher at a school in an affluent part a large city. She had worked in this school for eight years
P2	A reception teacher and foundation (reception and nursey) stage leader in a large primary school in an affluent suburb of a large city. She had worked in the school for 10 years.
P3	A reception teacher in an area of socio-economic challenge in a large city. He had worked in the community for 10 years, as a nursery teacher and then as a reception teacher.
P4	A reception teacher in a small fee-paying school in a semi-rural area.
P5	Previously a nursery practitioner, she had recently qualified as a teacher and had spent one year as a reception teacher in an inner-city area of socio-economic challenge.

insight into relationships between children in order to consider how to group students to promote inter-cultural peer working and relationships (Carnes, 2019).

The 'Making Caring Common' project, established by the Harvard School of Education (2020) aims to foster whole school strategies for teachers to visualise their relationships with children with the aim that all children have a relationship with a positive, supportive adult. The closeness of relationships is mapped to the personal or academic risk factors of each child. During the Covid pandemic, this model was used to support adult-student remote relationships (Thomas & Phillippi, 2022).

One strand of the recent use of sociograms and related representations of social networks in education as a learning tool focuses on children using them to reflect on relationships. For example, Swedish primary school children were supported to express their relationships relating to care through the use of a sociogram described as a 'closeness circle' (Eldén, 2013) and in the US, tracking changes in elementary students' relationship networks (Kim & Cappella, 2016). Encouraging children to reflect on their relationships has also been undertaken with the intention of professional development for teachers, examples are as follows:

- increasing teachers' awareness of the importance of children's friendships during primary to secondary school transition (Lyle, 2003)
- developing insight into classroom relationships and interactions between 8th grade students in a USA class working with student-selected peers, and how this influenced class dynamics (Sobieski & Dell'angelo, 2016)

More relevant to the development of the relationship mapping approach with reception teachers in our study are examples when sociograms or related mapping of social relationships are used as professional development tools. Carnes (2019) used anonymised sociograms of students' networks to aid reflective practice in university course for pre-service teachers in the US. The sociograms helped raise issues of cultural and racial biases of teachers by revealing the complexity of classroom relationships across diverse backgrounds. In contrast, Wardrip and Gomez (2024) worked with US middle and high school teachers to create teacher-drawn sociograms of their understanding of student social networks and explored the implications of this for informing teaching.

In one previous study, researchers explored the potential of relationship mapping as a diagnostic tool. Thomas and Phillippi (2022) worked with US Middle School social workers during Covid school closures. Educators indicated the students with whom they had a positive, trusting relationship and who they believed would come to them if they had a personal problem. This was used to create a relationship map of students to identify students who lacked strong relationships with adults in order to facilitate additional connections. The virtual mapping process and online mentoring that was delivered as a result was successful in building connection and has the potential to be effective in educational settings beyond the pandemic.

Research design and methods

The research aimed for the teachers to actively participate, positioning them as researchers of their classroom relationships and thus drawing on the participatory research

paradigm (Bensimon et al., 2004; Murphy et al., 2014). The aim was to create a collaborative space for critical reflection on an aspect of practice that is implicit and rarely discussed. The collaborative approach was informed by previous research about the value of sharing practice in a support community for early years teachers' professional learning (Kirkby et al., 2019).

Five class teachers working with children aged 4–5 years participated. The participants were selected using convenience sampling as they responded to a request for participants at a regional meeting of a national ECEC charity. The sample included one male and four female participants working in schools serving demographically different communities in the North of England. These ranged from a large inner-city school with relatively high levels of socio-economically disadvantaged pupils to a fee-paying school with children from more affluent families (see Table 1).

The research was subject to institutional ethical review and followed The British Education Research Association's Ethical Guidelines for Educational Research (BERA, 2018). Ethical considerations were continually reflected on and reviewed (Josselson, 2007) with participants' input invited at each meeting into the research activities.

The teachers met four times across an academic year to discuss their practice and used relationship mapping to represent their relationships with the children in their class. The group discussions took place in September, November, March and July, following the normal school year in England. Relationship mapping was introduced to the participants at the September meeting, leading to the creation of an initial map. The mapping was repeated three times across the academic year to capture the changing relationships with children in their classes.

The relationship mapping tool took the form of concentric circles with the teacher at the centre and each child mapped onto the figure using their initials and a shape to indicate their gender (Figures 1 and 2). The decision to represent gender was guided by the participants as they identified that there could be potential differences by gender in their relationships with children. At the first meeting, there was a discussion about what each of the concentric circles represented in terms of degrees of intimacy. However, a consensus could not be reached as the perspectives were very personal and individual. It was agreed that the sociogram would be completed intuitively.

Relationship mapping was used individually to reflect on feelings and relationships and to systematically map and monitor how relationships developed over the course of the year. At this first mapping meeting, participants were reassured that there are no right or wrong responses; the map simply reflected how they currently felt in relation to the children. Once the map had been completed the participants were asked to consider their current relationships to children, if they had any worries or concerns about the children on the outer circles and consider if there were any actions needed to strengthen and build relationships with specific children. Across the year, each new map was compared with the version from the previous meeting so that movement and patterns could be noted and explored. An example of such changes is shown in Figure 2 with arrows showing changes. The maps formed the basis of discussions about individuals and groups of children and discussions were recorded and transcribed.

Each participant's contribution within each discussion transcript was highlighted and read and reread by the researcher to note and identify themes. These themes were grouped under relevant headings as they emerged, and the related quotes

Relationship Mapping for your class

X Reception Class Educator

xx Boys

xx Girls
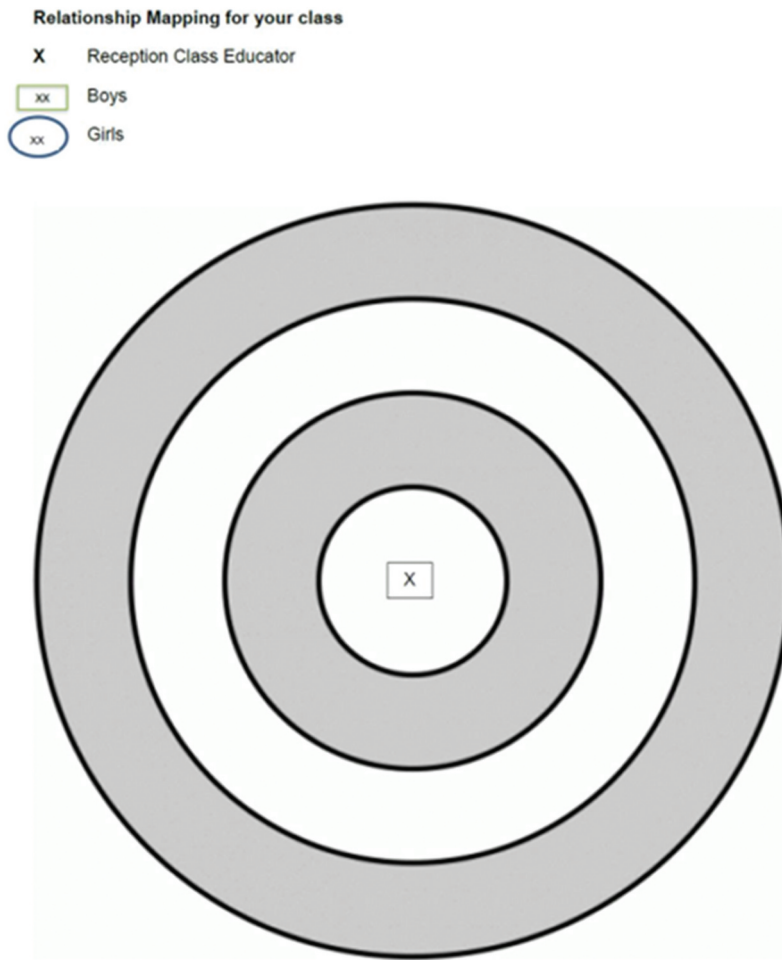
Figure 1. Blank relationship map.

were grouped under these headings. As new headings emerged, the transcripts were re-read to see if there were other examples of speech that reflected these. At the end of this process, the headings were ordered and grouped to reflect the connections between themes. The themes were reordered and renamed as continued rereading revealed new links and insights into the participants' contributions. The strongest elements relating to the impact and uses of the mapping process were making the relationships with all children visible, navigating a way to greater connection and learning about relational practice.

The power of relationship mapping

In this section, we identify three benefits of undertaking relationship mapping: making the relationships with all children visible, navigating a way to greater connection and learning about relational practice.

Relationship Mapping Across the Year

March Mapping

X	Reception Teacher	——→	Moved Closer
xx	Boys (16)	——→	Moved Away
xx	Girls (14)		
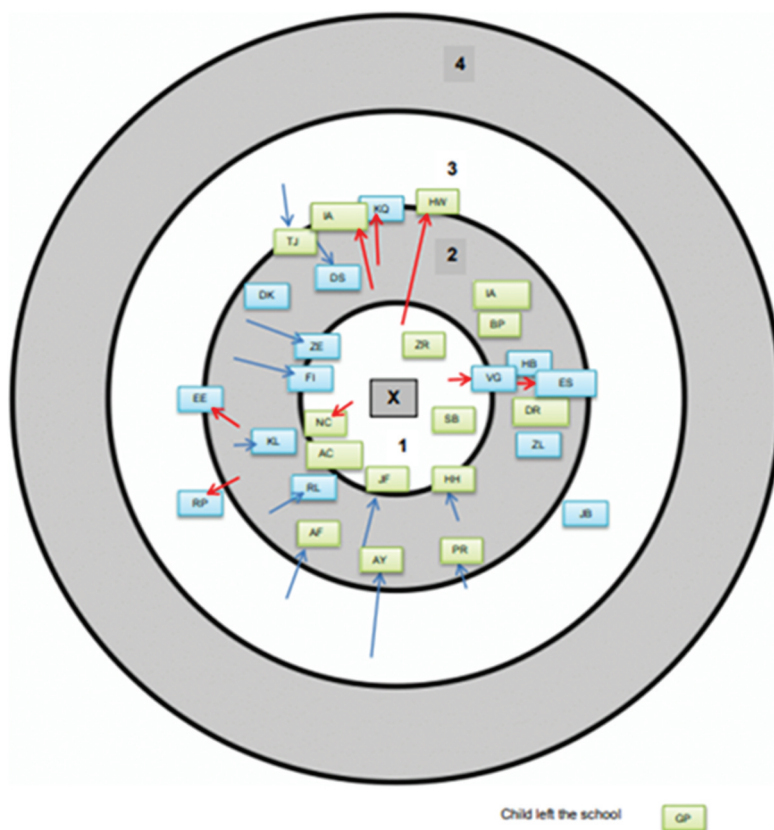
Figure 2. An example of a completed relationship map with tracking of movement.

Making relationships visible

As the participants met across the year, several benefits and potential uses for the relationship mapping tool emerged, including the fact that relationships with all children were considered. One participant reflected that the fact that there were still children on the outside of the map at the mid-year at this point was upsetting, as they would not normally be aware of that, and it could indicate that each year some children never experience a loving connection from their teacher:

> Are there always some un . . . not unloved children but . . . children who you're less connected with, which is a bit sad. You don't feel like you want to admit that do you or find that out. (P3)

This reflection led to a discussion that the children who remained on the outer edge could in fact be the neediest, but their needs remained unidentified as they were not in loving relationships with their teachers and could be avoiding relationships with adults. This led to discussions about how the relationship mapping tool could address this issue:

> I'm going to do a training session for school on wellbeing, children's wellbeing, and I'm going to use this with them as just a quick starter, map your children where you feel they are in your classroom. (P5)

For another participant, the process of mapping mainly reflected what they would have said about each child if asked, as she had a small class of 15 children. However, there was one exception to this which troubled this participant. There was a child who had not moved closer from September to April, and the participant believed that they may not have noticed or reflected on that without using relationship mapping:

> When I look at it, it's what I would have felt, but actually putting it down on paper and looking at it, you see this one, now you've pointed that one out I shall mull that and definitely think about why it is that I feel like that.(P4)

Following this meeting, the participant took steps to build a relationship with the child. At the July meeting, they recounted how this focus had led to the child having her hearing checked and it being discovered that the child had hearing loss. This barrier to a relationship may not have been identified without relationship mapping and the space and time to reflect on relationships.

Navigating a way to greater connection

The mapping process revealed the different ways in which the participants viewed the relationships they had with children in their class and provided underlying reasons for their perceived proximity to the teacher, which in turn enabled the participants to act based on their new understandings.

As the year progressed, the participants were able to identify the children to focus on and see change in relationships. One participant reflected that they felt closer to a child they were concerned about but commented that the boy was not yet ready for the relationship. This comment on reciprocity is consistent with Page's (2018) recognition that professional love is about care-sharing rather than just caregiving:

> The relationships at home aren't very strong and I think he's one that I'm trying to give that, I'm trying to say, 'Come on, I want to support you,' but he's not ready. (P3)

The discussions about the maps revealed interesting insights into how relationships move through different stages of closeness and that teachers' perceptions of intimacy with some children travelled into and out of closer levels over the course of the year. In some cases, the direction of travel was inwards to greater closeness, as the teacher and child came to know each other, or the teacher gained a greater insight into the child's life and the levels of love and support they believed they needed. In other cases, children moved outwards on the maps as their confidence and independence grew. There were instances where children moved a long way in, moved out again and then back in as new challenges and needs emerged.

In exploring the movement of positioning of children on the maps, one participant noted some gender differences, as although initially their relationships with girls in the class were generally closer than boys this had changed considerably. A boy who was positioned on the outside due to challenging behaviour was now one of the closest:

> Looking back at the September one, I've got five boys and six girls, and it's the boys that were on the outside when I look at it and the girls were closer, and then now that's changed quite a bit. One of the little boys that was on the outside has very challenging behaviour and [is] difficult to warm to and form a bond with, but now we've really got to know him, he's now one of the closest. (P4)

One of the participants recognised that some movement on the maps came from the need to meet the needs of all children in her class. This participant discussed the movement of a child with additional needs. They suggested that they were now less close by necessity, as she felt unable to give him everything he needed and still meet the needs of all the other children in the class.

> It's because I've got him to a state where I was happy that he was happy in school, and I've had to let it go a little bit because it's so much attention. I felt that other people weren't getting what they needed in the classroom. (P1)

At the final meeting, the participants looked at the movements of the representation of relationships across the year. A participant talked about most children moving slightly away from her at the end of the year, partly because they were now more independent but also because she was preparing them to leave her. Some children were struggling with this, and in reflecting on one child's movement on the mappings, the participant identified that he was initially positioned very close as she built a strong, loving relationship. He then moved away as he became more independent. However, his upset at the idea of losing his relationship with his teacher as he transitioned to Year 1 brought him closer again:

> So, he went out because he was becoming more independent, he wasn't needy anymore, he was just getting on with his normal day and didn't need much support anymore, so he went quite far out and then he's come back into the middle just because of the issue with transition, because I feel that he needs more support at the moment. (P5)

Learning about relational practice: the map as a professional development tool

The group discussions about the maps and relationships generated reflection and a growing understanding of the participants' relational practice. Initially, these reflections revealed the reasons why children were placed where they were on the map. One participant (P5) explained that the children in the inner circle on the map were there for different reasons and distinguished between the sociable, loving children for whom they felt 'natural love' and those who are facing challenges and were challenging *to* love:

> I've got a child who's in care, that's a looked after child. A child who is very challenging behaviour-wise and a child who is absolutely adorable to her peers and also her characteristics with a friend, she's very sociable and she's just one of those very loving children who want to please everybody. My inner circle, as you would say, are very different children and are there for very different reasons. (P5)

When discussing the location of children on the maps, the teachers explained that children were placed at a distance for a variety of reasons. In some cases, the children had joined the class late or been off for a period of time, but in others, it was the behaviour of the child that troubled the participant and prevented them from bonding with them. In describing a child who was in one of the outer circles of the relationship map, a participant identified behaviours that prevented the relationship from becoming closer:

> He's a bit of a tell-tale and he's constantly telling other children what they should and shouldn't be doing which is quite irritating. Because he's not the teacher. (P5)

As the participants had time and space to think about relationships, there were changes in how they viewed specific children. Taking part in the study led to a shift in one participant's (P5) views about which children they felt able to love – from those whose needs were expressed in socially acceptable ways to those children whose needs may be masked by challenging behaviour. This realisation led to a change in her beliefs and attitudes about certain children. This participant began to question her own motivations in developing close relationships with the children in her class and identified that it could be meeting her own social and emotional needs. She acknowledged that this may have been what drew her to her current role:

> So, it made me think seriously about my needs and is it about me or is it about the children? When I'm developing relationships with the children whose need is it? I've always gone from, 'Oh, it's the child's need, it's what they need and what they require,' but actually this has made me think, 'Oh, maybe I'm in this job because it's what I need for my social and emotional development as much as for them.' (P5)

The participants also talked extensively about impacts on their reflective skills. This led participants to change their views about incidents and particular children, which implies that the outcomes of these reflections will also be felt in the classroom, for example:

> I think also I've allowed myself a bit more time to think about what the relationship is with the children that I'm struggling with a bit more. Also doing this piece of work, I think, has been really interesting for me because it makes me think, well, why? (P1)

Participants' increased reflection appears to be a preliminary step before actual practice changes, as their understanding of children's emotional needs becomes clearer and their approach to this becomes more intentional.

The participants repeatedly used the words 'need' and 'needy' to refer to children who they felt required the most support and love. The participants made an 'effort' to love children facing challenges in their lives and who were often challenging in the classroom. In contrast, when discussing children who were not in the closest circle to the teacher on the relationship map, this lack of closeness was regarded as a potential positive, as these children were more autonomous and less needy:

> Maybe then, is it such a bad thing if children are further away because it means that, you know, it might mean that they're autonomous and they don't need someone as much as other children do. (P3)

Within the group discussions, a participant reflected on which children they were drawn into close relationships with and those they struggled to connect with. They identified

that some children placed in the inner circle of the relationship map were there because, in their view, they needed to be loved: 'so, this one's there because I feel she needs my support and my love and affection.' (P5).

As the academic year progressed, a participant (P3) noted that it was the children who they believed most needed their support that they identified as having the closest relationship with: 'he's a little boy with quite a few additional needs; it seems to be these children who need a lot more support that I've become closer to'.

The placing of children who were perceived as needy in the inner circle of relationships was consistent across all participants. This was linked to the need it fulfilled in the teacher to feel that they were supporting children holistically and not just with their academic development:

> I don't think I need to be needed but there must be something in me with that though. (P1)

> I think it's interesting, all the children that we've picked are children who we feel have got specific needs. (P3)

> We said that last time didn't we. We said it's almost the ones we put more into that we feel really need to help them or look out for them or protect them. (P2)

The ways in which loving the children met the individual needs of the teachers were also explored in the discussions and participants agreed that it often met their need to nurture. Participants discussed the issue of empathy with children's feelings, but this also generated questions about whose needs were being met:

> I really felt lots of empathy for her and I think, 'Do you know we were talking about who's the most needy, is it me as the practitioner or is it the child?' I think it's a mutual thing. I think I need to feel needed, but I also need to make sure that that child's needs are being met. (P5)

This led to the participant reflecting that they may focus their love and attention on children who were obviously needy rather than those who displayed more independence. Further, she found those children who challenged her powerful role as the teacher problematic:

> She's very, very articulate but she's got to be in charge of everything and it grates on me. She is a very able child who does not need or want very much interaction from myself on a social level. (P5)

Discussion

The research demonstrated that the participants prioritised love and focused on building loving relationships with the children in their care, particularly those they felt would benefit most from having a caring, consistent adult supporting them. The participants were comfortable discussing the part love played in their early years practice and clearly identified the ways in which these relationships were important to children and to themselves. As Page (2018) summarises, 'Early Years professionals, meanwhile, know only too well the emotional, intellectual and cognitive value of love and intimacy to their work with children' (2018, p. 123).

The participants' engagement with the research and desire to expand the discussion beyond the immediate research group indicates the benefit they felt they gained from the

process and highlights the value of studies that encourage participation. Participative research often provides opportunities for practitioners to come together and share the research outcomes and supports professional identity (Murphy et al., 2014). In this study, relationship mapping became a participative element of the study as participants shaped its use and their knowledge grew about its relevance and significance for their practice. The mapping process led to further reflection as the participants could see patterns in their relationships with children which would not have been visible through discussion alone. The use of the map to depict the closeness of relationships enabled the participants to explore and discuss their relationships, which reflects Moreno's intended use for sociograms as a means of exploration, rather than simply the representation of data (Moreno, 1953, cited in; Tubaro et al., 2016). These findings are consistent with other studies that found that the use of visual tools to map relationships brought out information that is usually outside of our consciousness and supports personal insight (Hogan et al., 2007; Tubaro et al., 2016).

Other studies have found that sociograms focused on relationship between children in classes have supported reflection and discussions amongst secondary school teachers (Lyle, 2003) and middle-grade teachers (Carnes, 2019). Our study extended this previous research to Early Years teachers and also focused on teacher-to-child relationships. In this new context, the use of sociograms and collaborative reflection on them also supported professional learning.

The descriptions the participants gave of the demands of forming loving relationships indicate that it is emotional labour, and the terms 'drain' and 'draining' were attached to illustrated this. This aspect of the practitioner role in ECEC is often ignored as it is linked to maternal care and stands in contrast to the current focus on 'professionalism' (Fairchild & Mikuska, 2021). The emotional intensity of loving children who are challenging or facing challenges is a strong theme in participants' discussions. One participant expressed a sense of relief when some children move on to the next class, as another teacher will become responsible for this love. The level of emotional labour involved in loving relationships in an ECEC context was identified by a participant as a reflection of the perceived level of children's need and the amount of themselves that they needed to invest to meet these:

> Sometimes those children in your inner circle, you feel that they need you and you need to protect and you need to look after them and that's why they're – Sometimes they're the hardest children in your inner circle but they're there because you put so much more of yourself into them. (P2)

One participant noted that the discussions about love had made her feel comfortable about telling children that she loved them, which she would not have done previously, although she does qualify this statement by saying 'even if its professional love':

> Yeah. I tell the children that I love them now. I never used to! 'Come here, we love you!' I wouldn't have said that before and I thought actually, it's okay to say that because I do love you, you know, even if it is professional love, it's okay. (P1)

ECEC training and policy currently do not include guidance on how to develop positive, loving relationships. This leaves practitioners to form their own models of practice without support or opportunities for discussion and reflection. The relationship mapping tool

supported participant reflection and discussion and enabled the participants to explore relationships and the tensions between this aspect of practice and their wider roles as ECEC teachers. In the absence of a current supervision model for teachers that includes love and relationships, the relationship mapping tool can provide a catalyst for team discussions that will surface and make explicit this aspect of practice. Without a systematic approach to exploring relationships, such as relationship mapping, there may be some children that are never fully supported by an emotionally available adult. Cousins (2017) uses the circle analogy to highlight the importance of holding children close in a way which echoes the use of the relationship mapping tool: "Adults need to consider how to respond to each child as if they were 'a member of [their] . . . inner circle" (Cousins, 2017, p. 26, citing Noddings, 2007, p. 223).

The co-construction of the use of the map appears to have engendered a sense of ownership and agency that led the participants to explore the use of the approach with colleagues. This also underlines that the tool has potential to be taken up and used more widely.

One possibility for further development is to also include children's experiences on their relationships with adults as the absence of children's perspectives was highlighted by participant 1. This could potentially be informed by studies noted in the review of previous use of sociograms in educational research and practice.

However, for those considering using the approach we took we offer the following two cautions. Firstly, it is important to recognise that what the sociogram offers is a visual perception of, in this case, the teachers' perceptions. In discussing the relationship maps, teachers might refer to 'children moving' – for example, becoming closer on the map. However, it is important to recognise the responsibility and agency for change primarily lies with the adults. The children do not have the power or responsibility to come into the inner circle in a relationship map or to move to the outer circles. In addition, relationship mapping prompted teachers to reflect on their own relationship patterns and dispositions, leading one teacher to realise that they may have been meeting their own emotional needs through their relationships with children. Such insights are potentially catalytic and disorientating. Disorientation may be important to and inevitable in adults' transformative learning (Mezirow, 1997). In the context of a supportive, facilitated peer community – a safe space – such disorientation was productive. However, if used as a standalone technique or relationship improvement tool, then outcomes could be less benign.

Conclusion

Relationship mapping was used in a novel context – both in terms of its use with reception teachers in England and as part of a participative, facilitated peer professional learning community. The participative approach has potential for further development of relationship mapping, or more generally engaging practitioners in inquiry about relationships in their classrooms and educational settings.

The development of the relationship mapping tool was undertaken with a small number of teachers, whose interest in participating, indicates they are not necessarily representative of other teachers. Therefore, the outcomes of this exploratory application of relationship mapping may not be applicable if used with other teachers.

Notwithstanding potential limitations, the participative approach helped reveal the messiness and complexity of loving relationships as the participants had a tool to support reflection, the time for reflection and a supportive, non-judgemental space for discussion. Such time and space is not usually afforded to early years teachers. In their study of the personal and professional emotional characteristics of ECEC teachers, Ciucci et al. (2018) concluded that there is a need for preservice and in-service training to support teachers' critical reflection on their own emotional competence. This study highlights the impact of an extended opportunity for discussion and reflection as the participants' views of relationships and their own motivations and emotional needs were only gradually revealed to each other and to themselves.

Relationship mapping surfaced the closeness of relationships across the whole class and facilitated discussions about them. The mapping tool as used in this study enabled the participants to reflect on the range of relationships they have with children in their class and to see how they changed over the school year. In performing this function, it made an implicit part of practice explicit and allowed practitioners to explore how and why they form the relationships they do with the children in their care. This study has several implications for initial training and professional development, as it indicates that current approaches to support positive relationships as an essential part of early years practice need to be complemented by additional tools and support structures that allow for the complex and multi-faceted nature of relationships to be surfaced and discussed over time. This is important as it also acknowledges the demands that forming and maintaining these relationships have on practitioners and raises issues about how their wellbeing is supported in the current system.

The process of seeing and becoming aware of the relationships they had with children and then focusing on developing greater connection led to the teachers becoming more aware of their own relational practice. This process of growing awareness and change in practice indicates that relationship mapping is a valuable tool for professional development in educational contexts.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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