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Abstract

Background Early years interventions are critical to children's health and development and are emerging as core to
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This paper illustrates the utilisation of participatory action research (PAR) approach, employing creative methods, including spider grams, service mapping and photovoice, with health professionals delivering ABSS services. PAR methods enabled exploration of community resources that facilitate or impede early childhood development in the local context.

Results Operationalising PAR yielded critical providers' perspectives on key challenges of delivering these programmes, and the factors that in their view impeded their uptake by families and hence e□ectiveness. The

*Correspondence:
Anuj Kapilashrami
a.kapilashrami@essex.ac.uk

Full list of author information is available at the end of the article

Background

Ensuring a healthy start is critical for good early childhood development [1]. Recognising this as a key priority for public health, the World Health Organization (WHO) published first guidance on the topic in 2020 [2]. While highlighting multiple areas of care and development, the WHO distil their recommendations into four key domains of effort to best support child health: responsive caregiving, promoting early learning, integrating caregiving and nutrition interventions, and supporting maternal mental health. In parallel, recognition of the role of early childhood in adult and population health has spurred the production of a wealth of scholarly conceptualisations of health promotion strategies [3–5] and the development of early years interventions (EYIs). EYIs typically aim to target one or more of the priority domains identified above, with high variance in the strategies and initiatives adopted in countries. For example, in the United Kingdom (UK), child nutrition is promoted through clinical guidance (such as the National Institute of Health and Care Excellence's guidance on 'Maternal and child nutrition' [6]), charitable campaigns like the 'Baby Friendly Initiative' [7], financial schemes (e.g. the 'Healthy Start' voucher scheme supporting parents with young children to purchase healthy food [8, 9]) and a deluge of educational material for parents and carers.

Other EYIs apply a more expansive and holistic model addressing multiple domains of development, for example, England's 'Sure Start' Children Centres which included child health services, pre- and post-natal classes, additional parental courses, childcare and education [10

value of their data, which could provide "a description of the often-hidden processes through which such an initiative can be developed within a described context" [22, p.7]. Privileging the voices of the key social actors and stakeholders is valuable for understanding the nuances and complexities of such programmes.

Participatory action research (PAR) enables "collective, self-re ective inquiry that researchers and partici-

comprised more detail on the issue, di erent facets of the issue and possible solutions. is more generic discussion on their roles and key challenges was expanded and given more focus by introducing the service mapping activity [30] – a form of asset-mapping, commonly used in community-based PAR work [31]. e activity, detailed below, enabled greater re ection on the rationale for the service, the underlying assumptions and resources necessary to deliver its di erent components.

Participatory mapping is used in varied and creative forms across elds, but broadly describes an interactive visual method to tackle speci c questions, which facilitate a process of description, to elaboration, to theorisation which can complement traditional verbal approaches [30]. For this study, a modi ed technique was used whereby participants were tasked with visualising their associated service pathway and to re ect on what they consider their ideal service pathway for achieving the objective of their respective workstream would be, if resources were not a constraint. is visual activity aimed to understand what practitioners wanted to see from their service and why, and empower them to hypothetically design the care pathways that would achieve success and good healthy child development. e pathways also stimulated re ection on the policy, system and

probably going to go through a couple of tubs a week, which is at least £20."
"I've seen a mum recently who ph17

is process produced rich and insightful data, which participants made sense collectively, as has been described above – re ective of a transformative praxis of collective critical consciousness" (33, p287) raising [38, 39]. For example, participants in the CLD workstream discussed what engaging in photovoice enabled:

> *P1 "Had we not had the pictures, I don't think we'd have necessarily come up with as much stu that we have or have had the discussions we have had."*
> *P2 "Yeah. It's allowed some really good, valid, creative discussion points from di erent perspectives as well."*

> *"ey (health visitors) invite them (parents) down to a room within the hostel to explain the services. We've had quite a few discussions with the health visitor about this, but she said they just don't come down." CLD workstream participant.*
>
> *"Sometimes the interpreters don't turn up, or it's only via a telephone link. It's very hard to interpret still, because you can't see any facial expressions. And just being able to book somebody can be quite di cult at times as well." DAN workstream participant.*
>
> *"You can translate the communication skills screening tool into certain European languages, but other languages not necessarily. ere are no words for some of the words we are using. ey don't exist." CLD workstream participant.*

We observed participants as a group moved incrementally from 'challenge' to identifying 'solutions'. A notable nding from this was the need for better working relationships between practitioners across di erent services that were hitherto operating in silos. Being in the collective space that PAR enabled made participants acknowledgment this. For example, discussions between health visitors and midwives led to clear recognition that it would bene t both teams if they worked more closely, and/or had a better communication system between their services. Re ection through photovoice also supported the sharing of innovation and knowledge exchange, as one participant described through their photograph of a session at the Lighthouse Child Development Centre - a local diagnostic centre for children with special education needs (Fig. 3). e image depicted a 'barrier' - this was the only service o ering diagnostic assessments in the area meaning long wait times, and as such children and families were for a long time not provided with support.

e participant subsequently highlighted a successful piece of work they had achieved which provides grounds for a solution to the identi ed challenge, as articulated in the quote below. is is illustrative of the establishment of empowered relationships, and an empowering environment – central to the process of PAR [27].

e image is of a play session taking place at the of the Lighthouse Child Development Centre in Southend.

> *" is is a picture of the Lighthouse Child Development Centre, which is the only diagnostic centre in Southend that children with special educational needs and disabilities can go to get diagnosed… It's a massive challenge for families to get into this centre. e waiting list for appointments are a year or more long, so they wait years and years and years to get into this centre."* SED workstream participant.
>
> *" ere's another thing I wanted to mention about this photo. While taking this, we actually went into the Lighthouse as a service, and we did a presentation for their sta on what our service is about and how we can assist them and work together. So, a positive note to this picture is that we've now agreed to work together, our service and the Lighthouse…".* SED workstream participant.

e quotes are also a reminder of the challenges with the ABSS programme in meeting the needs of some of the most vulnerable in the community, and the need for more connected services. e use of photovoice, and PAR approaches more broadly, in stimulating this transformative, positive re ection serves as valuable evidence of the usefulness of this approach in evaluation.

e photovoice methodology also o ered the space to contemplate nuanced paradoxes in facilitators and barriers to accessing health. With reference to the image provided in Fig. 4 below, a participant in the SED workstream commented: *"I took a picture of the seafront because I feel that Southend is a bit of a double-edged sword."* ey clari ed:

> *"I feel like in terms of social and emotional development, for some of our families, being on the seafront is a godsend…every Wednesday we do a wellbeing walk and we rotate around di erent areas… I just*

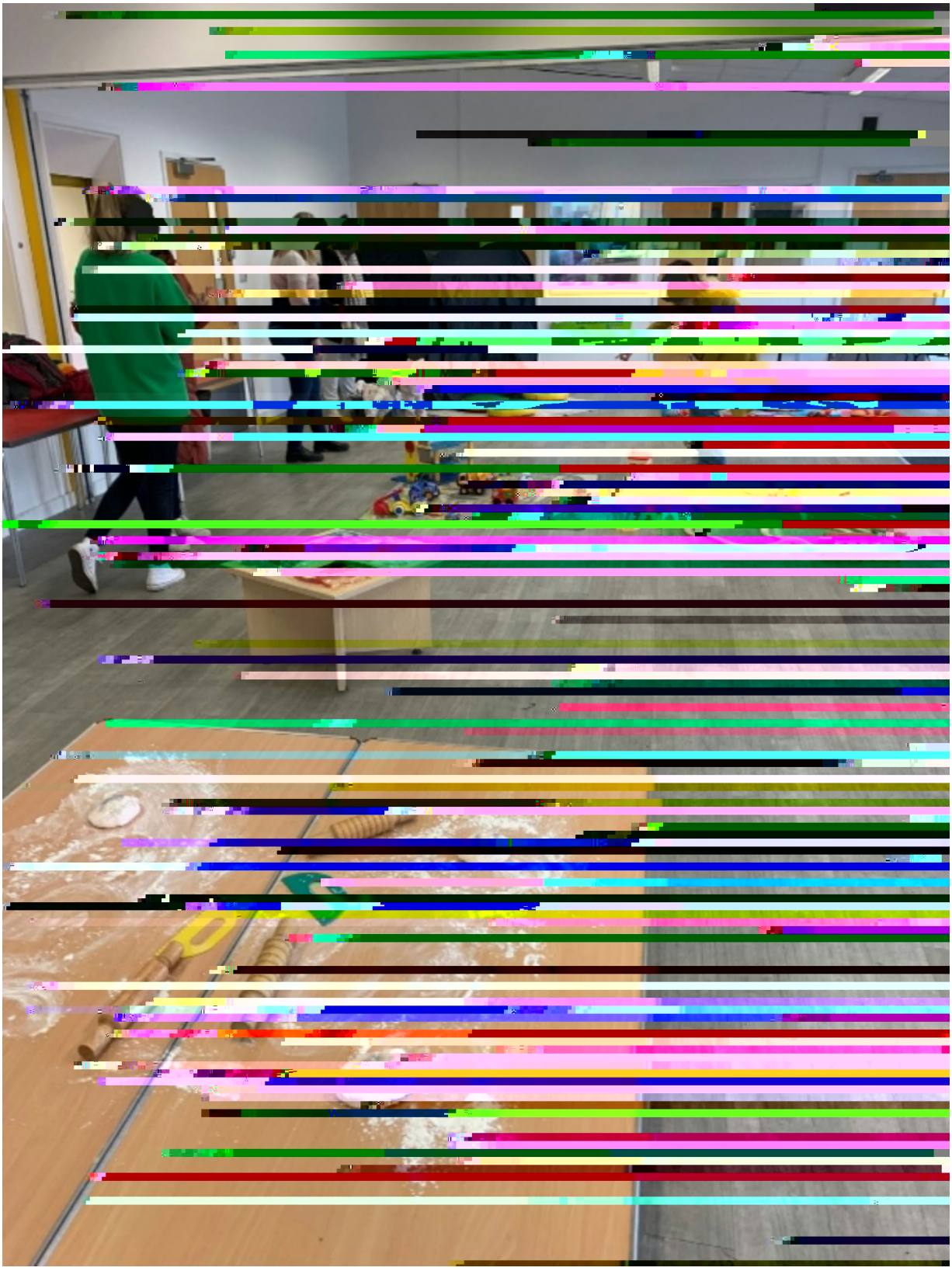

Fig. 3 A photovoice image from the SED workstream

goes beyond simply considering the e ectiveness of a given programme but extends into a more radical under-

> *"I know that these are the areas that our families are nding challenging, a struggle. So, it was quite interesting to sort of go out and nd this is a problem. It was exciting to share that with others and nd their views and experiences resonating with ours" SED workstream participant.*

Engagement in this work o ered participants time and space to re ect on aspects of their work and experiences which might not be routine (or even possible) in their

health practitioners delivering services brought them into a generative space that was created to identify problems, consider solutions and produce an action agenda, which was evidenced through knowledge, knowledge-in-action and transformation. We consider that utilising PAR was especially powerful in framing critical evaluation points not just in terms of process (for example, issues with sta ng), logistics (for example, the limitation of ABSS to only selected wards in Southend) or resource (for example, lack of interpreters) that perhaps are the focus in more traditional evaluation methods, but broader socio-economic and socio-political factors. is leads us to recommend PAR as an approach that could also be embedded for service design and delivery in future.

Ultimately, though advancing access to speci c services and assets and bene ting parts of the community, our research indicates that the ABSS programme may have fell short in e ectively enhancing access to health services for all, due to the unsurmountable in uence of broader socio-economic and socio-political determinants – such as the cost of living, housing, ethnicity-based exclusion and deprivation. Future public health EYIs would bene t from taking an intersectional, multi-systems approach to ensure those on the margins of society can bene t. e equity dimension of EYIs should be evaluated through a range of diverse methods including embedding PAR from the onset, and for nal evaluations. Consideration of PAR tools to sustain consciousness-raising and transformation of and among participants and community agendas is worthwhile. In the context of intersectional work with marginalised groups, that needs to account for historical barriers and on-going unequal power dynamics, PAR has much to o er through long-term, sustained engagement [44, 48].

Abbreviations

PAR	participatory action research
ABSS	A Better Start Southend

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Author contributions
KC: data collection and analysis, writing, editing, approval of nal manuscript. MM: editing, writing, approval of nal manuscript. AK: Principal Investigator - study conception and design, data collection, PAR facilitation, analysis, writing, editing, approval of nal manuscript.

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Data availability
The datasets generated and/or analysed during the current study are not publicly available due their procurement for a commissioned evaluation only and are not for wider use.

Declarations

Ethics approval and consent to participate
Ethics approval was granted by the University of Essex's Research Ethics Committee 2 (Reference: ETH2021-1297). Participants provided written informed consent to participate in the research. The study processes adhered to the Declaration of Helsinki [48

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