

# Evaluation of the HAF/Welsh Active Early Years Programme

DR. JANE DORRIAN

APRIL 2022

## Acknowledgements

Most importantly, thanks go to all the participants, children and facilitators who took part in the programme. The author would also like to thank all the members of the Welsh Active Early Years Project Team who have been so generous with their time in answering my many queries, diolch yn fawr.

## Table of Contents

Acknowledgements.....	1
List of Tables.....	4
List of Figures .....	4
<b>Glossary.....</b>	<b>5</b>
<b>Key Dates .....</b>	<b>5</b>
<b>Executive Summary.....</b>	<b>6</b>
Key Findings.....	9
<b>Introduction .....</b>	<b>10</b>
1.1 Background and policy context .....	10
1.2 Physical literacy .....	11
1.3 Current landscape of early childhood physical activity provision in Wales .....	12
1.4 Partnership structure .....	12
1.5 Project overview.....	13
1.6 Critical success factors and evaluation requirements .....	14
1.7 Impact of COVID-19.....	15
<b>Methodology.....</b>	<b>17</b>
2.1 Evaluation design and processes .....	17
2.2 Sample/Participants .....	17
2.3 Data collection tools.....	17
2.4 Modes of analysis .....	19
2.5 Ethical considerations.....	20
<b>Implementing the programme .....</b>	<b>21</b>
3.1 Recruitment and selection project staff and facilitators .....	21
3.2 Training and induction of facilitators.....	22
3.3 Project resources and session plans.....	23
3.4 Effectiveness of data collection methods.....	25
3.5 Effectiveness of promotion of the sessions .....	27
3.6 Suitability of venue/meeting places .....	29
3.7 Participant retention .....	29
3.8 Reasons for participants non-attendance/opt out .....	32
3.9 Participants' evaluations .....	32
3.10 Facilitators evaluations.....	35
3.11 Post session support.....	36
<b>The programme's impact .....</b>	<b>37</b>
4.1 Increase in physical play between adult and child .....	37

4.2	Increase of physical activity in day to day living e.g., walking to local places, using parks, using cars less for short journeys .....	40
4.3	Improved short term mental well-being .....	41
4.4	Improved knowledge of local area .....	45
4.5	Increased use of local community facilities for physical/social interaction for adults and young children.....	45
4.6	Improved knowledge of activity opportunities in local area e.g. sports clubs, parks .....	45
4.7	Increase in time spent with other parents .....	46
4.8	Increased time children spend together .....	46
4.9	Reduction in social isolation and loneliness .....	46
4.10	Upskilling of volunteers in identified communities .....	47
4.11	Increase numbers taking part in networking in the community.....	47
<b>Additional findings .....</b>		<b>48</b>
<b>Conclusions .....</b>		<b>49</b>
<b>Recommendations .....</b>		<b>51</b>
<b>Reference section .....</b>		<b>52</b>
<b>Appendix 1: Adult participant data.....</b>		<b>54</b>
<b>Appendix 2: Short Form WEMWBS Scale.....</b>		<b>55</b>
.....		55
<b>Appendix 3: International Physical Activity Questionnaire .....</b>		<b>56</b>

## List of Tables

Table 1: Types of response to evaluation request

Table 2: Overview of positive and negative terms evident in textual analysis of parent feedback to final evaluation questions

Table 3: Average IPAQ scores for all participants

Table 4: Average pre- and post- participation IPAQ scores

Table 5: Average IPAQ scores for participants with full a score profile

Table 6: Average Leuven scores

Table 7: Average WEMWBS scores for all participants

Table 8: Average pre- and post- participation WEMWBS scores

Table 9: Average WEMWBS scores for participants with full a score profile

## List of Figures

Figure 1: Rooks and Kilner's (2020) Adapted Four Stages of Competence Model

Figure 2: Completion rates for IPAQ and WEMWBS at each data collection point

Figure 3: Number of sessions attended

Figure 4: Average IPAQ scores by number of sessions attended

Figure 5: Average WEMWBS scores by number of sessions attended

Figure 6: Word cloud representing frequency of terms in participant evaluation responses

Figure 7: Word cloud representing frequency of terms in facilitator evaluation responses

Figure 8: Average IPAQ score for dates attended

Figure 9: Average pre- and post-participation IPAQ scores by WIMD decile

Figure 10: Average WEMWBS score for dates attended

Figure 11: Average pre-and post-participation WEMWBS scores by WIMD decile

Figure 12: Average WEMWBS score by age group

## Glossary

Acronym/Key Word	Definition
ALN	Additional Learning Needs
HAF	Healthy and Active Fund
IPAQ	International Physical Activity Questionnaire
WEMWBS	Warwick-Edinburgh Mental Well-being scale
WIMD	Welsh Index of Multiple Deprivation

## Key Dates

Key Dates	
April 2019	Original project start date
June 2019	Confirmation of project start
September 2019	Appointment of Operations Manager
December 2019	Facilitator roles advertised
January 2020	Appointment of facilitators
February 2020	Pilot of Active Together Wales programme (disrupted by adverse weather)
	Wales Active Early Years focus event
March 2020	COVID-19 lockdown restrictions introduced
July 2020	Relaxation of COVID-19 restrictions
October 2020	COVID-19 'firebreak' lockdown
November 2020	First online programme delivery
February 2021	Easing of lockdown restrictions begins
	First physical programme delivery within a setting
March 2021	End of stay-at-home rule
	Start of dads only programme
June 2021	First post-lockdown programme delivery

## Executive Summary

The Welsh Active Early Years project was designed in partnership between Early Years Wales and Welsh Gymnastics as a 4-week facilitator led programme which aimed to increase the physical activity levels of young children and their parents/carers in order to develop and embed lifelong physical literacy. Each session was based on a story, with participants receiving a resource pack containing cards outlining the activities and also giving ideas about how to create homemade resources linked to that week's focus. In the original programme design Phase 1 of the project would be delivered in community-based settings across Wales. Whilst this model was used to pilot the project, the lockdown restrictions associated with the COVID-19 pandemic coincided with the initial roll-out schedule which meant that the delivery model had to be completely reworked and the programme moved to an online platform. This change impacted on the project's ability to address some of its original aims, such as increasing participants' knowledge and engagement with local facilities.

The project's staff recruitment process articulated well with its aims, as was evidenced by the high numbers of appropriately qualified applicants to the advert for facilitators. The appointment process was clear and fair and appointments were made in line with the stated processes. Specific data related to the demographic characteristics of the applicants and the appointed facilitators were not available, but the information that was present indicated the majority of facilitators are white and female and this is a factor that is noted in other areas of the evaluation as being an issue for future consideration. Facilitator training was delivered online and supported the development of skills and approaches to support remote engagement with participants.

Participants were recruited using a range of publicity networks and approaches, most of which were online. This recruitment strategy proved effective with 296 adults and 310 children registered onto the programme since it started. The programme has been delivered in all 22 Welsh local authority areas. The majority of adult participants were white females aged between 30 and 34 living in urban areas and, as with the facilitator profile noted above, this factor and its potential to skew data and findings was taken into consideration within the analysis and evaluation. The impact of having such a dominant profile was recognised by the Project Team during Phase 1 delivery, with the realisation that fathers and male carers may be reluctant to join groups that were overwhelmingly female. It was also recognised that enabling male-only spaces could provide useful opportunities for fathers and male carers to share their experiences and develop supportive networks. As a result a dads only group was established in partnership with 'Dads Can Cymru', a Lottery funded project for a fathers living in Monmouthshire, Newport and Blaenau Gwent. The Project Team also noted that work done with ethnic minorities was disproportionately underrepresented by the data as when working with these families the focus was to engage them and the collection of data was seen as a barrier to gaining trust. Evidence gathered from case studies indicated positive engagement and the team are continuing to engage with partnerships made with Women Connect First and other Parent and Toddler groups to further build on this work as part of the return to face-to-face delivery. These examples illustrate the Project Team's ability to respond quickly and effectively to the needs of under-represented groups which is an aspect that emerges throughout this evaluation.

The transition to online delivery was well managed with sessions provided to upskill facilitators in order to use the online platforms and amend their delivery techniques to promote remote

engagement and interaction. Feedback from facilitators and participants showed that this was a positive change and that the session aims had been met via the remote delivery. Some additional benefits were also identified, such as the fact that using the online platform meant the family did not have the stress of having to organise all the equipment and time required to get children ready to go out and get to a location on time. The feedback did acknowledge that face-to-face sessions would have provided a very different type of experience and may have produced other benefits. However, it was also noted that online delivery presented some potential challenges to participants, such not wanting others to see inside their homes.

As part of the project design quantitative data was gathered from all participants. Children's involvement and well-being levels were measured at the start and end of the 4-week programme using the Leuven Child Engagement Scales. Adults' well-being was measured using the Warwick-Edinburgh Mental Well-Being Scale and their physical activity levels were measured using the International Physical Activity Questionnaire. These measures were taken prior to starting the programme, on completion of the programme and then 6- and 12-months post-participation. Qualitative data was also gathered in the form of evaluations completed by participants and facilitators using free text responses. Participant evaluations focussed on the impact that attending sessions had on their well-being and physical activity levels. The facilitator evaluations focussed on the effectiveness of the programme delivery processes.

The collection of the quantitative data scores was affected by the switch to remote delivery, with the majority of participants missing at least one set of results and as such the majority of data score profiles were incomplete. The remote delivery also meant there was no way of articulating the qualitative responses with the corresponding individual score profile. Wherever a data set was robust enough to undertake statistical analysis this was done and in other cases possible trends indicated by the data were identified, but it is likely that face-to-face delivery would improve the data collection rates which would enable a more thorough and reliable statistical analysis.

The data collected indicated that children's involvement and well-being improved over the course of the programme, with average well-being scores being 0.75 points higher at the end and average involvement scores being 0.5 points higher. The small number of complete data profiles meant that it was not possible to undertake meaningful statistical analysis of the scores. These improvements were also noted by the parents and carers with feedback highlighting children's enthusiasm to repeat activities undertaken during the sessions after participation.

Statistical analysis of adult participants' well-being as measured by WEMWBS scores indicated that there was a 95% likelihood that well-being scores would increase on completion of the programme which indicates that the programme made a positive impact. The incomplete nature of the 6- and 12-month data sets meant that it was not possible to undertake meaningful statistical analysis of impact at these points, but the average scores recorded at each point did continue to improve. Participant feedback highlighted specific aspects of their involvement with the project that they felt had made a positive difference to their wellbeing. These included the opportunity that the project offered to connect with others during COVID-19 lockdowns and being able to interact with their children in new ways. The data gave some indication that increases in well-being scores were greater in areas classed

as having higher levels of deprivation, but the small data sets meant it was not possible to establish any statistical significance.

Statistical analysis of adult participants' physical activity levels showed that 75% of participants who completed the course had increased levels, with the average time spent undertaking physical activities rising by around 1 hour per day. Participant feedback indicated that knowledge, understanding and awareness of the benefits of physical activity and physical literacy had developed as a direct result of undertaking the programme.

Evaluation of the data against the programme's process and outcome measures shows that positive impacts were apparent within all areas, except those that were not able to be addressed because of COVID-19 lockdown restrictions.

## Key Findings

- Participation in the programme had a positive impact on children's well-being and involvement scores.
- 71% of adults who completed the programme recorded an improvement in average well-being scores and there was evidence to suggest this improvement had continued up to 12 months after participation.
- 75% of adults who completed the programme had increased physical activity levels but the longer-term impact of participation on physical activity levels was unclear.
- 93% of participants were female and 96% were white, which limited the generalisability of some findings.
- Adults enjoyed participating in the programme and felt their children had enjoyed it too, but there is a lack of effectively joined-up provision to facilitate easily accessible next steps for them to progress onto and continue their physical literacy journey.
- The programme is uniquely positioned to act as a 'physical literacy librarian', providing information and guidance to participants based on their interests, skills and abilities to enable them to develop lifelong physical literacy. This is due to the project's pan-Wales remit and its focus on overall physical activity rather than a specific sport or physical skill.
- COVID-19 lockdown restrictions resulted in remote delivery of the programme and participants self-recording their test scores which led to incomplete data sets. This limited the opportunity to draw detailed conclusions related to specific characteristics that could have provided helpful data to target future interventions.
- Facilitators felt that the move to online delivery had been successful in developing opportunities for participants and children to embed physical activity in their day to day lives.

## Introduction

### 1.1 Background and policy context

The Well-being of Future Generations (Wales) Act (Welsh Government, 2015) is a key driver underpinning all Welsh policy development related to the social, economic, environmental and cultural well-being of the country and as such forms the policy basis that underpins the Welsh Active Early Years Project. The Act has seven key aims, which are:

- A healthier Wales
- A resilient Wales
- A prosperous Wales
- A globally responsible Wales
- A Wales of vibrant culture and thriving Welsh language
- A Wales of cohesive communities
- A more Equal Wales

All of these key policy aims are embedded within the aims and objectives of the project.

The Healthy and Active Fund (HAF) programme is one of the mechanisms introduced by Welsh government to address some of these aims. It is a partnership managed and delivered by Welsh Government, Sport Wales and Public Health Wales (Welsh Government, 2018a) which was launched in 2018, with the first phase providing an investment of £5 million into projects focussed on improving mental and physical health by enabling the adoption of healthy and active lifestyles across Wales. The HAF aims to:

- Sustainably increase the physical activity of those who are currently sedentary or have very low levels of activity
- Improve levels of mental well-being by promoting social interactions and increasing or improving access to spaces and places for physical activity

The Welsh Active Early Years project was devised to align with the following specific objectives and priorities of the HAF:

- Support the health and well-being of future generations (by working with children aged 0-5 involving adults who influence the child's life in the early years making positive choices for that child to be active)
- Address improvement to both physical and mental well-being for all generations
- Provide holistic solutions to attract adults who have sedentary lifestyles (engaging them in improving outcomes for themselves and children)
- Grow communities (to support children to play, develop and thrive)
- Use community lead approaches (to sustain the programme by supporting parents and carers to build networks to support physical activity through play)
- Be inclusive (so that children and adults of all abilities and all ages regardless of background find the programme accessible, non-judgemental and fun)
- Be flexible and adaptable to individual needs

The project also links to a range of other Wales specific policy developments, initiatives and strategies including 'Prosperity for all and a healthier Wales' (Welsh Government, 2018b), Public Health Wales 'Healthy and Sustainable Preschool' programme (Wales NHS, 2015), 'The Right Way: A Wales Future Fit for Children' (Children's Commissioner for Wales, 2017) and the development of Curriculum 2022 (Welsh Government, 2020).

Early Years Wales and Welsh Gymnastics form the partnership that created the Welsh Active Early Years project which was designed to encourage parents and carers to develop positive perceptions around engagement in physical activity and play, promoting healthy lifestyle choices and embedding these throughout the child's life course. The original project intended to deliver a bilingual 4-week multi-skills play based programme that highlighted the role that play has in holistic development, including social and emotional health and well-being and a child's resilience. The sessions were planned to be delivered using indoor and outdoor community spaces such as parks in 12 locations across Wales.

### 1.2 Physical literacy

As young children progress from birth towards starting school a lot of emphasis is placed upon the development of skills related to the traditional 'core' subjects such as reading, writing, and mathematics. However, in 2013 the UNESCO International Bureau of Education (UNESCO IBE, 2013) acknowledged that these 'core' areas needed to be reconsidered, stating that in their work "New forms of literacy needed in modern life are also increasingly taken into account' (p.39). One of these new forms of literacy is physical literacy and an increasing focus is being placed on the importance of this because of its potential to have a direct impact on health, life expectancy and quality of life. Agans *et al.* (2013) also highlight the fact that developing a culture where children are encouraged to be active and are subject to positive movement experiences throughout the day increases their ability to develop and achieve within the other forms of literacy too.

Physical literacy encompasses the knowledge, skills, motivation, and feelings related to physical activity and movement (Dudley, 2015) and was defined by Whitehead (2013) as 'the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits/activities throughout the lifecourse' (p. 28). As this definition indicates, physical literacy is not achieved in the first five years of life but it does rely on the key role that early years practitioners and parents have in supporting the development of physical activity and movement opportunities through motivation and confidence-building during the first few years of life. This foundation work is key to establishing positive habits and developing the competence in physical skills which lead to school readiness and engagement in physical activity long term. Fraser-Thomas & Safai (2018) highlight the importance of preschool children engaging in unstructured physical activity rather than organised sport-based programmes, suggesting that a focus on 'active for life' approaches were better placed to optimise long term development and benefits. Since Whitehead & Bailey (2010) introduced the concept of physical literacy its potential to impact positively on so many aspects of health and well-being across the lifespan has led to it becoming a driver for a wide range of international, national and local policy developments and the emergence of many projects and initiatives (Dudley & Cairney, 2020). In 2013 the Welsh Government made a commitment to making physical literacy as important a development skill as reading and writing (Welsh Government, 2013) and the Welsh Active for Early Years programme is one of the latest projects aiming to achieve this aim by promoting, developing and embedding physical literacy within families in Wales.

### 1.3 Current landscape of early childhood physical activity provision in Wales

The Public Health Wales (2020) Child Measurement Programme is a national scheme that starts when a child begins school in Wales and its latest findings showed that over the previous two years there had been an increase in the number of four- to five-year-olds in Wales classed as overweight or obese, with more than one in four children (27.1%) falling into this category. There is currently no national programme or system in Wales to gather information about children's growth of physical activity levels prior to school starting age but the levels of obesity that are apparent at the age of four clearly have their origins earlier in the child's lifespan.

The findings from the Child Measurement Programme led to the Welsh Government Health, Social Care and Sport Committee's report into the physical activity of children and young people (Welsh Government, 2019) which resulted in 20 recommendations to improve activity levels and establish effective systems to promote and support participation and engagement in physical activity from birth and across the lifespan. Whilst many of these recommendations focus on school-based provision the report highlighted need for collaborative approaches that provide easily accessible and joined-up services that enable families to participate in activities and progress smoothly through and across different opportunities as their ages, ability, skills and interests change and develop.

There is already a wide and diverse range of early childhood physical activity provision across Wales, but currently it is managed and delivered by a variety of stakeholders and organisations. These include sport national governing bodies, local authorities, third sector providers, community sport clubs and national bodies such as Sport Wales and NHS Wales and whilst some attempts have been made to establish clearly identifiable and articulated provision to support physical activity the current situation is fragmented and disjointed. Khanom *et al* (2020) highlighted this lack of an effective network of physical activity facilitators as being a significant barrier to families' participation.

As well as the lack of physical activity facilitators, Khanom *et al* (2020) identified a range of other factors that impact specifically on Welsh families' ability to access physical activity with young children. These include accessibility to safe spaces and resources, challenges associated with family work-life balance and the impact of deprivation on opportunities and attitudes. Their findings showed that despite the work that has been done to promote opportunities and to increase engagement the current landscape of early childhood physical activity provision in Wales is unclear and patchy and needs significant focussed development to create a coherent and joined-up service for families.

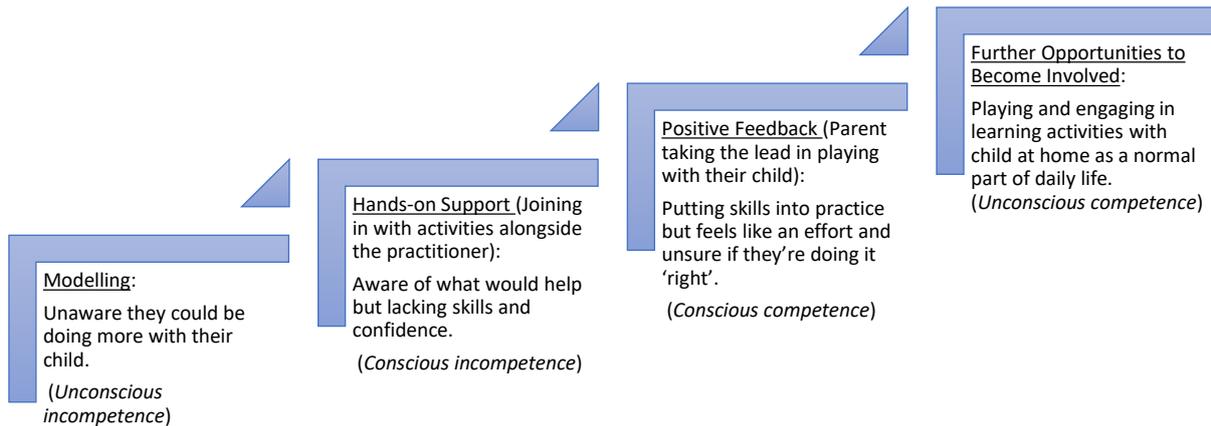
### 1.4 Partnership structure

In an attempt to try and address the impact of the current disjointed nature of early childhood physical activity in Wales the Welsh Active Early Years project was devised as a partnership between Early Years Wales and Welsh Gymnastics, aiming to work with their established networks and develop new networks and promotional partners to deliver the project. The partnership aims to introduce a positive culture change towards physical activity, health and well-being from the very start of life. Promotional partners identified included PACEY Cymru, NDNA Cymru, Clybiau Plant Cymru Kids' Clubs and Mudiad Meithrin. This model sites the programme at the centre of the provision with each partner directing families to the programme rather than delivering their own individual schemes. This design provides greater opportunity for the development of coherent and effective networks of provision in line with the recommendations of the Welsh Government's Health, Social Care and Sport Committee report into the physical activity of children and young people (Welsh Government, 2019).

## 1.5 Project overview

The overarching aim of the project is for children and adults to start enjoying playing actively together enabling them to reap the benefits of a healthy lifestyle instead of seeing it either as something done in isolation (such as sport training) or as a challenge or chore, and to encourage ongoing participation in physical activity throughout life. Rooks and Kilner (2020) adapted the four stages of competence model to apply it to parents' experiences of engaging with their child's learning (Figure 1) and this model provides a useful framework to illustrate the project's approach to developing parents' competence and confidence related to physical activity.

Figure 1- Rooks and Kilner (2020) Adapted Four Stages of Competence Model



The importance of play was identified in the initial project bid as central to a child's physical, mental, social and emotional health and well-being, resulting in resilience, flexibility and contributing to physical and emotional well-being. The initial design of the programme was as a 4-week multi skills movement and play based bilingual activity-based approach to be delivered directly to children and parents/carers at community-based venues and outdoor spaces in 12 communities across Wales. The sessions were to be held indoors and outdoors in community settings and using public space e.g. parks with each session linked to a well-known children's story. Sessions were designed to cater for around 20 participants, but with flexibility to include more so as not to exclude any interested parties. This expanded delivery could be delivered with existing community groups such as Parent and Toddler groups or gymnastics clubs to enhance the group's activities or by bringing new groups of people together. The intention with existing groups was to expand the number of attendees by promoting the project to them and encouraging participation.

Phase 2 of the project aimed to mentor volunteers that were part of the original groups to continue the activities and develop their group to have an ongoing physical activity programme that would be bespoke to requirements and facilities within that area. Through the upskilling of volunteers, the aim was to promote the physical literacy philosophy of sustaining changes in behaviour through no cost/low-cost activities, whilst also acknowledging that the programme would give participants skills for life and ideas for physical play activities that they could use in everyday life even if they did not wish to build upon their initial involvement to explore involvement in other organised groups or sport and activity clubs and organisations.

## 1.6 Critical success factors and evaluation requirements

The key critical success factors of the project were identified as:

1. Partners are committed and share the same approach and aims to work with the project
2. The aim of the HAF fits with the strategic aims of all partner organisations
3. The project management structure meets the requirements, and all involved can participate fully in project meetings
4. Project induction ensures that all partners are clear as to their roles within the project and what they are required to do. Partnership agreements will set out targets in the terms and conditions.
5. Staff and facilitators are selected using agreed criteria and job descriptions. The necessary skills and experience have been identified and met
6. The required number of participants can be engaged and retained on the project
7. Participants co-operate with milestone monitoring at the key stages so that outcomes can be measured
8. Project costs match the budget and cash inflow and outflow throughout the project meets partners' needs. Each partner has a clear budget and financial monitoring is effective and accurate
9. Community venues and agencies will promote the project. It will be critical that local links are forged.
10. That project roll-out is timely to allow for the monitoring at key milestones. Monitoring of the project against the project plan and timeline will enable remedial actions if timing.

The evaluation of the project sought to use a range of qualitative and quantitative data to identify baseline levels and explore the impact of subsequent outcomes against the measures identified in the initial plan. Two sets of measures were identified, one related to processes and one related to process.

The process measures were identified as:

1. Recruitment processes for project staff and facilitators
2. Project induction for all partners and facilitators
3. Project resources and session plans
4. Effectiveness of data collection methods
5. Effectiveness of promotion of the 4-week sessions for parents/carers and children and the practitioner training workshops
  - a. How the project was promoted
  - b. How participants found out about the project
  - c. Feedback from promotional partners

6. Suitability of venue/meeting places
7. Participant retention
8. Reasons for participant non-attendance/opt-out
9. Participants evaluations
10. Facilitators evaluations
11. Post session support

The outcome measures were identified as:

1. Increase in physical play between adult and child
2. Increase of physical activity in day to day living e.g., walking to local places, using parks, using cars less for short journeys
3. Improved short term mental well-being
4. Improved knowledge of local area
5. Increased use of local community facilities for physical/social interaction for adults and young children
6. Improved knowledge of activity opportunities in local area e.g. sports clubs, parks
7. Increase in time spent with other parents
8. Increased time children spend together
9. Reduction in social isolation and loneliness
10. Upskilling of volunteers in identified communities
11. Increase numbers taking part in networking in the community

### 1.7 Impact of COVID-19

A full risk assessment was presented in the initial business case submitted in February 2019 which identified six relevant risk factors, including potential threats to timescales. However, it was impossible at that time to foresee a global pandemic and the impact this would have on all aspects of the project. The first UK- wide COVID-19 lockdown in March 2020 coincided with the initial planned delivery phase of the Active Together programme. This meant that delivery had to be transferred from a face-to-face model to a remote, online platform-based model. This directly affected the ability of the programme to tackle some of the aims identified within its initial design.

The aims associated with suitability of venues and the impact of attendance on familiarity and engagement with local community facilities such as parks and playgrounds were unable to be evaluated in any meaningful capacity. The use of tablets as data gathering tools was not possible and working remotely made all aspects of data gathering less effective. This resulted in incomplete data sets which reduced the potential to undertake significant statistical analysis. Online delivery required different facilitation skills to those initially identified in the recruitment process, and also required changes to training and session plans. There was also an impact on accessibility to sessions as participants needed to have sufficient IT skills, hardware and infrastructure to access sessions. The

Project Team were receptive and proactive in their response the issues and challenges presented by the pandemic and made appropriate changes to enable the project to continue as effectively as possible in the circumstances.

As a result of these changes this evaluation will still present commentary for all the critical success factors and project outcomes (See section 1.6 above) set out in the initial programme proposal but will present the extent to which COVID-19 restrictions affected or limited the ability to undertake a full evaluation of each of them. The changes associated with the transition to remote online delivery also led to unexpected issues and outcomes and the evaluation will identify and comment upon these where relevant.

## Methodology

### 2.1 Evaluation design and processes

An external evaluation of the project based on the participant data gathered was part of the initial business case requirements. This evaluation aims to explore two strands of the project; the processes associated with the introduction and implementation of the project and the impact of the project measured against critical success factors and outcomes (see section 1.6). The evaluation will be organised into sections that focus on each of the identified factors in turn, giving a narrative description supported by relevant data and each section will conclude with a summary of the impact and an identification of future considerations related to that area.

### 2.2 Sample/Participants

The programme database lists 605 participants, 309 children aged under 4-years and 296 adults. Appendix 1 gives a full breakdown of adult participants according to gender, age, ethnicity, disability, economic status, WIMD decile and location. These characteristics were self-declared by participants as part of the quantitative data collection process. No demographic data were collected in relation to the qualitative data responses. Whilst there was evidence of representation across all the identified demographic indicators, the distribution of participants within and across these was highly variable. The data shows that 93% of participants were female, 96% were white and 75% were located in an urban town or city setting and this gives a distinct and significant participant profile which needed to be noted as it is not necessarily representative of the Welsh population as a whole. 4% of the project population identified as Arab/Asian/Asian British/Black/African/Caribbean/Black British which was comparable with the 5% of the Welsh population as a whole but only 6% of the project population declared a disability which contrasts sharply with the 22% of the total Welsh population (Stats Wales, 2021). As such the majority profile apparent in the project population was taken into consideration wherever possible in the analysis of data to acknowledge the potential skewing of perspectives that could be associated with it. Also, any potential gaps and missing voices from under-represented or marginalised groups that could occur as a result of this dominant profile will be highlighted to try and reduce the potential 'othering' of alternative views or experiences. Wherever it was possible and/or relevant data have been isolated according to one or more of the demographic criteria to try and decentre the focus away from the majority profile and ascertain the impact on that specific group, but often the small population sizes have limited the opportunity to produce reliable or valid results and comparisons from these data sets. It must also be noted that the Project Team recognised that when working with ethnic minority families the collection of data was seen as a barrier to gaining trust and so the focus was put primarily into engaging them in the project rather than collecting scores.

### 2.3 Data collection tools

The initial project proposal included a range of data collection requirements and these formed the basis of the data set used for the evaluation.

Children's engagement across the course of the programme was measured using the Leuven well-being and involvement scales, a well-established tool devised at the Leuven University Research Centre for Experiential Education and modified by Pascal and Bertram (1995). The scales are used extensively within early years settings and are a highly regarded indicator of children's levels of well-

being and involvement. The child's score is based on observed characteristics such as their facial expressions and engagement with their environment.

Parental physical activity was measured using the short form International Physical Activity Questionnaire (IPAQ) and mental well-being was measured using the short form version of the Warwick-Edinburgh Well-being Scale (WEMWBS) (NHS Scotland, 2006). Both these tools are well-established scales used for evaluation, monitoring and research purposes.

The WEMWBS uses a 5-point Likert scale and asks participants to score their thoughts and feelings about 7 positively worded items for the previous 14 days. The items link to feelings and functioning aspects of mental well-being (Appendix 2).

The IPAQ tool asks participants to record the duration (in minutes) and the frequency (in days) of involvement in physical activity undertaken in the previous 7 days. The activity is recorded against 5 categories: job-related; transportation; housework and caring for family; recreation, sport and leisure time; time spent sitting (Appendix 3).

On completion of the programme participants were asked to provide free text responses to four questions:

1. What did you enjoy about the sessions?
2. Has taking part in the sessions improved your well-being?
3. Has your understanding and knowledge of physical literacy improved following the sessions?
4. Is there anything we can improve on?

The responses to these questions were received in different formats depending on the delivery format being used by the group. Some responses were emailed directly to the Project Team whereas others were collated by facilitators and sent as a group response. The responses received from participants covered both remote and face-to-face delivery but it was not possible to link these responses to the quantitative data for each respondent.

Facilitators were also asked to complete an evaluation on the completion of delivery of a full set of sessions. This feedback was in the form of free text responses to questions based on the critical success factors listed in section 1.6. These responses were sent via email direct to the Project Team. It was not possible to link facilitator evaluation to the quantitative data for the group of participants that they had worked with.

A case study was undertaken by the facilitators of one of the initial pilot sessions that then moved to online delivery, focussing on a participant who declared their ethnicity as Arabic. The case study was presented in a narrative form and was not linked to any specific process or outcome measures. The case study provided some IPAQ score data, but no WEMWBS information and it was not possible to identify whether this participant had returned an evaluation. Because of the stand-alone nature of the case-study it was not possible to synthesise its content with other data sets.

## 2.4 Modes of analysis

### *Qualitative data*

The responses received from participants were returned in three different formats (see table 1) and a textual analysis was undertaken to identify high frequency terms that were then used to create themes. This analysis also identified terms that were low frequency but indicated areas of interest. No demographic data was collected in relation to the qualitative responses and it was not possible to link this feedback with individual's quantitative data scores.

*Table 1- Types of response to evaluation request.*

Type of response	Number of responses received
Individual email reply	22
Collation of responses created by setting	4
Transcription of online chat facility	3

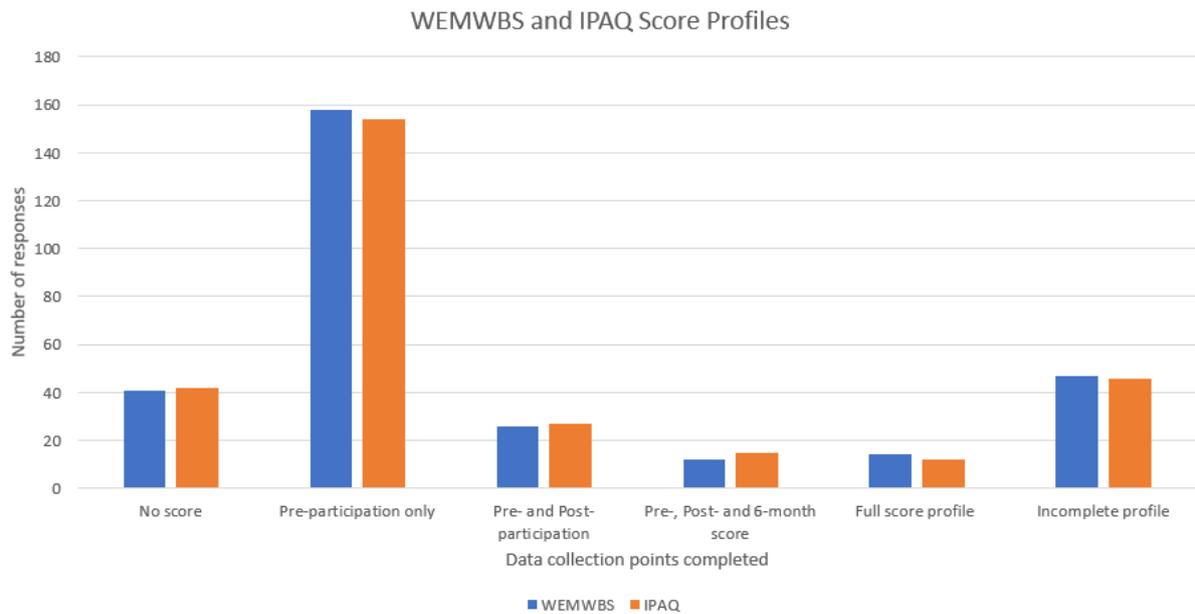
Facilitator feedback was returned electronically to the Project Team and the same modes of analysis were undertaken.

### *Quantitative data*

The mean average scores from the Leuven scales, IPAQ and WEMWBS for all participants were calculated to allow for ease of comparison. To limit the impact of incomplete data sets skewing results (e.g. where a child had missed a session) separate calculations were undertaken for populations with the same data profile, such as attendance rates or number of completed quantitative data scores. This allowed for more accurate comparison of like-for-like data. However, it must be noted that small sets of complete data limited the opportunity to undertake statistical analysis and in some cases this was not possible at all. The largest data sets that could be compared were for pre- and post- participation IPAQ and WEMWBS scores (see Figure 2) and so this set was used to provide the most reliable statistical analysis. Where other sets could provide useful indications even when not deemed statistically significant they were included in the evaluation and discussion. When this occurred the specific data set being used and its potential limitations have been identified.

Statistical analysis was undertaken to establish whether there was any significant relationship between participants' pre-participation IPAQ and WEMWBS scores and their scores on completion of the programme. Parametric testing was used to identify the level of statistical significance and non-parametric testing was used to assess levels of correlation. Correlation indicates a relationship between two variables (e.g. a participant's starting score and their score on completion of the programme) but correlation does not equate to causality. It shows there is a relationship but it does not prove or imply that one causes the other, the relationship could be purely coincidental and so additional data collection and further testing would be required to mitigate or eliminate this possibility and show if there were causal links creating the correlation which make it statistically reliable and generalisable.

Figure 2- Completion rates for IPAQ and WEMWBS at each data collection point



## 2.5 Ethical considerations

This evaluation was undertaken in compliance with relevant British Educational Research Association (2004) guidelines. The requirements of the project meant that participants' personal details were collected. This was done in compliance with GDPR regulations and requirements and in line with Early Years Wales and Welsh Gymnastics' policies on data protection, with access to data restricted as required. All personal identifiers and data related to IPAQ and WEMWBS scores were anonymised by using participant numbers. Qualitative feedback from participants and facilitators was gathered according to location so that the Project Team were able to respond to any specific issues, but this potential identifier has been removed from any data presented within the evaluation to ensure anonymity and confidentiality.

## Implementing the programme

### 3.1 Recruitment and selection project staff and facilitators

One of the critical success factors identified within the original business case was ‘Staff and facilitators are selected using agreed criteria and job descriptions. The necessary skills and experience have been identified and met’ and this was used as the criterion for the evaluation of the processes and procedures related to recruitment and appointment.

The project’s funding body was not able to hit meet initial timescales and changes of key personnel at various organisations (including Sport Wales, Welsh Gymnastics and Early Years Wales) that coincided with the originally stated start date set resulted in an unavoidable three-month delay to the confirmation of the project start which meant that all required appointments to roles were made later than the initial plans had accounted for and this affected subsequent timescales. Project update reports produced at the time evidence a slight difference in perception between the partners regarding the impact of time slippages and the significance of these. Early Years Wales reported that the extended time taken to produce the job description and a delay between advert and interview times as a result of the lag caused by the funding body would impact on the time available to deliver initial training, whereas Welsh Gymnastics reported that the turnaround times were suitable.

There was clear evidence of a parity of approach in recruitment processes used by Early Years Wales and Welsh Gymnastics, with collaborative working across the partnership to produce job descriptions and other required procedural documentation. The criterion identified in the job descriptions were clearly aligned to the project aims and allowed for a diverse range of previous knowledge and experience to be used to support applications. Within the ‘Schedule of Service Required’ information one of the main areas of delivery identified was ‘to act as a role model for participants’, which has connections to equality, diversity and inclusion issues because a more diverse workforce maximises opportunities to engage all sectors of the population. Both partners were actively involved in the bilingual advertising of posts, using their own social media channels and websites which demonstrated a proactive approach to recruiting Welsh speaking facilitators. The person specification also listed ‘ability to speak additional languages’ as a desirable skill, but there was no evidence of the advert being translated or distributed in other languages or alternative formats. The advert was sent directly to organisations and networks affiliated to the partners, such as gymnastics clubs and members of Early Years Wales and to other contacts including sport development officers who were asked to share it with relevant organisations and local authority contacts. The advert was also posted on external job boards, but there was no clear strategy identified to promote the advert to groups currently under-represented in the early years workforce or to track distribution and link this to applications.

Early Years Wales noted a delay to the process associated with the compilation of job descriptions and a further delay between releasing the advert and holding the interviews related to the lag caused by the funding body not meeting initial timescales (Evidenced in the process evaluation documentation), but Welsh Gymnastics did not report this challenge, only noting that the timescale between release and close dates for the advert was suitable and allowed for the roles to be shared across networks for applicants to see.

The Lead Facilitator role received 10 applications and co-facilitator received 19 applications across the Early Years Wales and Welsh Gymnastics adverts. The only demographic data recorded from the application stage was gender and this showed 18 female applicants and 1 male. The Early Years Wales

Annual Progress report 2019-2020 noted that the quality and quantity of applications for the facilitator posts had exceeded expectations and resulted in more interviews than had originally been anticipated.

Interviews were held over a three-day period with the same questions asked of each interviewee and an anonymised scoring process used to make final decisions. There was clear articulation between the skills identified in the person specification and the interview questions, and the questions were open-ended to allow candidates maximum opportunity to present their skills, knowledge and experience. Candidates' responses were scored against a Likert scale to enable objective comparison between them.

13 appointments were made in total across the Early Years Wales and Welsh Gymnastics processes, the 6 unsuccessful applicants had insufficient experience in delivering parenting programmes, which was identified as an essential requirement in the person specification.

### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to recruitment processes for project staff and facilitators were appropriate and effective.

High application numbers of suitable candidates suggests that there is professional interest in the area and it is valued as an important and worthwhile employment option. The numbers also indicate that the existing advertising and publicity networks that were used to promote the posts were appropriate and effective in reaching suitably skilled and qualified people.

The lack of demographic data for applicants makes it difficult to comment on the racial, disability, age and/or location profile of facilitators, but the gender profile mirrors the overwhelmingly female participant profile and that of the early childhood workforce as a whole. The participant evaluation feedback singled out the input provided by a male facilitator more than any other, and whilst this feedback was only representative of approximately 10% of the total participant population it does illustrate the potential positive impact that a diverse delivery team could have. The Project Team are continuing to engage with partnerships made with Women Connect First and other Parent and Toddler groups to further develop the diversity of the delivery team.

Exploring recruitment practices to encourage representation across the full range of demographic characteristics could be a positive action in redressing this balance.

### 3.2 Training and induction of facilitators

The COVID-19 lockdown restrictions meant that the original plan for face-to-face facilitator training was cancelled. The project induction was delivered online via Zoom and all the facilitator evaluations indicated that it was effective. A particular strength identified was the inclusion of child development content and also COVID-19 related material that raised awareness of potential issues being faced by families, with facilitators reporting that these helped to reinforce their knowledge and feel better equipped to support participants during the programme. Facilitator 6 also noted that the change allowed them to reflect on their own professional development and enabled them to share the experiences and challenges that parents were also going through,

*'the virtual sessions took me out of my comfort zone which is not a bad thing as I'm sure it would have been the same for many of the parents.'*

The induction feedback showed that it increased facilitator confidence and allowed them to make connections with their colleagues across Wales in a way that might not have been as achievable via

face-to-face training events. Despite this it was also noted that face-to-face sessions could have provided opportunities for incidental networking and information sharing that are not well-facilitated in remote sessions and a blended approach to training would be worth exploring for future events.

Some facilitators reported initial apprehension about the change from face-to-face to online delivery and this related to their limited previous use of these systems and their lack of confidence in using technology to deliver sessions. There appears to have been some difference of experience with the receipt of resource packs prior to training, with some facilitators reporting that it would have been useful to have them prior to the session but others stating that they had been received.

The Project Lead noted that there had been a significant interest in facilitator training outside the target group, including requests for the course to be delivered to a range of professional bodies who wanted to upskill their knowledge and understanding of physical literacy in young children, and minutes from partnership meetings also noted the need to develop joined-up provision as part of the future direction of the programme. Facilitator 3's evaluation identified the '*need to encourage adults to carry on physical activity*' as an important next step, which further reinforces the need to widen training to include other providers in order to maximise opportunities to allow participants to use the programme as an entry point to start to develop their physical literacy. Currently this development of training is outside the project's remit but this issue does link to the Welsh Government Health, Social Care and Sport Committee's recommendations for developing easily accessible physical activity opportunities that articulate together effectively (Welsh Government, 2019).

#### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to project induction for all partners and facilitators were appropriate and effective.

The training supported facilitators to develop new skills and approaches to maximise opportunities to engage participants using remote platforms, which had not been part of their original role. They were able to use the skills from the training to successfully deliver sessions and were able to reflect on this approach to identify unexpected benefits, whilst also recognising its inherent limitations and suggest ways forward to develop blended approaches for subsequent training events.

The success of the training in enabling effective delivery of the programme provides a catalyst for the development of future networks of provision which uses the programme as a gateway into physical activity that can then be used to support participants in their future physical literacy journeys.

#### 3.3 Project resources and session plans

Each session was based on a story, with participants receiving a resource pack containing cards outlining the activities and also giving ideas about how to create homemade resources linked to that week's focus. The resources will be placed on the Early Years Wales website, this was work in progress at the time of writing.

Facilitator feedback to the project resources and session plans was very positive, the sessions plans were described as clear, easy to use and helpful with a user-friendly layout that enabled effective delivery. The switch to online delivery meant that revisions are required to some resources to ensure a match between slides and session plans, these were mostly connected to timing issues and facilitators were able to provide specific details and suggestions to the Project Team. The emphasis on using homemade resources as part of the programme was seen as very positive element of the session plans by facilitators and by parents, as highlighted by Participant 3 who said,

*'I liked the fact that it was using everyday household items that you already have*

*lying around so you don't have to go out and buy fancy toys to have a good time.'*

Participant feedback indicated that the content and activities provided by the resources and sessions were effective in engaging their children and this was also evidenced by the children continuing to repeat activities after the sessions had finished. Three parents felt that the activities were more suitable to younger children and that this had limited their child's interest in some sessions, but two other participants noted that they had been given ideas about how to develop and adapt activities to tailor them to their child's interests and abilities. It was not possible to match the feedback to specific participant profiles, so there was no way of identifying whether the participants who raised the age-appropriateness issue had attended all sessions or had attended the same sessions as those participants who highlighted to adaptations that were given.

As presented in section 2.2 the majority of programme participants and facilitators were white and female, and this profile does need to be considered in regard to the project resources. The stories used as the basis for each session are well known and accessible to all groups, but the future development of resources could be an opportunity to try and address the under-representation of some demographic profiles within the project population. Information from Project Team and partnership meetings shows that there are already established connections with groups such as Women Connect First and organisations supporting under-represented groups and working with these to evaluate the current resources or develop new ones that might resonate more strongly with parents and carers in these groups could encourage greater participation and diversify the profile of participants.

The initial design of the programme was to deliver sessions using indoor and outdoor community settings and public spaces. The first delivery phase aimed to deliver the programme in 12 communities across Wales with at least 12 adults and children attending each one and pilot sessions to trial delivery were built into the original project plan, but the delayed confirmation of the programme start caused by the funding body meant that there was a three-month slippage on the implementation of these sessions and subsequently they were taking place when COVID-19 lockdown restrictions were introduced so these were not fully completed. Pilot sessions planned for north Wales were further disrupted by unprecedented bad weather in February 2020 resulting in flooding that prevented delivery.

Zoom was selected by the Project Team as the online platform used to deliver sessions in the redesigned format and this resulted in the need for many facilitators and participants to rapidly develop IT skills and use new media and online platforms. The Project Lead noted in February 2021 that this had raised a variety of challenges, systems needed to be able to be accessible to a wide and diverse range of users and users needed to be upskilled quickly to enable them to engage. This meant some revision of job roles within the central Early Years Wales associated team in order to deliver additional staff training to upskill them in the safe and effective use of new and different delivery platforms. The Project Lead and team also decided that the online sessions should be delivered by at least two facilitators to ensure safeguarding requirements were addressed and to allow provision for individual support if needed. Facilitator feedback showed that despite their initial concerns that online delivery would be difficult and would negatively impact the levels of engagement and interaction the actual sessions went well and these concerns did not materialise. It was also noted that these concerns were only voiced in relation to adult participation. Facilitator 5's feedback highlighted that *'it was lovely that the children embraced this and were really chatty, putting their faces on the screens'* which suggests that children had no concerns about engaging remotely. Some specific positive aspects that were noted included parents saying that using Zoom removed the stress of getting young children and family members ready to go out to a venue and facilitators feeling that

participants felt less self-conscious as they were in a familiar setting and this seemed to encourage better communication. There was appreciation of the opportunity that the sessions gave to provide a distraction during lockdown, as described by Participant 14,

*'It gave us new ideas about physical activity at home. Lockdown is hard and I used to take E to so many groups, so this online class has been a real lifeline.'*

However, there were reports of technological difficulties adversely affecting some sessions and one facilitator noted that they felt some families may have been put off by online delivery as they may have felt anxious about others being able to see into their home. Participants also noted remote delivery as a challenge whilst still recognising that it was the only option available at the time.

The pivot to online delivery meant a reduction in the number of participants at a session in order to ensure good levels of support and engagement and ensure adequate time was available within and after sessions for participants to chat and build connections. Smaller groups also provided more opportunities for participants to become confident with online communication and contribution approaches. Whilst this cap on attendees had a negative impact on the number of participants that could be involved in the programme at a time it ensured a richer and more supportive experience for those that were there as noted by Participant 7,

*'The sessions improved my well-being by improving my sense of community and feelings of belonging. It gave me something to look forward to in regards to meeting other parents.'*

## IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to project resources and session plans were appropriate and effective.

Facilitators were able to use the session plans to deliver sessions in an engaging way and participants were able to use the ideas presented in the resources to continue to develop skills and activities outside the sessions. The Project Team were proactive in asking for feedback from facilitators to identify aspects of the resources and plans that could be improved and facilitators have used these to provide specific suggestions.

The development of resources in collaboration with partners such as Women Connect First to try and address the under-representation of some demographic characteristics within the programme population profile could be a positive action to increase participation of under-represented groups in future phases of the programme.

### 3.4 Effectiveness of data collection methods

The initial programme design planned to use tablets to collect the IPAQ and WEMWBS data from participants during the sessions. This approach was trialled in an initial session but there were unanticipated challenges. Internet connections were not always reliable, and the time required to complete the forms reduced the time available to deliver the session content so during a subsequent pilot session paper forms were used. These were more user-friendly and but still proved to be time consuming for participants and for data transfer and recording and this approach was not environmentally friendly. Qualitative data was gathered in the form of free text responses from participants and facilitators. Participant evaluations focussed on the impact that attending sessions had on their well-being and physical activity levels. The facilitator evaluations focussed on the effectiveness of the programme delivery processes.

The change to online delivery had a significant impact on the approaches initially identified to collect data. As part of the move to virtual systems the Project Team developed the use of Microsoft Forms as a data collection method. This approach allowed participants to complete the questionnaires using their own IT devices and in their own time which maximised the time available to participate in the session activities and also eliminated the cost, administrative time and environmental impact of using paper-based methods. The forms were emailed to participants when they first booked onto the programme. A reminder system was in place that emailed participants if they had not completed the initial data request, with post-participation data then being requested once the last session of the programme had taken place. Whilst the use of electronic forms did have benefits, the change to remote delivery meant there was an onus on the participant to complete the IPAQ and WEMWBS requirements without the hands-on support, guidance and encouragement of a facilitator and this allowed participants not to engage in responding in a way that might not have been an option in a face-to-face session. This factor may have been the reason why the number of complete participant data sets was very limited (see figure 2 on page 19). There were a number of erratic responses, such as participants recording 6-month scores but having no other scores showing, and also some erratic score profiles (e.g. one participant recording a pre-participation IPAQ score of 23040 and a post participation score of 11664).

Whilst the remote data collection provides one possible reason for the incomplete and erratic nature of the data sets there are a number of other potential factors that could have had an effect too. Participants might have misunderstood the scoring scales associated with the different tests. Technology issues could have caused difficulties in participants completing or submitting their data. Score could also have been impacted by participants having had an 'extraordinary' week that appeared to give erratic scores, for example, they may have been ill and unable to get up which would have given a very low IPAQ score related to that week. Conversely, they may have run a marathon which would have given a highly inflated IPAQ score. In a fuller data set the skew produced by these outliers would be reduced, but the small numbers of respondents in many of the sets meant that this skew created a challenge. Without any contextual background to clarify whether the outliers were the product of exceptional circumstances or a result of incorrect administration of the tests the decision was made to use all the data returned but acknowledge the incidences where an outlier may have caused significant skewing of overall averages.

Participant evaluation response rates were 10% which suggests that there is potential to develop more robust feedback processes. The issues related to remote delivery that are highlighted above as having impacted on quantitative data collection may have also affected this aspect as it is likely participants would have been more likely to complete a feedback form if they had been attending in person. However, this also raises the issue of the potential impact of familiarity issues affecting the quality of the data collected as participants may feel more reluctant to give negative feedback directly to a facilitator who they know or if they feel their feedback could be identified. As noted above, during the initial face-to-face delivery the data collection was time-consuming and Facilitator 3 suggested that it was *'better to complete [the forms] on behalf of parents rather than them complete them themselves'*. This statement also illustrates an aspect of the familiarity issue in that the participant may be tempted to artificially inflate or reduce their scores to reflect what they think should be appropriate rather than give a true answer. However, this personal approach does allow for the development of contextualisation of data that could be used to provide explanations for seemingly erratic scores.

The Project Team also noted that work done with ethnic minorities was disproportionately underrepresented by the data as when working with these families the focus was to engage them and the collection of data was seen as a barrier to gaining trust. Evidence gathered from case studies indicated positive engagement and the team are continuing to engage with partnerships made with Women Connect First and other Parent and Toddler groups to further build on this work as part of the return to face-to-face delivery but at the moment this data sits outside the main database.

## IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to the data collection methods were appropriate and effective in the context of the changes that had to be introduced as a result of COVID-19 restrictions.

The change to remote delivery had a significant impact on the original data collection approaches outlined in the project plans, with the majority of data being gathered remotely. This change meant that there were limited opportunities for facilitators to support, encourage and remind participants to complete the quantitative records and this led to high numbers of incomplete records. The limited number of complete data sets significantly reduced the opportunity to undertake effective statistical analysis of the scores.

The change to remote delivery also meant that it was not possible for facilitators to provide any information to contextualise specific data sets related to their groups or individuals within these. This was further affected by the lack of any mechanism to connect participants' qualitative and quantitative data. Whilst face-to-face delivery could have provided these links it could also have affected the participants' willingness to give honest responses.

In future delivery phases it would be useful to develop data collection systems that allow for the articulation of participants' qualitative and quantitative data and enable facilitators to input relevant contextual detail to create more robust score profiles.

### 3.5 Effectiveness of promotion of the sessions

The programme has clear bespoke branding which was used consistently across all publicity materials, platforms and communications and this helped to create an easily recognisable visual identity. There was clear evidence of all partners using their established networks to raise awareness of the programme and promote the sessions. These networks covered a wide range of organisations, including councils, health boards, family information services, the voluntary sector and affiliated members of the partners such as Early Years Wales settings and Welsh Gymnastics groups. There was no data available to provide details of the recipients of the publicity materials and so it was not possible to identify gaps in the distribution that could relate to the under-representation of some groups within the project population.

The COVID-19 pandemic reduced the avenues available to promote the programme with online publicity being the primary approach available. The programme is supported by well managed social media accounts on Facebook, Twitter and Instagram which are regularly updated with relevant and engaging content that promotes upcoming events and presents information about sessions that have been delivered. The focus on online promotion routes is reflected in the participants' feedback which indicated that most of them found out about the programme through social media, mainly through the Early Years Wales programme page or other organisations' platforms which had shared the Early Years Wales information. The Project Team also reported that the enforced move to online promotion had led to them using local based bloggers to promote the programme and this proved to

be an unexpectedly useful source, with one blogger having over 14,000 followers which caused an influx of parents into one intake. Facilitators all reported that they were able to use a variety of online platforms to share publicity materials e.g. Facebook and local parent and toddler groups' social media, but some felt that this was a limiting factor in recruitment and that being able to speak with colleagues or potential participants would be likely to have a significant positive impact future on participant recruitment figures.

Anecdotal evidence from the Project Team indicated that participants had promoted the programme to others via word of mouth, including 'virtual' word of mouth routes such as sharing information of social media posts. Informal, personal networks were also identified as having been used to encourage other participants to join and this was also helped by settings that partners were already working with supporting the delivery of a session as part of their usual provision which meant that the programme could be promoted to the families who were already attending that group.

Appendix 1 gives a full breakdown of participants according to age, gender, self-defined ethnicity, disability, economic status, WIMD decile and location. As noted in section 2.2 there was representation across the full spectrum of identified demographic characteristics but the distribution within and across them was not equal, with certain categories being noticeably unbalanced. 93% of participants were female, 96% were white and 75% were located in an urban town or city and this gave the data a particular profile. Similarly, the demographic profile of facilitators was mostly white and female, and this reduced the potential of the programme to provide role models to appeal to under-represented groups. There could be a reluctance from people within the under-represented groups to participate in sessions dominated by the majority profile, with the increased possibility that they may feel that they have little common and so choose not to get involved.

In March 2021 a dads only group was launched in conjunction with Dads Can Cymru in recognition of the fact that men may have been reluctant to get involved in groups where they may be the only male participant and the February 2021 report identified that some provision for Active Baby at Home had been developed specifically for BME families across Wales in conjunction with Women Connect First. These examples demonstrate that the Project Team were able to recognise that there were gaps on provision related to under-represented demographic groups and action was taken to begin to address this issue.

The resources were available in Welsh, there were Welsh speaking facilitators and one participant evaluation was completed in Welsh which indicates that there had been Welsh language communication between that participant and the facilitator, but the financial implications of translating all content and resources in real time as the programme developed were noted as prohibitive by the Project Lead in February 2021. Demographic data about participants Welsh language proficiency were not collected, but Stats Wales (2021) report that 29% of the total population of Wales identify as being able to speak Welsh so it is likely that the development of Welsh medium support and provision would be beneficial. Although not a Welsh language issue, that Project Team did note their commitment to providing parity of experience across Wales in the 2019-2020 progress report, acknowledging that programmes are often launched initially in south Wales and then introduced into north Wales at a later date and this had not been the case with this project.

## IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to the promotion of the sessions were appropriate and effective.

A range of networks representing all partners were used to promote the programme and the team were open to new and innovative promotion opportunities, such as the use of bloggers. These approaches resulted in the programme recruiting to target, but the demographic make-up of the participants had limited diversity. The Project Team recognised that fathers and male carers were an under-represented group and connections with a relevant charity were used to develop and promote male only provision. This approach has also been started with a charity representing ethnic minority women. This direct action to address the gaps in representation was successful and would be useful to replicate in order to continue to address the under-representation of other groups. Systematic mapping of the distribution of publicity of materials and recording recruitment against this would be a useful development to enable the identification of any specific gaps in provision.

There is evidence of connections between partners and organisations working with under-represented groups and these could be further developed to try and promote delivery of the programme within these demographics. Once groups are established there could be opportunities to develop connections between other groups post-participation because the catalysts for participants' engagement would have been similar. This shared experience of participating could then be used to reverse-engineer subsequent provision by participants reflecting back on the challenges and opportunities they experienced during their attendance and working together to identify the best way forward for them, thereby promoting more diverse group make-ups.

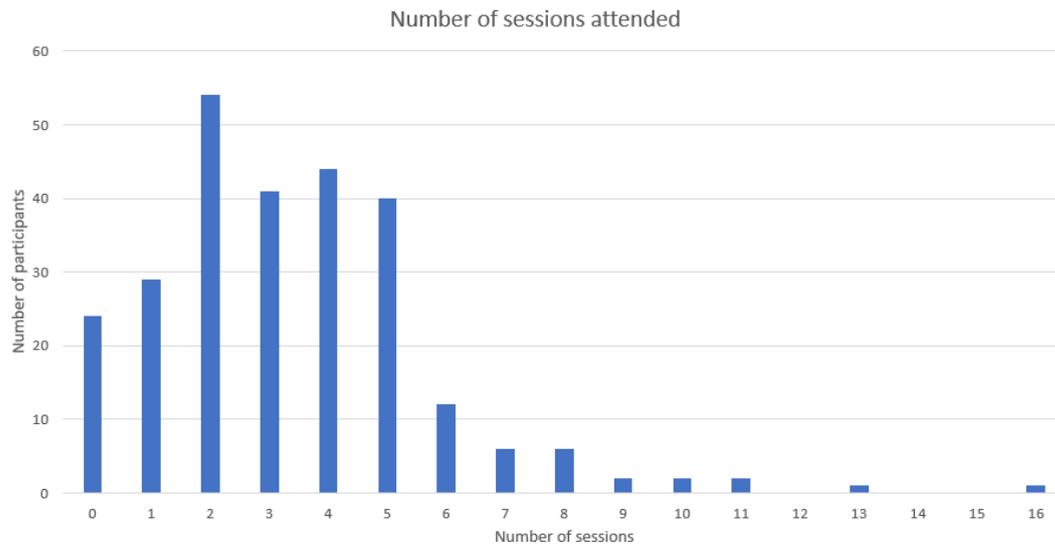
### 3.6 Suitability of venue/meeting places

It was not possible to present data or commentary on this process measure because of the switch to home based online delivery.

### 3.7 Participant retention

The initial project plan, based on a face-to-face delivery model, aimed to recruit a minimum of 120 children aged 0-5 years and 120 parents/carers with a minimum attendance rate of 60%. The original recruitment target figures were achieved, with 310 children and 296 adults registered on the database. 95% of adult participants registered onto the database recorded a pre-participation score, but the numbers who recorded subsequent scores were much lower. No attendance registers or data for individual groups was provided and the lack of complete data sets means it is not possible to give one definitive rate for the completion of subsequent scores, but the numbers of participants with at least one post-participation score indicate a rate of approximately 20%. Attendance data showed that 30% of participants who had attendance data recorded had attended a full suite of 4 or 5 sessions, with the majority of participants attending 2 sessions (see figure 3). Attendance declined sharply after the 5-week point, as would be expected, but the data showed a number of participants continued to participate in sessions after the completion of one delivery round. This suggests that they undertook the programme more than once, but there is no detail or information within the data gathered to explain this occurrence.

Figure 3- Number of sessions attended



Attendance data indicated that some participants appeared to have attended more than one complete set of sessions, with some registering attendance at 16 sessions. The data collection did not identify or differentiate between when scores were collected for these participants, so it is not clear whether the pre-participation score is related to their situation prior to their initial attendance or attendance at a subsequent set of sessions and also whether any subsequent scores are related to attendance at one suite of delivery or across several. 19 participants had a pre-participation IPAQ and/or WEMWBS score recorded but had not attended any sessions, indicating a possible issue with registration or data collection processes which is a potential area for further scrutiny. None of the participants who identified as Asian/British Asian/Arab/Black/African/Caribbean/Black British had post-participation scores for WEMWBS or IPAQ, and none had attended more than 2 sessions. Because there were only 4 adult participants in this category it is not possible to link ethnicity to attendance or drop-out but the limited data available do provide some indication, and as noted previously the decision was taken not to focus on formal data collection with this group as it was perceived to be a barrier to building trust and engagement

The IPAQ data gave a general indication that attending the full suite of sessions led to the greatest increase in physical activity levels (Figure 4), but this was not mirrored in well-being scores (Figure 5) and the small data sets in other date ranges meant it was not possible to undertake statistical analysis so this trend is not generalisable.

Figure 4 - Average IPAQ scores by number of sessions attended

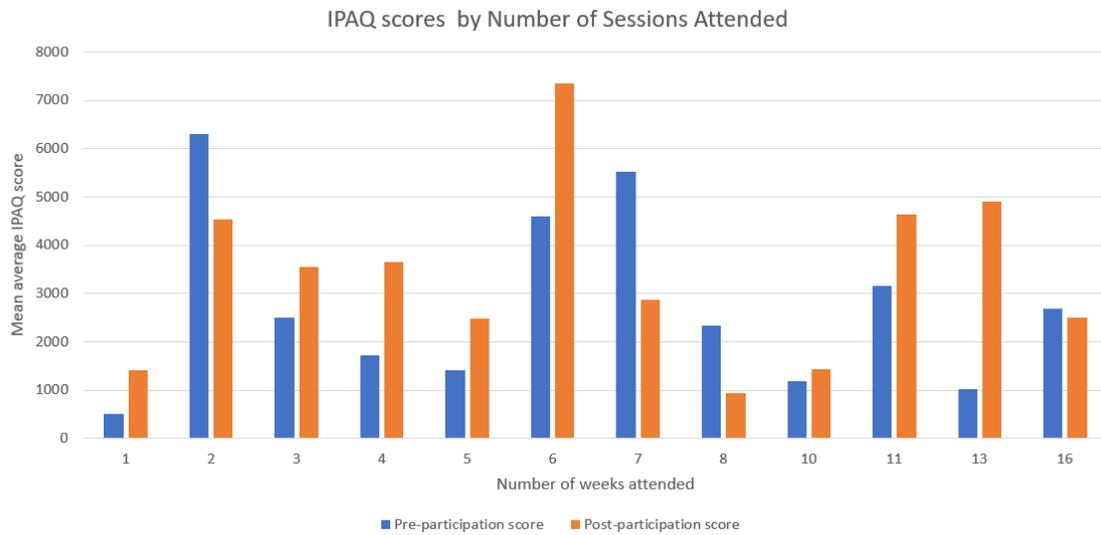
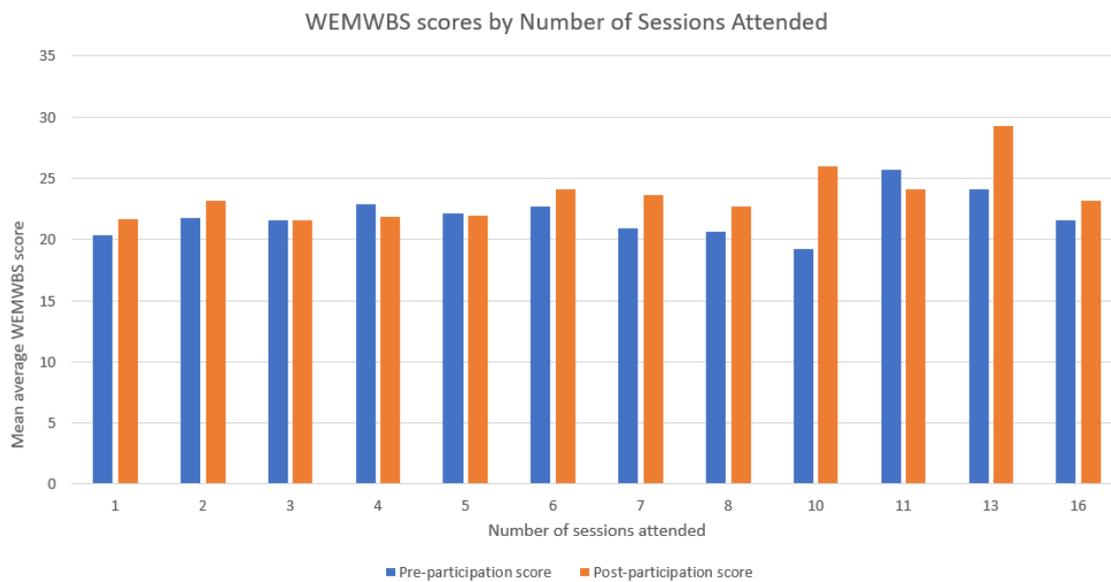


Figure 5- Average WEMWBS scores by number of sessions attended



### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to participant retention were appropriate and effective in the context of the changes that had to be introduced as a result of COVID-19 restrictions.

Online delivery presented the potential issue of participants not being able to attend a session as a result of connectivity or technological difficulties rather than choosing not to attend, and conversely it allowed easier access by eliminating the need for participants having to get to a location at a set time. The significant difference between the number of participants providing pre-participation scores and those giving any post-participation information suggests that the development of more robust systems to undertake attendance check-ins and to follow-up absences or non-attendance would be useful.

The fact that some participants appeared to be re-attending sessions and repeating the project indicates that there is a lack of effective systems to support progress onto other provision that would help them to progress in their physical literacy journey.

### 3.8 Reasons for participants non-attendance/opt out

The project did not have a mechanism to gather exit data from participants who did not complete the programme. Analysis of the participants who registered attended at 2 sessions or less gave some indication that participants from under-represented ethnic groups were more likely to opt-out of the programme but the small number of participants in this group meant it was not possible to identify any significant link. Feedback from participant evaluations evidenced that some participants did inform facilitators of reasons for absence related to individual sessions and this was confirmed with the facilitators' evaluations. The reasons for missed sessions tended to be child-related such as tiredness or illness.

The Project Lead's February 2021 report stated that the switch to remote delivery had impacted negatively on participation. The primary reason suggested for this was families' lack of confidence in using IT and online platforms, and difficulties in accessing the sessions. The potential impact of COVID-19 lockdown restrictions should also be considered as a potential factor as many families were dealing with a range of other issues such as home-schooling, homeworking and increased caring responsibilities which could have limited the time and resources available to them to engage with the programme. However, no data were presented that related to these views and subsequent facilitator evaluations indicated that whilst challenges associated with lockdown and use of technology had been concerns prior to delivery these had not materialised, as noted by Facilitator 1 who stated '*it wasn't easy to make a connection with families, but flow was better at further sessions*'. Facilitator 6 felt that '*the parents/guardians seemed just as engaged in the virtual sessions as the sessions which were face-to-face*', which further illustrates that the initial concerns about remote delivery did not appear to materialise.

### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to participant non-attendance/opt-out were appropriate and effective in the context of the changes that had to be introduced as a result of COVID-19 restrictions.

Initial concerns by the Project Team and facilitators regarding online delivery impacting negatively on attendance were not apparent within the data. The lack of a system to identify potential opt-out from the programme and to follow this up to explore reasons for it mean that it is not possible to present a discussion of possible factors or suggest actions to address these so the introduction of process to collect exit data would be useful.

### 3.9 Participants' evaluations

As outlined in section 2.3 participants were asked to complete an evaluation at the end of the programme. However, it must be noted that the response rate to the evaluation request was low so these data only represent the views of approximately 10% of the total participant population and did not include any demographic identifiers such as age, and as such can only be used to provide general indications rather than generalisable findings.

Participants responded to 4 questions using a free text format and these responses were analysed to identify high frequency terms. The word cloud shown in Figure 6 was generated from this initial analysis indicates that the overall headline responses were positive, as illustrated by this comment about the programme from Participant 8,



that supported the activities was an aspect that participants identified as a positive element of the programme that had not been anticipated.

*Table 2- Overview of positive and negative terms evident in textual analysis of parent feedback to final evaluation questions*

Examples of positive terms	No. of responses	Examples of negative terms	No. of responses
enjoy/enjoyed/enjoyable	41	difficult	5
thank/thanks	33	shame	2
great	22	challenging	1
help/helped	17	distracting	1
lovely	12	disappointed	1
fun	11	uncertain	1
good	8	struggled	1
nice	5	stressful	1
amazing	2	tricky	1
love/loved	7	unfortunate	1
positive	2	sadly	1
interesting	2		
friendly	2		

The main challenge noted in the participants' evaluations related to delivery, with technical issues and timing being identified as problematic. Related to theme of remote delivery were responses identifying the lack of opportunity to connect with other parents and develop networks that would support progression onto next steps, but all these responses also noted that these issues were unavoidable by-products of COVID-19 restrictions and were beyond the control of the programme.

The issue of participants' perceptions of the age appropriateness of activities was mentioned in 3 of the 23 responses, with feedback suggesting the activities would be better suited to younger children, however, as discussed in section 3.3 this view was contradicted by other responses who noted how they had been shown how to adapt activities to suit children's different abilities and ages.

#### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to participants' evaluations were appropriate and effective within the constraints associated with operating in COVID-19 restrictions.

The responses received in the evaluations highlighted specific elements of the programme that participants had found beneficial and they were also able to identify aspects that had been less successful. Whilst the feedback did outline relevant factors, the low response rate needs to be noted and the data cannot be judged to be fully representative of the total programme population.



successful delivery of the project, although some were identified as needing to be revised to fit better with online delivery and these details have been fed back to the Project Team. Facilitators reported that the use of online promotion approaches had been effective whilst also noting that they felt the use of face-to-face networking to promote the project would have allowed for wider dissemination and more promotion.

The facilitators' evaluations indicated that they felt the change to online delivery had been successful and they had been able to engage with children and participants to promote physical activity. They were able to make suggestions that would improve specific aspects of the programme in future phases, in both online or face-to-face formats.

#### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to facilitators' evaluations were appropriate and effective.

Their feedback provided useful specific detail related to process measures and identified areas that could be improved to make the programme more successful in future presentations. This shows that the relationships between the facilitators and the Project Team are positive and enable professional reflection and development to occur. The evaluations also provided data that could be cross-referenced to participant evaluations in order to give strong indications of positive or negative aspects of the programme. An example of this was the identification by participants and facilitators of the use of household objects to create resources as a strength of sessions.

Identifying where facilitator feedback has been used to inform and develop the next steps of the programme would be a useful approach to consider as it will help to promote a sense of connection and ownership and demonstrate that their views are valued.

##### 3.11 Post session support

One of the initial aims of the project was to promote a transformative practice model that would create a legacy by recruiting volunteers from within the groups at the end of the delivery period who would then be provided with support to carry on the future organisation and delivery of that group, resulting in the establishment of self-sustaining ongoing provision within each local community. In the February 2021 Project Lead report it was noted that this had not been possible because of online delivery which meant that attendees at a session may not be located in the same geographical area so it would not be possible for them to come together as group after lockdown restriction were lifted. The responses from participants that identified the need for systems to support progression onto other opportunities suggests that the aim of developing self-sustaining groups is still valid and should be continued.

The Project Team recognised the potential for specific needs associated with children born in lockdown who may have had reduced opportunities to develop physical literacy, and this was noted by participants too,

*'Having been in lockdown for half her life the sessions also gave us ways of being active in a small space.'* Participant 3

This is being supported by development of a digital version of the Active Together Wales programme consisting of 6x10 minute videos introducing parents to physical activities suitable for very young children.

One of the project outputs listed in the original programme design was to signpost all participants to further activities which promote physical health and well-being for all ages. Participant feedback noted that this was a limitation of the project, and whilst the small population size of this group means that this cannot be classed as a strong view it does support the recommendations for easily accessible joined-up provision set out in the Welsh Government Health, Social Care and Sport Committee's report into the physical activity of children and young people (Welsh Government, 2019).

In February 2020 a Welsh Active Early Years focus event was held to promote the programme and this was attended by a range of sporting bodies who expressed an interest in future involvement and development. The pandemic prevented timely follow-up of these connections but as organisations reopen following COVID-restrictions the reestablishment of these should be prioritised in order to maximise opportunities to develop a clear portfolio of provision for participants. The new ways of working that were developed during lockdown could provide an opportunity to reset the previous organisational norms and boundaries and allow the creation of new collaborative networks which provide joined-up services.

### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that the process measures related to post session support were appropriate and effective in the context of the changes that had to be introduced as a result of COVID-19 restrictions.

The change to online delivery meant the use of community-based venue and locations was not possible and so the original plan to create self-sustaining groups based in localities had to be suspended. The evaluations from participants and facilitators indicated that on completion of the programme there was enthusiasm and motivation to continue involvement in physical activity programmes and the project is uniquely positioned to provide the support and guidance to enable this progression. The project has a pan-Wales remit and the partners already has established connections with a wide and diverse range of organisations that provide sport and physical activity opportunities for children and their families. The fact that the programme focusses on physical activity rather than any specific sport-related skills means it is accessible to participants who may have negative perceptions of involvement in sport. Participant feedback indicating their increased awareness of the importance of physical activity suggests that they would be receptive to ideas about continuing to develop this, so the programme could act as a 'physical literacy librarian' providing information and guidance to support participants in finding and selecting provision based on their interests, skills and abilities to enable them to develop lifelong physical literacy.

## The programme's impact

### 4.1 Increase in physical play between adult and child

Participants' physical activity levels were measured using the IPAQ which asks them to record the duration (in minutes) and the frequency (in days) of involvement in physical activity undertaken in the previous 7 days (see appendix 2). The activity was recorded against 5 categories: job-related; transportation; housework and caring for family; recreation, sport and leisure time; time spent sitting. The mean average scores in minutes were calculated and used to conduct statistical analysis. There

were no data collection tools used that identified any specific activities that accounted for increases in activity levels.

The IPAQ data set for all scores recorded across the complete the whole cohort (Table 3) showed an average increase of 551.50 minutes across 7 days immediately on completion of the programme, which equates to just over an hour a day, and evidence of an increase still showed 6 months after participation, although this had fallen to 148.21 or approximately 30 minutes additional minutes of physical activity compared to pre-participation levels. Data taken 12 months after participation showed that the average time had increased again. However, this data set was highly inconsistent with high numbers of incomplete profiles, missing records and isolated scores these inconsistencies were likely to be impacting negatively on the rigour and validity of any analysis. For this reason the data sets were cleaned according to set parameters to enable more reliable outcomes.

*Table 3 – Average IPAQ scores for all participants*

	Pre-participation (n=245)	Post-participation (n=65)	6 months post- participation (n=51)	12 months post- participation (n=36)
	3284.53	3836.03	3432.74	3811.17
Difference between pre- participation score		+551.50	+148.21	+526.64

The largest complete data set was for pre- and post- participation scores (Table 4) and analysis of these data showed there was a statistical significance to this indicating that scores were likely to be higher on completion of the programme. 75% of participants recorded higher IPAQ results in their post-participation responses, with their average activity levels increasing by approximately 4 hours per day. The reason for the difference in result between this data set and the complete set shown in Table 3 is that the average pre-participation score for the complete set contained 245 participants which produced a different starting average level for that population.

*Table 4- Average pre- and post- participation IPAQ scores (n=65)*

Pre-participation	Post-participation	Difference between pre-participatio score
2370.72	4343.93	1973.21

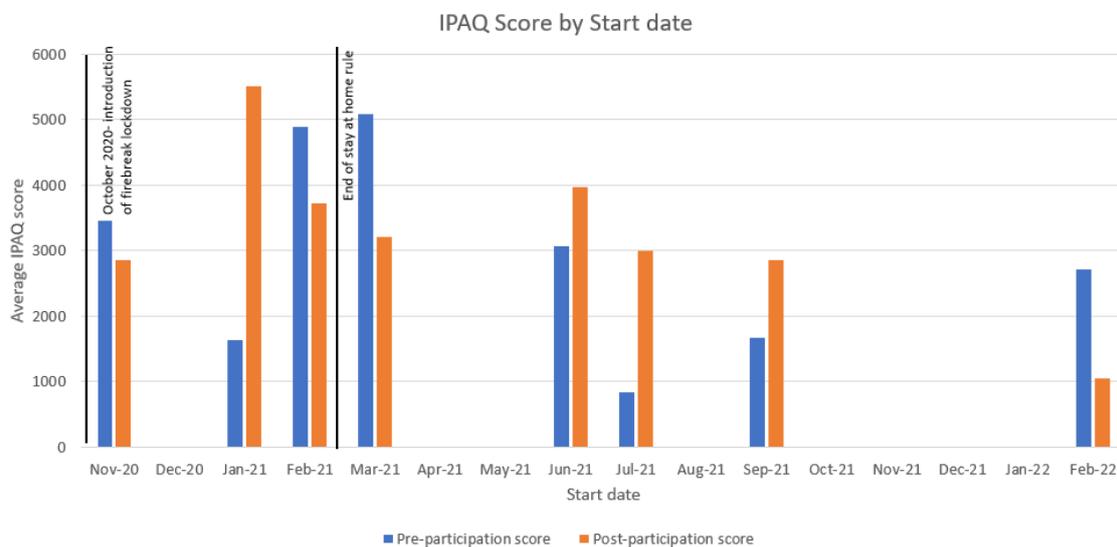
12 participants had a complete score profile (Table 5) and the average pre-participation activity level in this population was more than twice that of the participants who recorded a pre- and post-participation score. Following this high initial activity level score all the subsequent recorded levels show a decrease in activity. Examination of this data set showed that one participant had recorded unusually high initial levels which had decreased sharply by the 12-month point (Participant 0169 had a pre-participation level of 27,216 which had gone down to 1,728 12-months later) and this individual profile had skewed the average pre-participation score. There was no mechanism available to contextualise or verify this score by correlating it facilitator information that could explain the initial high or the decline.

Table 5 – Average IPAQ scores for participants with full a score profile (n=12)

	Pre-participation	Post-participation	6 months post-participation	12 months post-participation
	5648.83	3976.75	5067.58	3466.17
Difference between pre-participation score		-1672.08	-581.25	-2182.66

Examination of the data for the participants whose post-participation IPAQ results had declined showed that some individual situations had significantly affected the overall average of this group, for example, participant 0162 recorded a pre- participation score of 27,216 and a post-participation score of 9679. It was possible that restrictions associated with COVID-19 restrictions could have impacted upon activity levels, as during periods of lockdown opportunities to exercise or go outside were limited. In order to try and identify whether this had a been a factor the scores were analysed according to start date (see Figure 8) but there was no clearly identifiable correlation between the introduction or relaxation of restrictions and increases or decreases in scores. Men made up 5 % of the total project population but represented 15% of the participants whose IPAQ scores had decreased.

Figure 8- Average IPAQ score for dates attended



The quantitative data gathered from children’s Leuven scores shows that the average well-being and involvement scores increased by between 0.5 and 0.75 points (Table 6).

Table 6- Average Leuven scores

	Week 1	Week 2	Week 3	Week 4	Difference between start and end scores
Children who attended all sessions					
Well-being	3.76	3.8	4.05	4.5	+0.75
Involvement	3.68	3.66	3.85	4.2	+0.5
All children across all sessions					
Well-being	3.72	3.62	3.9	4.5	+0.78
Involvement	3.72	3.08	3.6	4.2	+0.48

This analysis of quantitative data shows that average physical activity levels improved for adults and that children’s involvement increased, and feedback from participants suggests that these were happening in tandem as adults and children undertook more activities together. Participant feedback presented specific examples of adults and children engaging in activities together, with the use of ‘we’ being used in these descriptions as illustrated by Participant 16’s comment,

*‘We adapted the singing and dancing and my daughter really enjoyed that, she was laughing so much at the interactive parts.’*

Facilitator feedback also indicated that participants had used the activities from sessions throughout the week, with Facilitator 7 reporting,

*‘Parents/guardians fed back each week about activities they had revisited and commented verbally or in the chat’.*

The focus on building engagement with participants in under-represented ethnic groups and the associated barriers to establishing trust related to formal data gathering meant that this group had incomplete data sets so it was not possible to present any information related to changes in their activity levels, or with participants who had a declared disability.

#### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that increases in physical play between adult and child were evident and the programme had had a positive impact.

It was possible to undertake some statistical analysis on certain data sets and this indicated a significant link between pre- and post-participation activity levels, showing that it was likely that levels would be higher after completing the programme. There was some data to indicate that the increased levels occurred in conjunction between adults and children, but there was no specific data gathered to prove this.

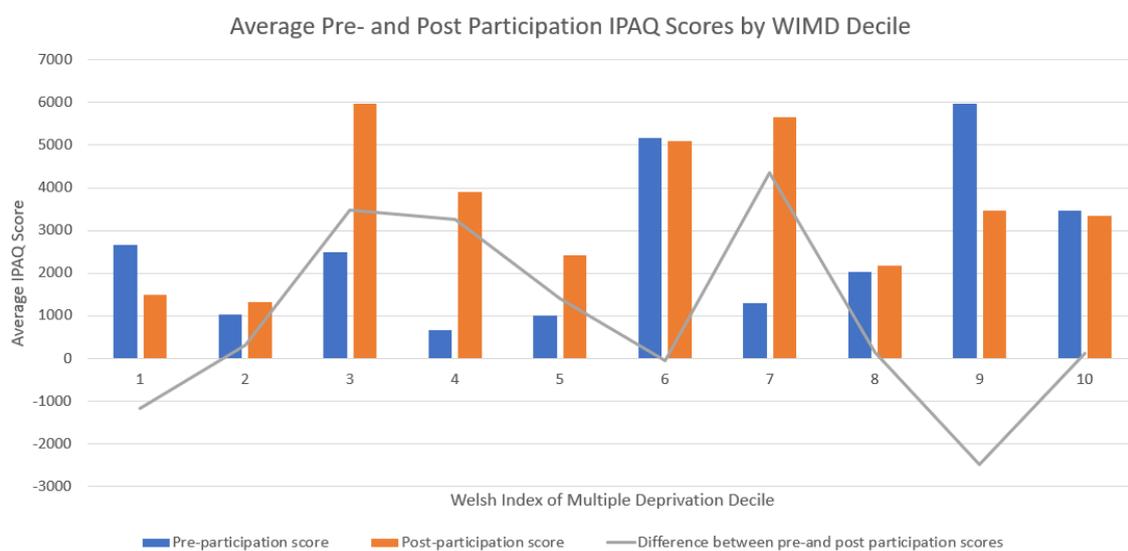
In future presentations of the programme it would be useful to develop more structured feedback systems that allowed participants to report directly on the impact factors, and to develop opportunities to gather children’s voices too.

#### 4.2 Increase of physical activity in day to day living e.g., walking to local places, using parks, using cars less for short journeys

The analysis and commentary presented in section 4.1 showed that physical activity levels had increased, but there was no mechanism available to capture where this activity had occurred. The introduction of COVID-19 restrictions meant that, at different times, there were reductions in the amount of time people were allowed to be outside and the number of locations that were open was

limited. These factors will have affected the opportunities available to participants to increase their use of these resources. There was no information presented in the participant or facilitator evaluations that suggested any aspects of day to day living that had been impacted by attendance, with all the detail given being related to the session activities. Analysis of IPAQ data based on WIMD decile gave an indication that participants located in areas classed as being more affected by deprivation (deciles 1-5) had greater improvements in activity levels (Figure 9). As the WIMD is based on location as well as other factors this data may be relevant in suggesting that participants in areas of deprivation were undertaking more activity and this may have increased their use of local facilities or their choice to walk rather use a car, but further data would be needed to explore this and establish any significant connection.

Figure 9 – Average pre- and post-participation IPAQ scores by WIMD decile



## IMPACT AND FUTURE CONSIDERATIONS

It was not possible to present data that specifically illustrates where physical activity levels increased or how involvement in the programme impacted upon this.

In future presentations of the programme it would be useful to develop more structured feedback systems that allowed participants to report directly on the impact factors, and to develop opportunities to gather children’s voices too.

### 4.3 Improved short term mental well-being

Adult participants’ well-being was measured using the short form WEMWBS scale (NHS Scotland, 2006) which asked them to score their feelings and thoughts about 7 positively worded statements using a 5-point Likert scale (see Appendix 2). The minimum score achievable was 5 and the maximum was 35. The mean average scores were used as the basis for the statistical analysis presented within the evaluation.

The WEMWBS data set for the whole cohort (Table 7) showed a small increase in average score immediately on completion of the programme and this increase continued 6 months post-participation with an average score 0.09 higher than pre-participation rates. Data taken 12 months after participation showed a fall in average scores taking them below the initial pre-participation scores. However, this final data set was highly inconsistent with high numbers of incomplete profiles, missing records and isolated scores and these inconsistencies were likely to be impacting negatively on the rigour and validity of this initial analysis. For this reason the data sets were cleaned according to set parameters to enable more reliable outcomes.

*Table 7 – Average WEMWBS scores for all participants*

	Pre-participation (n=251)	Post-participation (n=54)	6 months post-participation (n=54)	12 months post-participation (n=38)
	23.02	23.08	23.11	22.57
Difference between pre-participation score		+0.06	+0.09	-0.45

The largest complete data set was for participants who had recorded a pre-and post-participation score (Table 8). 71% of these participants recorded an improvement in their WEMWBS score, with an average increase of 1.89 points. Statistical analysis showed that the connection between the pre- and post- participation scores was significant, meaning that the relationship between the two sets of scores was not coincidental.

*Table 8- Average pre- and post- participation WEMWBS scores*

Pre-participation	Post-participation	Difference between pre-participation score
22.29	22.91	+0.62

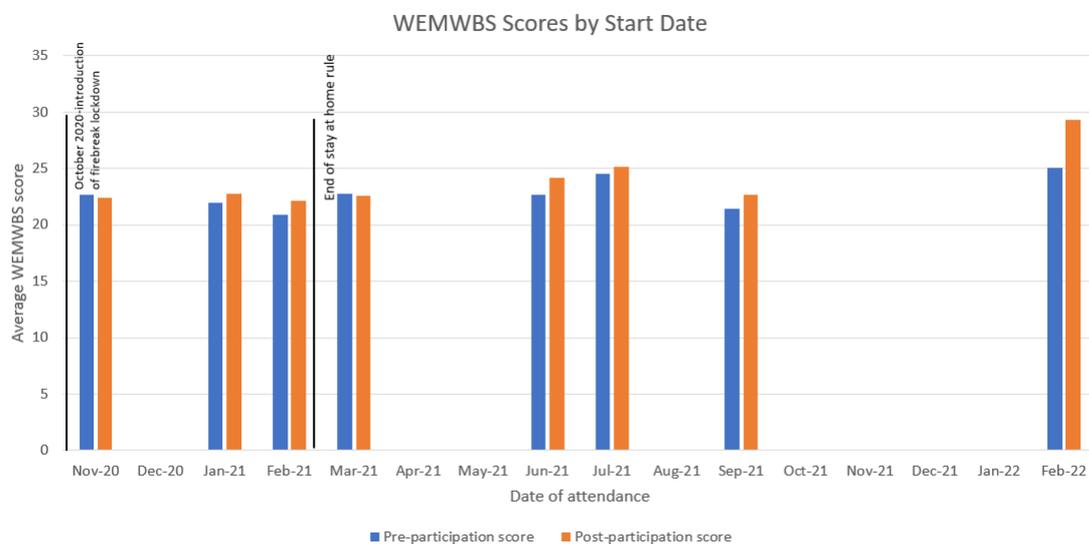
The mean average WEMWBS score was calculated for participants who had a complete score profile (see Table 9). Although this was a small population (n=15) the consistency of their profile allowed for an accurate analysis. The average WEMWBS score for participants with a complete 12-month data record showed an improvement in score at each measurement point with an overall increase of 1.24 points over 12 months and statistical analysis showed this was a statistically significant difference with correlation evident between the two data sets.

*Table 9 – Average WEMWBS scores for participants with full a score profile (n=15)*

	Pre-participation	Post-participation	6 months post-participation	12 months post-participation
	22.35	23.29	23.50	23.59
Difference between pre-participation score		+0.94	+1.15	+1.24

Examination of the data for the participants whose post-participation WEMWBS results had declined showed that some individual situations had significantly affected the overall average of this group, for example, participant 057 recorded a pre- participation score of 28.13 and a post-participation score of 20.73. It was possible that restrictions associated with COVID-19 restrictions could have impacted upon well-being levels, as during periods of lockdown stresses were increased. In order to try and identify whether this had been a factor the scores were analysed according to start date (see Figure 10) but there was no clearly identifiable correlation between the introduction or relaxation of restrictions and increases or decreases in scores.

Figure 10- Average WEMWBS score for dates attended



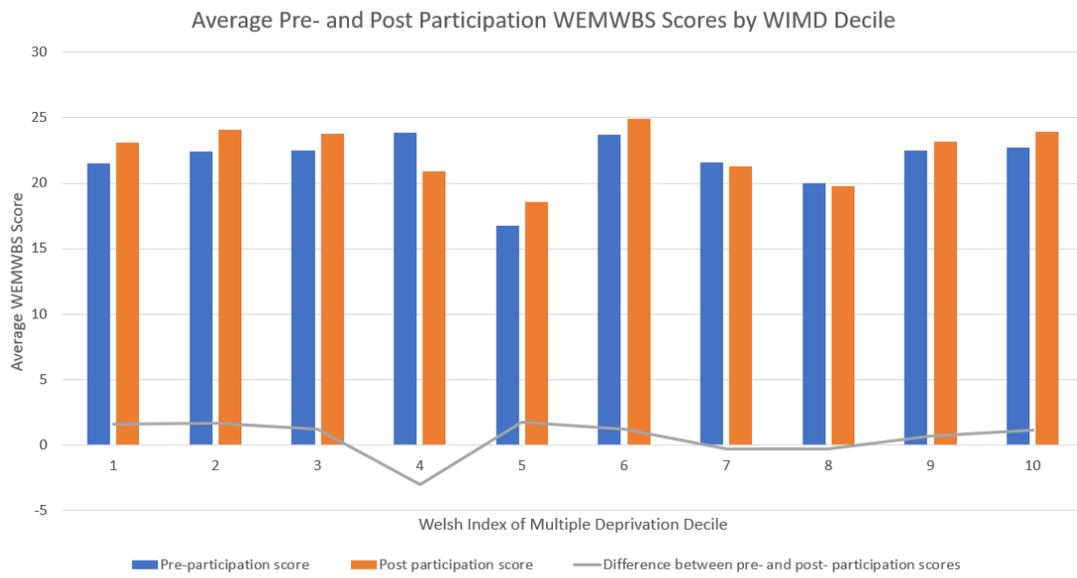
Participant feedback clearly outlined how involvement in the programme had impacted on their well-being, as shown in the comment from Participant 9,

*‘We have looked forward to it every week, the facilitators were fun, inspiring and friendly so that was lovely too! So yes, it’s improved my well-being.’*

There were no responses from participants that indicated participation had adversely impacted upon their well-being, but the evaluations received only represented 10% of the total programme population so it is not possible to generalise the feedback received.

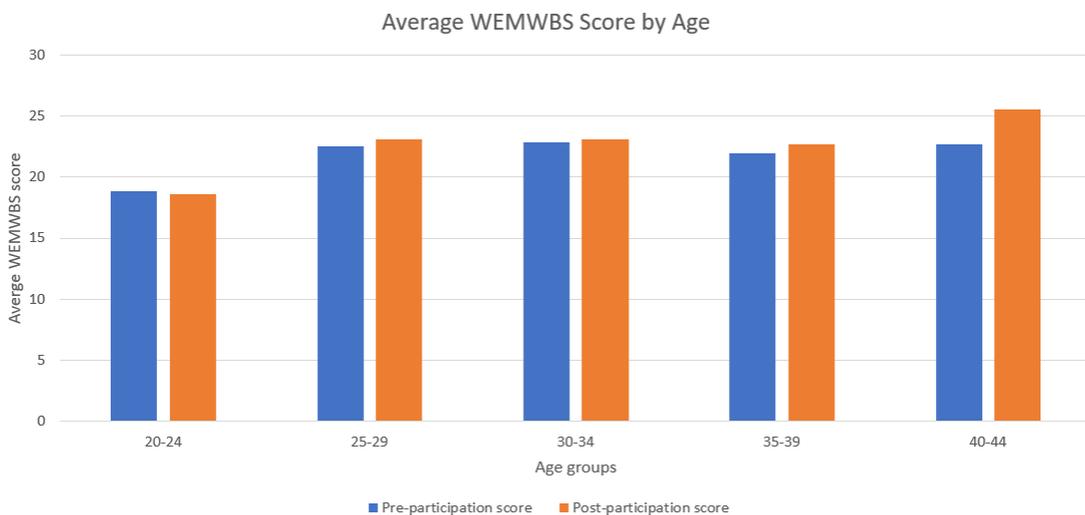
Analysis of average WEMWBS scores by WIMD decile (Figure 11) gave an indication that participants located in areas classed as being more affected by deprivation (deciles 1-5) had greater improvements in well-being scores, but the small population sizes meant that statistical analysis was not possible and the lack of qualitative data linked directly to participants meant there was no means available to establish any causes or reasons.

Figure 11- Average pre-and post-participation WEMWBS scores by WIMD decile



There was some evidence to suggest that improvements in well-being scores were higher in older age groups (Figure 12) but the limited data sets meant that it was not possible to undertake statistical analysis and so these have to be presented as possible trends rather than generalisable findings.

Figure 12- Average WEMWBS score by age group



The focus on building engagement with participants in under-represented ethnic groups and the associated barriers to establishing trust related to formal data gathering meant that this group had incomplete data sets so it was not possible to present any information related to changes in their activity levels, or with participants who had a declared disability.

#### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that there were improvements in short term mental well-being evident and the programme had had a positive impact.

It was possible to undertake some statistical analysis on certain data sets and this indicated a significant link between pre- and post-participation activity levels, showing that it was likely that well-being would be higher after completing the programme.

In future presentations of the programme it would be useful to develop more structured feedback systems that allowed participants to report directly on the impact factors, and to develop opportunities to gather children's voices too.

#### 4.4 Improved knowledge of local area

As noted in section 4.2, COVID-19 lockdown restrictions impacted negatively on participants' opportunities to use their local area, and the move to online delivery of the programme meant that the original project plan of using local facilities to deliver sessions and increase local area knowledge was not possible. As such this impact factor would need to be evaluated as part of future programme presentations.

#### 4.5 Increased use of local community facilities for physical/social interaction for adults and young children

As noted in sections 4.2 and 4.4, COVID-19 lockdown restrictions impacted negatively on participants' opportunities to use their local area, and the move to online delivery of the programme meant that the original project plan of using local facilities to deliver sessions and increase local area knowledge was not possible. As such this impact factor would need to be evaluated as part of future programme presentations.

#### 4.6 Improved knowledge of activity opportunities in local area e.g. sports clubs, parks

Feedback from participants indicated that on completion of the programme there was an appetite to continue involvement in physical activity, with comments such as *'it would be lovely to have follow up courses'* (Participant 19). Facilitator evaluations also noted the *'need to encourage adults to carry on physical activities'* (Facilitator 3), recognising that there could be a critical period on completion of the programme where participants' positive perceptions about physical activity would increase the likelihood of engagement in other provision. There was no data to indicate that facilitators or participants had been able to increase their knowledge of local activity opportunities and this had not been directly asked for in the feedback. It should also be considered that during COVID-19 lockdowns sports clubs had not been running and these were among the last to have restrictions lifted so during the period when sessions were being delivered there would not have been opportunities to access them.

#### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that there was an increased interest in finding out about local activity opportunities but the impact of COVID-19 restrictions limited the ability to do this. As such the

programme had had a positive impact on this outcome measure within the constraints associated with operating within the pandemic.

As outlined in section 3.11 the evaluations from participants and facilitators indicated that on completion of the programme there was enthusiasm and motivation to continue involvement in physical activity programmes and the project is uniquely positioned to provide the support and guidance to enable this progression. The project has a pan-Wales remit and the partners already have established connections with a wide and diverse range of organisations that provide sport and physical activity opportunities for children and their families. The fact that the programme focusses on physical activity rather than any specific sport-related skills means it is accessible to participants who may have negative perceptions of involvement in sport. Participant feedback indicating their increased awareness of the importance of physical activity suggests that they would be receptive to ideas about continuing to develop this, so the programme could act as a 'physical literacy librarian' providing information and guidance to support participants to find and select provision based on their interests, skills and abilities to enable them to develop lifelong physical literacy

#### 4.7 Increase in time spent with other parents

The move to online delivery changed the focus of this outcome measure as parents were not able to physically spend time together so there was not an option for an increase in time. As such this impact factor would need to be evaluated as part of future programme presentations.

#### 4.8 Increased time children spend together

As noted in section 4.7 the move to online delivery meant that children were not able to meet and spend time together, so it was not possible to identify any increases. Participant 4 did highlight that engaging in the sessions had provided new ideas and opportunities to encourage siblings to play together, saying that *'We like to share the activities with E's big brother'*, which illustrates the potential that the programme has to enable increased time being spent together. However, the specific outcome measure related to children spending time with others outside their family unit and this would need to be evaluated as part of future presentations of the programme.

#### 4.9 Reduction in social isolation and loneliness

Section 4.3 outlined the positive impact that participation in the programme had on adults' well-being scores and the feedback provided in the participants' evaluations indicates that these improvements related to being able to connect with others,

*'With lockdown and nowhere to go it's easy to slip into PJ days so it has been great having this to look forwards to and actually being able to virtually interact with other people.'* Participant 17

Participant feedback also outlined that attending the sessions helped provide professional support that had been unavailable during lockdown,

*'The sessions were very informative and a lot was covered which I wouldn't have been aware of, particularly as there is no contact with health visitors at the moment.'* Participant 16

This suggests that the programme had been able to provide reassurance to participants, but the low participant evaluation response rate means it is not possible to generalise these opinions.

The WEMWBS contains one statement that relates to social isolation and loneliness which is 'I've been feeling close to other people' but the data recorded on the database gave an aggregate score for all responses so it was not possible to use this statement to establish specific pre- and post-participation scores for this measure.

#### IMPACT AND FUTURE CONSIDERATIONS

The commentary above indicates that there was evidence that involvement in the programme reduced feelings of isolation and loneliness but there was limited data to support this. As such the programme had had a positive impact on this outcome measure within the constraints associated with operating in the pandemic.

Providing disaggregated scores for the WEMWBS statement related to feeling connected in future presentations of the programme would allow for statistical analysis of this outcome measure and developing more structured feedback systems that encourage respondents to provide views directly related to this issue would provide context to support statistical findings.

##### 4.10 Upskilling of volunteers in identified communities

The move to online delivery of the programme meant that the original project plan of developing self-sustaining groups using volunteers recruited within the original delivery was not possible. As such this impact factor would need to be evaluated as part of future programme presentations.

##### 4.11 Increase numbers taking part in networking in the community

As noted in sections 3.11 and 4.6 there was evidence to show that participants expressed interest in continuing their engagement in physical activity with their children, and developing networks within the community would be a vehicle to facilitate this in future presentations of the programme but there is no data available to evaluate this outcome factor at this time.

## Additional findings

Although physical literacy was a concept mentioned throughout the project documentation and participants were asked to comment on their knowledge and understanding of it as part of their evaluation there was no process or outcome measure specifically related to this. All the responses indicated that participants had had an awareness of physical literacy prior to participation and they recognised its significance, as shown in Participant 2's response to the question 'Has your knowledge and understanding of physical literacy improved following the sessions?' *'Absolutely. I knew it was important but this has reinforced the point.'*

One response suggested that the participant had not fully understood physical literacy as an ongoing and developing process, but saw it as a standalone piece of knowledge that could be learned and remembered,

*'With C being our second child and the age she is, I've got to be honest, we didn't really pick up too much about physical literacy but I can see how first-time parents or those with younger children would.'* Participant 8

This comment may indicate that the respondent had confused physical development or physical activity rather than physical literacy.

In contrast to the feedback suggesting participants' knowledge was complete, other responses suggested they had engaged in more of a learn-unlearn-relearn process, as illustrated by the comment from Participant 9,

*'As someone trained in primary education I was amazed how much I'd learnt and how important it [physical literacy] was from such a young age.'*

There was also feedback that suggested participants recognised physical literacy as a concept that has relevance to all families, regardless of their initial activity levels,

*'Although we are an active family I now see even more so the benefits of active play for development.'* Participant 19

These responses indicate that knowledge and understanding of physical literacy had improved as a result of involvement in the programme, but the low participant response rates mean that it is not possible to generalise these views.

## Conclusions

Evaluation of the data against the programme's process and outcome measures shows that positive impacts were apparent within all areas, except those that were not able to be addressed because of COVID-19 lockdown restrictions. On completion of the programme the measured outcomes for all children and for the majority of adults had improved, with 75% of participants recording increased physical activity levels and 71% showing improved well-being scores. Statistical analysis indicated that there was evidence of correlation between the increases in pre-participation and post-participation scores. There was some indication that improvements were more apparent in participants located in areas affected by deprivation as measured by the WIMD but limited data sets meant it was not possible to prove a correlation.

More than 90% of participants were white females, so the positive impact of participation needs to be considered with regard to this. The Project Team recognised that the work done with ethnic minorities is disproportionately underrepresented by the data as when working with these families the primary focus was to engage them, and the collection of data was seen as a barrier to gaining trust. The small population sizes of other under-represented groups meant that it was not possible to undertake statistical analysis of data related to them either, but there were indications that drop-out rates were higher in under-represented ethnic groups and reductions in activity levels were more apparent in men. The data presented in this evaluation cannot reliably support these indications but as proactive work is undertaken to engage with these groups via organisations such as Women Connect First and Dads Can Cymru and greater engagement and trust is established future exploration would be useful. The introduction of face-to-face delivery is also likely to be a positive factor in enabling this to happen.

There was evidence that on completion of the programme participants had positive perceptions of physical activity and wanted to continue to be involved in this. The programme is uniquely positioned to act as a 'physical literacy librarian', providing information and guidance to participants based on their interests, skills and abilities to enable them select provision to develop lifelong physical literacy. This is due to the project's pan-Wales remit and its focus on overall physical activity rather than a specific sport or physical skill.

The Project Team responded effectively to the limitations associated with the introduction of COVID-19 restrictions, moving the programme onto an online platform and supporting facilitators to develop their ability to deliver sessions remotely. The team also recognised the potential barrier to involvement for men related to the high levels of female participants and they were proactive in working with partners to develop bespoke sessions to address this issue. These examples show that the team are able to operate flexibly and respond to changing situations and requirements which indicates they will be receptive to recommendation to improve subsequent presentations of the programme.

COVID-19 restrictions meant that some of the original programme aims could not be addressed, such as the recruitment of volunteers and the establishment of self-sustaining groups. There were indications within the data that were gathered to show that these aims are valid and face-to-face delivery would allow them to be introduced and evaluated in the future. Remote delivery also impacted negatively on data collection, with many participants having incomplete score profiles and low participant evaluation response rates. As restrictions relax and more people are able to engage in activities the programme provides effective opportunities to encourage participation in physical activity and to promote lifelong physical literacy.

## Recommendations

1. Work with partner organisations to develop joined-up ongoing provision that participants can access on completion of the programme to enable them to continue their physical literacy development. Training other relevant organisations to deliver the programme would help to develop this network, with the programme acting as the gateway to all other provision.
2. Refine and develop the data collection processes to enable effective synthesis of qualitative and quantitative data. These should include the collection of demographic data in qualitative responses and systems that enable facilitators to contextualise individual participant responses to explain seemingly anomalous scores.
3. Roll-out delivery of the original face-to-face model in local communities and support recruitment of volunteers to develop bespoke provision to enable the programme to develop. This should be done alongside ongoing remote delivery because this approach can enable access to the programme for participants who cannot attend in person due to physical, organisational or other issues.
4. Continue to increase the diversity of participants by replicating the proactive work done with organisations such as Women Connect First and Dads Can Cymru to identify opportunities to deliver the programme to under-represented groups. This could also involve collaborative approaches with partner organisations and a review of resources and activities to maximise their relevance to minority groups.

## Reference section

Agans, J. P., Säfvenbom, R., L. Davis, J.L., Bowers, E.P. & Richard M. Lerner, R.M. (2013) Positive Movement Experiences: Approaching the Study of Athletic Participation, Exercise, and Leisure Activity through Relational Developmental Systems Theory and the Concept of Embodiment, *Advances in Child Development and Behavior*, Volume 45, pp. 261-286.

British Education Research Association (2004) *Revised Ethical Guidelines for Educational Research*  
[Revised Ethical Guidelines for Educational Research \(2004\) | BERA](#)

Children's Commissioner for Wales (2017) *The Right Way: A Wales Future Fit for Children*  
<https://www.childcomwales.org.uk/resources/the-right-way-a-childrens-rights-approach/a-childrens-rights-approach-in-wales/>

Dudley, D.A. (2015) A conceptual model of observed physical literacy. *Journal of Physical Education* 72 pp:236–60.

Dudley, D. & Cairney, J. (2020) 'Physical literacy: Answering the call for quality education and sustainable development', *Prospects* (Paris), 50(1-2), pp. 5–11.

Fraser-Thomas, J. & Safai, P. (2018) 'Tykes and 'Timbits': A Critical Examination of Organized Sport Programs for Preschoolers' in Dionigi, R. & Gard, M. (Eds) 'Sport and Physical Activity Across the Lifespan' London: Palgrave MacMillan

Khanom, A., Evans, B., Lynch, R., Marchant, E., Hill, R. A., Morgan, K., Rapport, F., Lyons, R. A. & Brophy, S. (2020) 'Parent recommendations to support physical activity for families with young children: Results of interviews in deprived and affluent communities in South Wales (United Kingdom)', *Health expectations : an international journal of public participation in health care and health policy*, 23(2), pp. 284–295.

NHS Scotland (2006) *Warwick-Edinburgh Mental Well-being Scale*  
<http://www.healthscotland.scot/health-topics/mental-health-and-well-being/wemwbs#:~:text=The%20Warwick-Edinburgh%20Mental%20Well-being%20Scale%20%28WEMWBS%29%20is%20a,to%20develop%20Scottish%20mental%20health%20indicators%20for%20adults.>

Pascal, E. & Bertram, T. (1995). "Involvement and the Effective Early Learning Project: a collaborative venture. In: Laevers, F., (ed), *An exploration of the concept of "involvement" as an indicator of the quality of Early Childhood Care and Education*. Dundee: CIDREE Report.

Public Health Wales (2021) *Every Child-Child measurement Programme 2018/19*  
<https://phw.nhs.wales/services-and-teams/child-measurement-programme/cmp-2018-19/child-measurement-programme-for-wales-report-2018-19/>

Rooks, K. & Kilner, D. (2020) Inspiring families to enter their child's encounters with learning, *Early Education Journal*, 92, pp.10-12.

Stats Wales (2021) [Ethnicity by area and ethnic group \(gov.wales\)](#)

UNESCO IBE [International Bureau of Education] (2013). *Glossary of curriculum terminology*. Geneva: UNESCO IBE

- Wales NHS (2015) Healthy and Sustainable Pre-School Scheme  
<http://www.wales.nhs.uk/sitesplus/documents/888/HSPSS-Doc%28E%29.pdf>
- Welsh Government (2013) Physical Literacy – an all-Wales approach to increasing levels of physical activity for children and young people. Cardiff: Schools and Physical Activity Task and Finish Group
- Welsh Government (2015) The Well-being of Future Generations (Wales) Act <https://gov.wales/well-being-of-future-generations-wales>
- Welsh Government (2018a) The Healthy and Active Fund: a process evaluation  
<https://gov.wales/healthy-and-active-fund-process-evaluation-summary-html>
- Welsh Government (2018b) A healthier Wales: long term plan for health and social care  
<https://gov.wales/healthier-wales-long-term-plan-health-and-social-care>
- Welsh Government (2019) Physical Activity of Children and Young People  
<https://senedd.wales/laid%20documents/cr-ld12369/cr-ld12369-e.pdf>
- Welsh Government (2020) Curriculum for Wales Framework <https://gov.wales/curriculum-wales-overview>
- Whitehead, M. & Bailey, R. (2010) Physical Literacy: Throughout the Lifecourse. London: Routledge.
- Whitehead, M. (2013) Definition of physical literacy and clarification of related issues. *International Council of Sport Sciences and Physical Education Bulletin*, No:65, pp.28-34

## Appendix 1: Adult participant data

Participant Ages	
15-19	1
20-24	25
25-29	53
30-34	125
35-39	67
40-44	19
45-49	2
50-54	1
Prefer not to say	3
TOTAL	296

Self-declared disability	
Limited a lot	12
Limited a little	4
No disability	277
Prefer not to say	3
TOTAL	296

Self-declared Economic status	
Full time student	7
In paid employment or self employment	236
Not in paid employment, looking for work	8
Not in paid employment, not looking for work	34
Prefer not to say	11
TOTAL	296
Location	
C1- city & town	221
C2 -city & town in a sparse setting	14
D1 - town & fringe	22
D2 - town & fringe in a sparse setting	3
E1- village	19
E2- village in a sparse setting	14
Not recorded	3
TOTAL	296

Self-defined ethnicity	
Arab	2
Asian/Asian British	5
Black/African/Caribbean/Black British	1
White	286
Prefer not to say	2
TOTAL	296

Gender	
Female	277
Male	17
Prefer not to say	2
TOTAL	296

All male participants identified as white. No complete IPAQ or WEMWBS for any male participants

WIMD Decile	
1 (most deprived)	23
2	28
3	43
4	25
5	23
6	33
7	29
8	19
9	22
10 (least deprived)	48
Not recorded	3
TOTAL	296

Number of sessions	Total participants who attended this number of sessions
0	92
1	33
2	47
3	32
4	31
5	32
6	16
7	3
8	4
9	2
10	2
11	1
16	1
TOTAL	296

## Short Warwick Edinburgh Mental Wellbeing Scale (S) WEMWBS

Below are some statements about feelings and thoughts.

Please circle the number that best describes your experience of each over the last 2 weeks.

		<i>None of the Time</i>	<i>Rarely</i>	<i>Some of the Time</i>	<i>Often</i>	<i>All of the Time</i>
I've been feeling optimistic about the future	1	2	3	4	5	
I've been feeling useful	1	2	3	4	5	
I've been feeling relaxed	1	2	3	4	5	
I've been dealing with problems well	1	2	3	4	5	
I've been thinking clearly	1	2	3	4	5	
I've been feeling close to other people	1	2	3	4	5	
I've been able to make up my own mind about things	1	2	3	4	5	

## INTERNATIONAL PHYSICAL ACTIVITY QUESTIONNAIRE

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the **last 7 days**. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the **vigorous** activities that you did in the **last 7 days**. **Vigorous** physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think *only* about those physical activities that you did for at least 10 minutes at a time.

1. During the **last 7 days**, on how many days did you do **vigorous** physical activities like heavy lifting, digging, aerobics, or fast bicycling?

\_\_\_\_\_ **days per week**

No vigorous physical activities → **Skip to question 3**

2. How much time did you usually spend doing **vigorous** physical activities on one of those days?

\_\_\_\_\_ **hours per day**

\_\_\_\_\_ **minutes per day**

Don't know/Not sure

Think about all the **moderate** activities that you did in the **last 7 days**. **Moderate** activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think *only* about those physical activities that you did for at least 10 minutes at a time.

3. During the **last 7 days**, on how many days did you do **moderate** physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.

\_\_\_\_\_ **days per week**

No moderate physical activities → **Skip to question 5**

1. How much time did you usually spend doing **moderate** physical activities on one of those days?

\_\_\_\_\_ **hours per day**

\_\_\_\_\_ **minutes per day**

Don't know/Not sure

Think about the time you spent **walking** in the **last 7 days**. This includes at work and at home, walking to travel from place to place, and any other walking that you have done solely for recreation, sport, exercise, or leisure.

5. During the **last 7 days**, on how many days did you **walk** for at least 10 minutes at a time?

\_\_\_\_\_ **days per week**

No walking → **Skip to question 7**

6. How much time did you usually spend **walking** on one of those days?

\_\_\_\_\_ **hours per day**

\_\_\_\_\_ **minutes per day**

Don't know/Not sure

The last question is about the time you spent **sitting** on weekdays during the **last 7 days**. Include time spent at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting or lying down to watch television.

7. During the **last 7 days**, how much time did you spend **sitting** on a **week day**?

\_\_\_\_\_ **hours per day**

\_\_\_\_\_ **minutes per day**

Don't know/Not sure

**This is the end of the questionnaire, thank you for participating.**