

Akādemi



Credit: Justin Jones

Reach Out and Reveal

A 3-year investigative study into the impact of dance influenced by South Asian styles for Autistic young children in SEND schools

Claire Farmer and Dr Ashley Brain

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Executive Summary

Akademi commissioned Claire Farmer and Dr Ashley Brain to carry out a longitudinal research study across a 3-year period as part of its Reach Out and Reveal (ROaR) Programme, funded by the Paul Hamlyn Foundation. The research collected quantitative and qualitative data to understand more about the impact of participation in dance classes influenced by South Asian dance styles for autistic young children in SEND schools located in London, UK.

The following points summarise key findings from the study:

- The development of a rapport and familiarity with the dance artist is important for building trust and therefore engagement and focus with the child
- Engagement and focus must take precedence when first implementing dance classes, alongside developing the child's ability to move independently. These foundations can then provide a base for building other physical competencies.
- A flexible teaching approach where the artist adapts to the needs of the children allows for improved engagement in the dancing. Adaptations may be environmental in nature such as working in particular spaces, in 1:1 or group sessions, or reducing noise level. They may also be more personal or behavioural such as moving through exercises quickly or allowing movement to happen while travelling around the room.
- Dance can provide gateways for greater range of motion in the limbs including fully extending the elbows and knees, reaching overhead and twisting the torso, all skills that are directly relatable to everyday activities.
- Aspects of South Asian dance such as the use of mudras, can provide the children with another way to communicate and tell stories as well as developing their fine motor skills
- There is potential for improvements in co-ordination and skill difficulty if there is a good base of engagement and focus.
- The impact of the dance classes has the potential to transfer to settings beyond the classroom, in the children's behaviour at home and this requires further investigation.

Acknowledgements

At the heart of this project are the people involved, the teachers, parents, artists, staff at the various schools, and the children themselves all working together towards a rich and fulfilling experience. The development of this project would not have been possible without the team of individuals working together to provide the dance classes and build the research around the sessions. We would like to extend a huge thank you to Akademi and the wonderful dance artists working throughout the year with these young people, utilising their dance expertise to provide exciting activities that enrich the children's school days.

Embedding research within an existing environment comes with an array of challenges, however having the support of an individual already working in those settings makes this process much easier and provides insights into the research that would not otherwise be possible. We would like to thank the teachers at each of the schools for taking time to complete the data collection and the Assistant Headteachers, in particular Al Miller, for all their work in integrating the dance research into their schools, including moving timetables and other logistical issues. This is no mean feat on top of their already busy work schedules.

We would also like to thank the parents and guardians of the children in this project, those that took part in the research and those that didn't, for trusting the teachers and dance artists to provide an enriching experience for their child and believing in the work that Akademi has built over the years.

Finally, a huge thank you to the wonderful children for showing up, even when they didn't feel like it, letting the dance and the music in. We hope that these experiences stay with them throughout their life!



Introduction

Akademi's Learning and Participation Programmes

Since its formation in 1979, Akademi has been a cornerstone of South Asian dance in the United Kingdom bringing vibrant, joyful and meaningful performances and workshops to communities all over the nation. At the heart of the company's work and ethos is its important contribution to health and wellbeing initiatives, demonstrating how dance and specifically, South Asian styles, can impact and benefit a variety of populations and improve quality of life. As part of this work Akademi works with children in primary and secondary schools using creative and expressive elements of South Asian dance to foster social cohesion, confidence, and communication. In 2016 the company launched Dance Well, a dance programme specialised for older adults in community settings such as care homes, sheltered housing, and community centres as well as hospitals, providing an opportunity to develop friendships and a sense of community while also remaining physically active in later life. Akademi are pioneers in taking South Asian Dance into primary, secondary and SEND schools. The characteristic features of South Asian dance styles have proven to be highly effective in supporting the physical, mental and emotional development of children and young people. Pupils are drawn to the vibrancy and uniqueness of South Asian Dance through its movement, music, costume, and storytelling elements.



Credit: Justin Jones

Reach Out and Reveal Programme

Akademi's Reach Out and Reveal (ROaR) programme commenced in 2018. This work aims to support the physical, emotional and communication needs of autistic young people with special educational needs and disabilities (SEND) through movement that is influenced by South Asian dance styles. Professional dance artists teach the weekly dance sessions for children in the school setting.

ROaR has worked with a number of schools across London and the surrounding area. The project initially commenced at Papillon House School in Surrey and over the years has grown to include the following schools:

- Papillon House School
- Manor Primary School
- The Avenue School
- Wembley Manor
- Netley Primary School (Woodlands)

The Dance Artists

Akademi has a long-standing reputation for excellence in learning and participation, carrying out regular training and continued professional development opportunities for dance artists working in South Asian Dance forms including Kathak, Bharatanatyam, Odissi, Kuchipudi and Bollywood. Many of these artists are professional performers and choreographers as well as teachers with extensive experience in their dance form. Through learning and participation projects, Akademi runs a development programme whereby a dance artist may shadow and assist another dancer in particular settings including hospitals, community centres and schools, thereby learning and developing their skills alongside each other. You can read more about the artist-in-training experiences in [this blog by Jane Chan](#).

Throughout the 3 years of this study, a team of committed dance artists have been working alongside and training future teaching artists who now lead workshops across five SEND schools in London and Surrey, UK.

Anusha Subramanyam - Lead Dance Artist

Anusha Subramanyam is a pioneering South Asian dance artist, trained Bharatanatyam performer, choreographer, and dance movement therapist. Trained at the University of Hertfordshire in 1994, she was one of the first South Asian dance artists in the UK to integrate therapeutic skills into her creative practice. Since 1986, she has worked in disability, community, and inclusive arts, pioneering approaches now widely recognised as inclusive dance practice.

For over ten years, Anusha has been working at Papillon House School, bringing movement, rhythm, and sensory play into the lives of autistic children. Her work emphasises not only the value of dance for children and young people with SEND, but also the way this practice reshapes dance itself—opening fresh choreographic and creative possibilities for practitioners. She has mentored many South Asian dancers to re-examine their practice in this light, nurturing a new generation of artists who recognise the richness of SEND and community work.



Credit: Vipul Sangoi

Emiko Ishii - Lead Dance Artist

Emiko Ishii is a passionate teacher, performer, and creative consultant and mentor with over 20 years of experience, dedicated to empowering young people through movement. As an actress, action performer, dance coach, and founder of Epika Dance (now Epika Global), she spent over a decade working with ROaR and SEN schools through Akademi Dance, beginning at Phoenix School and later across multiple SEN schools in London. Her classes were rooted in Indian dance, using storytelling, mudras, and expressive gestures in Kathak, dynamic energy and coordination in Bhangra, and modern Bollywood/Hip-Hop steps to engage every student.

For male students, she creatively integrated martial arts and screen/stage combat with Indian dance, opening new avenues for expression, confidence, and teamwork. She also learned Makaton and adapted her approach to create cohesive lesson plans that valued both individual progress and group performance. Emiko's greatest joy was witnessing tangible growth in students—whether movements translating into daily skills or sparking unexpected passions, like a student who once disliked dance discovering a love for choreography, acting, and combat. Always curious and inventive, she continually found new ways to draw children in, adapt to their needs, and elevate their confidence and creativity.

Before moving to Los Angeles, she mentored teachers to continue this vital work and extended her expertise internationally by training educators in Mumbai—a mission she describes not just as work, but as a true labour of love. For Emiko, it has been an absolute honour to be part of ROAR and SEND, working alongside schools, head teachers like AI, and the Akademi team to spread Indian dance, evolve it, and integrate it into the vibrant programs it is today.



Georgia Cornwell - Lead Dance Artist

Georgia is a professional dancer, choreographer, teacher, and inclusive dance artist who graduated from Kingston University in 2016. Her passion for dance started at the age of 3 where she began her training in Ballet, then progressed onto learning Tap, Jazz, Contemporary and took part in local musical shows as a teenager before furthering her training at College and University.

Now specialising in Bollywood and Bollywood fusion, Georgia has performed with and taught for various dance companies across London. She has choreographed for competition teams, weddings, corporate events, parties, and festivals, as well as appearing in Bollywood and Punjabi films, music videos, TV programmes, stage shows and concerts.

Georgia regularly teaches inclusive dance sessions to a wide range of ages in various settings all over London, working for companies including 'Akademi' and 'Step Change Studios'. Georgia has been a Dance Artist for Akademi since 2016, and has had the opportunity to work on their 'Dance Well' project conducting dance sessions in settings such as care homes, day centres, and hospitals. Since 2022, Georgia has also been involved in the companies 'Reach Out and Reveal Project' and took over as a lead artist at Manor School in 2023.



Jane Chan - Trainee Dance Artist

Jane is an independent dance artist whose practice spans choreographing, making, teaching, facilitating, project managing, producing, writing, and instigating change. Her training includes kathak, ballet, contemporary dance, Chinese classical and folk dance, as well as martial art Wing Chun. Jane works in an artist advisory capacity and is an independent mentor for dance professionals and for Arts Emergency, a charity supporting under-resourced young people.

Jane is the founder of Passion Project, a teaching initiative that aims to share the joy and benefits of movement and dance with communities who may be in the margins of societies.

Jane performs regularly for Amina Khayyam Dance Company and is now the Associate Creative Producer. Jane is also a board of trustee for People Dancing.

Jane's work is autoethnographical and aims to question and reclaim cultural and social misrepresentation as well as dismantle, redistribute and reconstruct the power dynamics within the landscape of movement, dance and body practices. Her practice takes her around Britain and internationally.

www.chanjane.com



Credit: Cheniece Warner

Nandita Shankardass - Trainee Dance Artist

Nandita Shankardass is a dance artist, choreographer, interdisciplinary facilitator and speaker. She is the founder of Welcome Movement®, centred around wellbeing, creativity and freedom of expression through movement and dance. Nandita is interested in how the creative and production processes in the arts and culture can generate a sustainable future for the environment, which surrounds us, as well as the inner environment of our body, mind and soul. She is continually driven by the care and compassion she can create and offer in her creative processes and in the participatory experiences and spaces she facilitates.



Credit: Camilla Greenwell

Jesal Patel - Trainee Dance Artist

Jesal Patel is a Kathak dancer who trained under her Guru Gauri Sharma Tripathi. With over 30 years of experience as both a performer and practitioner, she has developed an understanding of this classical art form and its transformative power.

Building on her extensive training and performance career, Jesal has expanded her practice into the field of health and wellbeing. She applies the principles of Kathak—rhythm, storytelling, and embodied



expression—to support people of all ages and abilities, tailoring her work to diverse needs.

Jesal has a particular passion for working with elderly and vulnerable groups, where she creates inclusive spaces that foster connection, creativity, and joy. Through her long-standing association with Akademi, she has led numerous workshops, projects, and performances for communities across the UK and away, making dance accessible and meaningful beyond the stage.

Manuela Benini - Trainee Dance Artist

Artistic director, facilitator and performer with over 20 years' experience in outdoor arts and mass participation, Manuela has led large-scale cultural projects across the UK and internationally. She was Co-Artistic Director of Hackney Carnival, and has worked with Emergency Exit Arts, Historic England, Walk the Plank, Sadler's Wells theatre, South Bank Centre and many other community settings including SEN schools, hospitals and detention centres. Her ongoing Red Dress Project uses dance in contested landscapes to explore climate justice. She holds an MFA with distinction from Trinity Laban.



Suhani Dhanki Mody - Trainee Dance Artist

Suhani Dhanki Mody is a Bharatanatyam performer, teacher, choreographer, and research assistant with a deep-rooted interest in the theory and practice of Indian classical dance. Trained in the Thanjavur tradition under renowned performing academician Dr. Sandhya Purecha, Suhani blends rigorous traditional knowledge with contemporary engagement. She holds a Gold Medal in her Master's in Dance from Bharata College, Mumbai, and is a recipient of the National Scholarship to Young Artists awarded by India's Ministry of Culture. A graded artist of Doordarshan, Suhani has performed at prestigious Indian festivals and featured in acclaimed television and theatre productions. Since relocating to London in 2019, she has been working with several respected UK-based dance companies as a dance collaborator and conducts workshops as well as teaches dance and movement to SEN students under Akademi's ROaR Programme. Suhani continues to pursue her passion as a full-time dance artist, engaging with global audiences through performance, pedagogy, and research.



Aishani Ghosh - Trainee Dance Artist

Aishani Ghosh is a performer, artist, facilitator, and researcher working in the Contemporary Dance sector with her movement language grounded in Bharatnatyam and Uday Shankar Style.

As the first South Asian Dancer to be accepted onto both the contemporary and Bharatanatyam strands on The Centre for Advanced Dance Training Programme, she paved the way for other South Asian dancers to expand their training. She represented her sector in the BBC Young Dancer Category Finals at 17 and completed her BA in contemporary dance from London



Contemporary Dance School, graduating with a first and the Principal's Award.

She is an established performer with nine years of industry experience performing in theatres (Sadler's Wells Theatre, The Royal Opera House, The Place Theatre, Pavillion Dance, The Lowry), galleries (The V&A, The Tate Modern, Birmingham Museum and Art Gallery), outdoors (Somerset House, Brighton Festival, Inside out Dorset, Stockton International Riverside Festival, Birmingham International Dance Festivals) and in film (Sadlers Wells Digital Commissions). She has worked with Seeta Patel Dance, Shobanna Jeyasingh, Dickson MBI, Vidya Patel, Scottish Dance Theatre, James Cousins Company, Akademi and Sampad, amongst others. She is currently completing a masters which is exploring post-colonial identities through the lens of colonialism, intergenerational trauma and neoliberalism.

Her experience being a dancing body for various choreographers and choreographing on various youth groups and RAD, inspired her to explore how she moves intuitively, leading her to co-create her first piece for Resolution Festival in 2023 for a sold-out night.

Alongside working as a freelance artist in the industry, she is a company artsit with Seeta Patel Dance working in as a creative producer. She created a podcast series which opens up difficult conversations about the South Asian dance industry.

Research Team

Claire Farmer

Claire Farmer MSc is a Senior Lecturer in Dance and researcher in the areas of dance biomechanics and physiology and dance for health. Her teaching encompasses pre-vocational dance students, higher education, professional artists and community dance practitioners, focusing on anatomy, dance science, community dance practice and strength and conditioning. Claire holds a BA (hons) Dance Studies with Drama, theatre and performance studies from Roehampton University and an MSc Dance Science from Trinity Laban Conservatoire of Music and Dance. She has had the pleasure of working with dance companies, dance schools, universities



and circus companies across the UK, delivering practical workshops and lectures in dance science and strength and conditioning, including All or Nothing Aerial Dance Theatre, Gravity and Levity, Pagrav Dance Company, Dance East CAT programme and The Circus Doc. Claire is also the Chair of the Strength and Conditioning Special Interest Group for the International Association for Dance Medicine and Science.

Dr Ashley Brain

Dr Ashley Brain (she/her) is a lecturer and researcher in dance and dance science. Her teaching in higher education has focused primarily on ballet and topics under the dance science umbrella including anatomy, biomechanics, conditioning, psychology and somatic education. She has been an active researcher in the Dance for Health (DfH) sector with an interest in collaborative, arts-based, and person-centered approaches. In 2016 she completed her PhD at University of Roehampton exploring the potential benefits of a ballet-based dance programme for people living with Parkinson's, a project done in conjunction with English National Ballet. Her recent work has advocated for approaches to DfH research that value embodied knowledge and embrace the subjective and individual nature of the art form. Ashley also supervises undergraduate and postgraduate dissertations at multiple higher education institutions in the UK.



Reach Out and Reveal Research



Credit: Justin Jones

Aims and Objectives of Research

In 2022 Akademi received funding from the Paul Hamlyn Foundation for a 3-year research project to run alongside the existing ROaR Programme. The overarching aim of this work was to provide evidence of the learnings from the programme and to demonstrate the impact of the dance classes for the autistic young people in the participating SEND schools. Furthermore, these learnings would be shared and disseminated to the wider health and education sector allowing for knowledge sharing and transfer across disciplines.

From a research perspective, the work aimed to:

- investigate the impact of the dance classes on engagement of the children
- understand if participation in the dance classes could help children progress beyond engagement profile targets within their education setting and achieve further subject-specific learning and targets.

- investigate how the dancing could potentially aid functional motor skills helping with everyday activities
- examine how any benefits seen within the dance classes could be generalised and transferred to other settings, both at school and at home.

Regarding approach the research aimed to:

- work collaboratively with staff at Akademi, the dance artists, and the staff at the schools to develop the research methodology and research questions
- value and utilise the rich, embodied knowledge held by the dance artists and their understanding of the children gained through their experiences of moving and dancing alongside them.
- embrace arts-based, mixed methods perspectives to better understand the impact of the dancing for this group of young people.
- focus on individual progressions and journeys through dancing, understanding that each child will have their own personal contextual factors that will shape their experiences.

The research remained iterative throughout the 3 years allowing for new ideas and methods to feed into the process. This flexible approach allowed the research to learn and grow across time rather than remain attached to a particular structure.

Autism

Autism spectrum disorder (ASD) is a neurodevelopmental disability that affects how people learn, communicate, and behave (DeJesus et al., 2020). The spectrum condition affects people in many different ways and can result in a number of challenges. Children with ASD may have difficulties with social and emotional behaviour including empathy, social understanding and communication and this can make interacting with others and developing friendships challenging. Further difficulties might include compulsions, avoidance behaviours, echolalia (repetitive speech), and

motor stereotypes such as hand flapping and body rocking (Aithal et al., 2021; Bremer, Crozier, and Lloyd, 2016). Autistic children may also have impairments in gross and fine motor skills including bilateral coordination, postural stability and gait, handwriting and other manual dexterity skills (Lindor et al., 2023; Sefen et al, 2020). There may also be difficulties with motor skills important for social participation and communication such as imitation and interpersonal synchrony (Manders et al., 2021).

ASD is not an illness or disease and those with the condition can live a long, full, and happy life. However, there is a need for support to enhance quality of life and to provide opportunities for those living with the condition to participate in wider society. Additionally, there is a need to support autistic young people in accessing education and subject-specific content as well as teaching life skills. Much of the research into autism focuses on the difficulties faced rather than exploring and celebrating their abilities and understanding better how engagement in physical and creative activities could help support these individuals in daily life.

The Dance Classes

The dance classes take place weekly during academic term time. Classes generally last between 10-30 minutes, however this is dependent on a variety of factors including how engaged and settled the children are and other personal or environmental contextual factors. Some children experience the dancing in a small group setting, while others have 1:1 sessions with the dance artist. Whether or not a particular child is in a group or solo lesson is largely determined by timetabling within the school and also whether the child engages better on their own as opposed to dancing alongside their peers.

The dance classes are informed by practices including Kathak, Bharatanatyam, Odissi, Bollywood, and Yoga. Core elements of these practices such as rhythmic work of the feet and hands, use of gestures and mudras to communicate ideas and stories, balance, range of motion, and limb coordination are at the foundation of the exercises choreographed by the artists. Whether in a

small group setting or in a solo session, there are often other supporting staff members in the space helping to verbally and if needed, physically encourage the children to move and experience the dancing.

During the sessions the children dance to recorded songs chosen by the dance artists. While there have been a range of genres across the project, generally the artists use Bollywood music. The volume is adjusted to suit the needs of the children, particularly those who are noise sensitive. This playlist has been provided to parents and teachers of the children so they can engage in dance activity or simply play these songs that the children are familiar with outside of their dance class.

Depending on the child, movements may be done seated or standing. Key movements and exercises addressed in the sessions are listed below however not all movements will necessarily be carried out in each session as this will depend on level of engagement and focus as well as movement proficiency.

- Brushing the arms and legs
- Clapping the hands
- Tapping different parts of the body (head, shoulders, knees, toes)
- Marches (both stationary and travelling)
- Reaching arms overhead and expanding in different directions
- Coordinating movements together (bending knees and then straightening to reach arms overhead; clapping hands under gesture leg while balancing on supporting leg)
- Leg extensions (reaching leg in front to connect toes with partner)
- Walks and freezes in space

These movements can also be completed seated and can be found in the ROAR Resource and Research Book. The standing version is shown in Figures 1 and 2 below.

Figure 1: Key movements used in class



Figure 2: Key movements used in class (cont)



The Schools

As mentioned above, the ROaR programme currently takes place across 5 schools; Papillon House, Manor School, The Avenue School, Wembley Manor and Netley School, however the 3-year research project focused mainly on data gathered from Manor School across the 2nd and 3rd year of the study, with Netley School entering into the research for the last 2 terms of the project.

Papillon House: 2018 - Present

Papillon House School is a special school for children and young people aged 4-19 years with autistic spectrum disorders (ASDs) and associated challenging behaviours based in Tadworth, Surrey. Work began at Papillon House in 2018, led by Anusha Subramanyam. This was at the inception of the ROaR project and laid the ground-work for this 2022 iteration of the continued work and additional research element. Anusha has continued to work with the young people at Papillon House throughout this time and was an integral part of the research design based on her experiences at the school to date.

Manor Primary School: 2019 - Present

Manor School is a large special primary school located in the London Borough of Brent with almost 200 pupils on roll, from Reception to Year 6. Manor school has been involved in the ROaR programme since 2019 led by Emiko Ishii. As a result, the dance classes were already a firmly established part of the timetable prior to the start of the research project. When Emiko moved away from the UK in 2023, this role was taken up by Georgia Cornwell who had been working within SEND settings for some time. Georgia quickly established a rapport with the school and the team were able to implement the pilot study of the research in January 2024. The Assistant Headteacher, Al Miller, has been integral to the research process and our understanding of the

children, the educational support and assessment systems in place, as well as the gentle integration of the research into the school.

The Avenue School: 2022 - Present

The Avenue School is a secondary special education needs school in Brent. Dance classes commenced at The Avenue in 2022 led by Anusha Subramanyam and Emiko Ishii. Across the course of the first year of research, Avenue school was involved with a small group of children and parents consenting to take part in the study as part of the pilot work. However, at the end of 2023 the dance classes and research at the school were paused with some internal changes taking place and a new head of school coming in. Despite several coffee mornings and recruitment emails in later years of the project, there were not enough parental consents to continue the research in the school. The dance classes however did continue from January 2024 and are led by Suhani Dhanki Mody and Aishani Ghosh.

Wembley Manor School

Wembley Manor is a secondary school in the London borough of Brent. The school provides a specialist teaching environment for pupils who have a diagnosis of Autism and additional special educational needs. Wembley Manor joined the ROaR programme in September 2024 with classes led by Jesal Patel and Manuela Benini. The research team met with staff at Wembley Manor School in Autumn Term 2024 with the aim of recruiting participants and collecting data from Spring Term 2025. However, there were not enough participants signed up to run the research at this school.

Netley School (Woodlands): 2024 - Present

Netley is a primary school in the London borough of Camden which houses Woodlands Centre for Autism, a specialist resource base for children with Autism Spectrum Condition (ASC). Netley

joined the ROaR programme in October 2024 with classes led by Jane Chan and Nandita Shankardass. A decision was taken to allow the students a chance to settle with the dance artists during Autumn Term 2024 before research commenced in January 2025.



Credit: Justin Jones

Methodology

Figure 3: Reach out and Reveal research timeline



Participants

Ethical approval for the project was granted by Middlesex University Arts and Creative Industries ethics committee (approval number 21934) on November 29, 2022. Participants for the study were recruited from the schools already working with Akademi on the ROaR programme. In practice this involved establishing coffee mornings within the schools to meet directly with parents, discuss the potential impact of dancing on their children and what they would like to see coming from the research. From the outset it was clear that parents were keen on the dance being able to infiltrate home life, giving them activities to participate in with their child as well as potentially improving communication skills, self-expression and mobility that would impact on their wider life skills.

Participating schools also sent out a detailed participant information sheet and link to the online consent form prior to the coffee mornings so that parents could review the material before attending, or sign up in the event that they could not attend. Given the nature of the programme, recruitment to the research study remained open throughout the 3 years allowing students and their parents to sign up at any time should they wish to take part. However, the research team focused on recruitment mainly within the autumn terms throughout the project. All participants from Manor Primary School had joined the research study by Spring Term 2023 and all participants from Netley School joined the research study by Spring Term 2025.

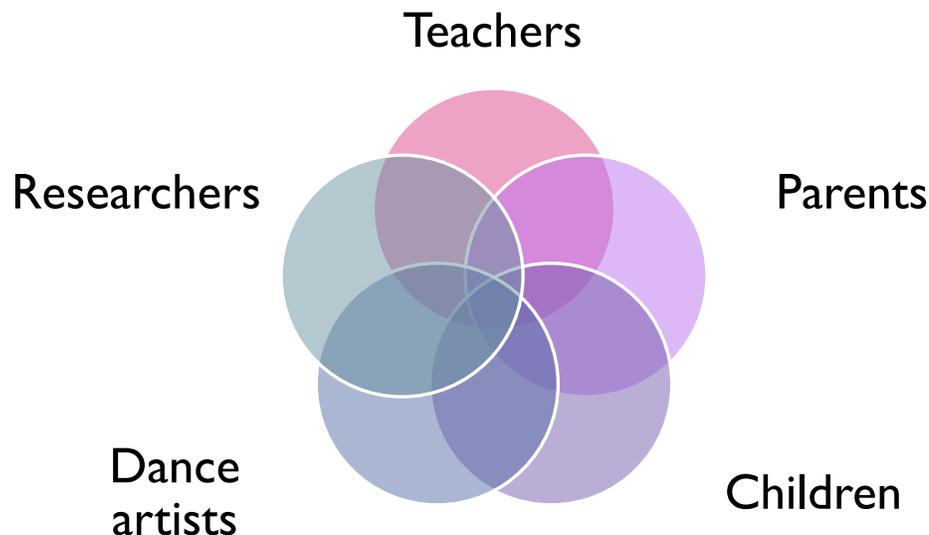
As the study involves vulnerable young people under the age of 18, parents were asked to review the detailed participant information sheets and consent forms with their children and to sign on their behalf. Parents were also invited to complete a questionnaire as part of the data collection methods and therefore were required to sign a consent form to participate in the research. Similarly, relevant teachers at the participating schools were also asked to complete the questionnaire and therefore were required to sign a consent form to participate in the research. All consent forms were signed by participating children, parents and teachers before data collection commenced.

A total of 20 children were signed up to the research across both schools, 17 from Manor Primary School and 3 from Netley School. One child from Manor Primary left the school in the middle of the research study and so the data focuses on 16 young autistic children from this school. One child from Netley left the school in April 2025 and so the data focuses on two children from this school. Children at Manor Primary School were 8.14 ± 1.14 years old at the beginning of data collection in January 2024. Children at Netley Primary were 6.84 ± 0.97 years old at the start of data collection in January 2025.

Co-Design

The study employed an arts-based, collaborative and mixed methods approach with a focus on individual progressions and experiences of dancing. From the outset, all those invested in the project including staff at Akademi, the dance artists, teachers, and parents were invited to actively engage with the development and delivery of the research and continually feed back into the iterative research design. As a result, the research team encompassed not only the co-investigators on the project, but also the dance artists who were embedded within the dance sessions gaining rich information about participant experience, as well as teachers and parents who were providing useful insight about the children in other settings across the duration of the study. This collaborative design ensured that the work was both meaningful and relevant to those participating in the dance activity, as well as those who live and work alongside them.

Figure 4: Collaborative research design



Project Overview

Year 1 - Discussing, Learning, and Piloting Methods

The first year of this project was an exploratory process focusing on meeting all relevant stakeholders including school staff and the dance artists, learning about autism and some of the main challenges, and trialling different methods for data collection. It was important that the data collection methods for this study met two key aims; firstly, the methods were not to interfere with the children’s experience of the dance classes, which in turn could influence the results and secondly, the chosen methods should consider the children and school staff and not place extra workload or burden on them where possible.



Credit: Antareepa Thakur

Autistic children may find having new individuals in the room distracting and unsettling. It was important to us as researchers to impact upon the dance classes as little as possible, as our presence, or manipulation of the space could interfere with the children’s dancing experience. As soon as outcome measures such as observations, surveys or interactions within the dance space

are present, the therapeutic and artistic nature of that space is altered, thus also impacting the data gathered. The research and chosen methods were therefore guided by what was most appropriate for the children in this context and within the specific schools.

It was determined that data would be gathered from people who were already close to the children and working with them in different contexts, leading to the most accurate reflections, rather than having new individuals enter in to observe, measure, and collect information. As such, we were highly reliant on the dance artists to not only inform the research, but to be one of the main points of data collection. To facilitate this, we established artist meetings at Akademi's offices to discuss the methodology, ensuring it would not be too onerous to complete, nor impact on the children's experience.

Across this year, the research looked at a variety of potential data collection methods including observation of film footage, Laban Movement Analysis (LMA) (Samaritter and Payne, 2017), the Arts Observational Scale (Fancourt and Poon, 2015), dance artist feedback and reports, curriculum progression assessments within schools, and the Verbal Behaviour Milestones Assessment and Placement Program (VB-MAPP). The VB-MAPP is an assessment tool used with individuals diagnosed with Autism who exhibit language delays. It is often used in education settings as a tool to establish language goals and objectives and assess learning, language, and social skills (Barnes et al., 2014; Sundberg, 2008). The VB-MAPP was being used by Avenue school to track progress in these areas, however the tool was not being used by other schools.

Key learnings from this initial work are listed below:

- The descriptions used within the Arts Observational Scale to describe engagement, confidence and happiness were not successful when used in this context. Individual children displayed unique emotional responses and it was not always clear through video footage what specific emotions the individual children were experiencing. As a result,

inter-tester reliability was poor and it was concluded not to utilise this particular tool going forwards, but to continue observing film footage noting comments qualitatively.

- Upon observation of the first videos of children in dance class, it became apparent that a structured LMA tool would not be possible as the main focus for many children was on engagement and reducing avoidance behaviours. However, it was determined that utilising the language found in LMA could potentially be useful to qualitatively describe changes in movement that were seen in film footage.
- Initial videos were reviewed and qualitative notes were recorded regarding movement patterns, quality of movement, level of engagement, and general behaviour. Themes that emerged from this data were then utilised to develop a framework for future video analysis and were also used to develop more specific prompts and questions for the dance artists, helping to guide their feedback and encourage a more individualised approach.
- The idea of gathering parent and teacher feedback via focus group discussions was considered so as to gain insight into potential behaviour changes outside of the dance context, at home and in school. However, it became apparent that language could be a barrier as many families did not have English as a first language. As a result, the research sought to find an appropriate questionnaire that could give insight into the children's behaviour outside of the dance class and that could be provided in a variety of languages.

From this initial work it was clear that there was a need for more open-ended, qualitative discussion and reflection alongside objective tools. In this particular context with individuals who have very different and unique autistic characteristics, discussion of these changes and nuances are significant and perhaps more useful than relying solely on numerical data, which tends to neglect the more allusive and creative aspects of this work. A mixed methods approach and inclusion of qualitative data collection methods could help to provide important context to objective tools.

Moving into year 2 it was decided that the research would focus on curriculum progression assessments, observation of film footage, dance artist feedback, and parent/teacher feedback via a questionnaire. As the VB-MAPP was only utilised by Avenue School, when research paused at this school, so did the use of that assessment tool.

Year 2 - Preliminary Investigation and Setting of Methods

The second year of the project saw quite a few changes that would require the research to remain flexible and adaptable. The lead dance artist working with Manor Primary School moved out of the country and a new dance artist began teaching these classes in Autumn 2023. This required a settling in period for the dance artists and the children before data collection could commence. Additionally, Manor Primary School made a change to the system that they use to track curriculum progression for each child and this particular assessment was also being used as a component of the data collection methods for the research study.

As a result of the changes, Autumn Term 2023 focused on further recruitment of participants and finalising methods with formal data collection commencing in Spring 2024 for Manor Primary School only. A detailed description of the final methods can be found in the next section of this report. Preliminary findings from the 2nd year of this project are currently in press and due to be published with the Journal of Dance Medicine and Science.

Year 3 - Further Data Collection and Expanding the Research

The final year of this study focused on continuing data collection, expanding the research to a new school, and generalising the benefits seen in the dance classes to other contexts. The research continued working with participants at Manor School while also welcoming participants from Netley School in Spring Term 2025.

The research team met with the dance artists who would be teaching at Netley Primary alongside Georgia Cornwell to discuss the research methodology and key findings to date. It was important to discuss their experiences so far, gain any additional feedback on the research methodology and ensure it was as clear and simple as possible for the artists to complete.

A research handbook was created to accompany this training, guiding the artists in how to complete the online forms for class observations.

A key aim of the research was to look at how any learnings and benefits gained through the dance classes could potentially be transferred to other contexts at home and in the school setting. Through this work a resource booklet was developed and shared with parents and teachers that describes and illustrates some of the key ingredients of the dance classes and encourages active engagement with the work both at school and at home.



Credit: Antareepa Thakur

Final Data Collection Methods (Jan 2024 - July 2025)

Strengths and Difficulties Questionnaire

Parent and teacher feedback was gathered using the Strengths and Difficulties Questionnaire (SDQ). The SDQ is a widely used screening tool that aims to measure psychosocial problems and strengths in children and youths. The questionnaire consists of 25 items divided into 5 subscales; emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour (Goodman, 1997; Stone et al., 2010). An additional impact supplement considers the impact and burden placed upon teachers or parents as a result of these behaviours. Participants scored relevant statements on a scale of 0-2 to reflect answers of Not True, Somewhat True or Certainly True. Each subscale had a potential score of 10 with higher scores indicating higher levels of psychopathology (with the exception of the prosocial behaviour scale).

A benefit of using the SDQ is that it is available in over 60 languages, an important consideration when working with a school where the majority of families do not have English as their mother tongue, thus removing barriers to participation in the study.

There is one form for the beginning of term and a slightly different one for the end of term. The end of term survey asks participants to reflect on a shorter time frame, namely the prior 4 weeks. For Manor School, teachers and parents were asked to complete the SDQ at the following time points: January 2024, April 2024, July 2024, September 2024, December 2024, April 2025, and July 2025. For Netley School, teachers and parents were asked to complete the SDQ at the following time points: January 2025, April 2025, July 2025.

Questionnaires were administered online via survey monkey and emails were sent directly by the researchers to all parents and teachers with the relevant links. Follow up emails were sent to all parents and teachers to encourage completion of the questionnaire.

Curriculum Development

As part of data collection at Manor School, curriculum development was monitored using a bespoke internal assessment system called Small Steps. Small Steps is a skills ladder that allows the school to track progress against predetermined Personal Intervention Plans (PIPs) for each child. Originally called the Brent Assessment Route I Can Statements (BARICS), but later renamed Small Steps, the skills ladder comprises of a set of “I can” learning statements. The scale is separated into a pre-subject-specific scale and a subject-specific scale with children assessed on one or the other depending on their level of development. The majority of children at the school were working with the subject specific scale. Areas observed within this system include: speaking, listening, reading, writing, numbers, geometry and measure, PSHE, science and computing. The assessment also looks at progression in functional skills such as health and hygiene, safety in the community, washing, grooming, dressing, and toileting.

For each subject or functional skill, there is a list of target statements that need to be met. For subject specific areas, these target statements are subdivided into levels. Teachers can log into the live online system and update scores by checking off when a particular child has achieved certain target statements. Once all statements in a particular level have been met, the child moves up to the next level until all levels have been completed for that subject. Subject scores are represented by noting the level and the percentage of statements achieved in that level. For instance, a score of 5.25 for ‘Reading’ would mean that the child is working within level 5 and has achieved 25% of the target statements in that level. For functional skills which are not subdivided into levels, scores are simply represented as a percentage of target statements achieved for that skill. Examples of target statements are provided in figures 5 and 6.

Small Steps curriculum and functional skill scores were recorded at the end of each school term between January 2024 and July 2025.

Figure 5: Example of “I can” statements from the Small Steps skills ladder for reading

<p>▼ Reading</p> <p>▼ Level 5</p> <p>I can attend to rhymes or stories in a small group, for at least 3 minutes</p> <p>I can attend to rhymes or stories on a computer/TV/iPad in a small group for at least 3 minutes</p> <p>I can attend to 1:1 book-sharing activities with an adult for at least 3 minutes</p> <p>I can turn the pages in books, during 1:1 book-sharing activities with an adult (may turn several pages at a time)</p> <p>I can demonstrate understanding of previously mastered words by pointing to pictures in simple picture books (at 1 key word level)</p> <p>I can label pictured items in books/story resources on screen using single words, signs or symbols (e.g. in response to 'What's this?', with at least 10 previously mastered labels)</p>
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Figure 6: Example of “I can” statements from the Small Steps skills ladder for functional skills

<p>▼ Functional Skills</p> <p>▼ Food and drink</p> <p>I can eat finger food</p> <p>I can eat a sandwich with my hands</p> <p>I can feed myself with a pre-loaded spoon</p> <p>I can scoop with a spoon and use it to put food into my mouth</p> <p>I can feed myself with a pre-loaded fork</p> <p>I can scoop with a fork and use it to put food into my mouth</p>

Netley School assesses their children’s curriculum progression in a different way and does not utilise the small steps system. The school focuses on individual learning targets and PIPs as a means to understand progression for each individual child. As Netley joined the research with only 2 terms of data collection to the end of the project, the research focused on other data points for these children and did not incorporate curriculum progression.

Dance artist feedback

Recent literature has argued for the inclusion of tacit, embodied knowledge in Dance for Health research design and methodology noting that those who are embedded within the practice, dancing alongside research participants, are gaining rich, contextual information that is not gained through other objective means (Whatley, 2020; Chappell et al., 2021; Petts and McGill, 2024).

In the present study, the dance artists leading the sessions have an embodied understanding of the children in the dance context and therefore have rich knowledge and insight into their individual progressions. Taking this embodied knowledge into consideration, the dance artists were asked to complete a weekly feedback form for each child via an online survey that would encourage them to reflect back on their experiences and share this insight as best as they could with the rest of the team. The artists were asked to comment on the following:

1. How engaged was the child in today's session (eye contact, focus)?
2. Did the child require physical contact in order to engage in the dance activity?
3. Experiences of note (an open question to allow artists to feedback on elements specific to that individual)

The specific focus of the first two prompts was developed through pilot work in the first year of the research and watching early video footage of the dance classes. As many of the children struggled with engagement and tended to become distracted or demonstrate avoidance behaviours, it was important that the dance artists provided feedback on these aspects and whether physical support was required to engage with the dancing. The third question was intentionally left to be more open-ended so as to allow the artist to describe their experiences and reflections in their own words.

Filming

Across the duration of the project, filming and video analysis were included to support other modes of data collection and further understand potential progressions taking place in the dance space. During the 2nd year of the project, the weekly dance sessions were filmed. Video footage

was then reviewed and notes taken with a broad focus allowing the researchers to record anything of significance regarding engagement, focus, behaviours, level of support needed, as well as movement-specific comments on range of motion, size of movement, musicality and rhythm, and ability to mirror and follow instructions.

After careful review of the footage across the 2nd year, it was clear that many were still struggling with engagement with some children demonstrating avoidance behaviours such as walking/running around the space, trying to leave the room, or climbing on furniture. A small group of five participants were engaging well enough for additional notes on aspects such as range of motion and movement competency. However, the comments generally reflected what was already being noted in the artist feedback logs and it was therefore decided that this information was redundant and video analysis in this way was not needed.

Through discussions with the dance artists and analysing the feedback logs, it was clear that there were certain actions carried out in the dance classes that were both functional and useful for everyday activities, and were also useful markers when analysing changes in movement competency and range. Further research also found that these movements closely mirrored the Bruininks-Oseretsky test of motor proficiency- 2nd edition (BOT-2), a scale commonly used to measure fine and gross motor performance (Kaur et al. 2018). Therefore, the dance artists were asked to film a short movement sequence at the beginning and end of each term for each child.

The sequence incorporated these functional actions:

1. Leg brushes
2. Standing homolateral leg lift and leg tap (left hand to left knee) including balance
3. Seated under leg claps
4. Marching and clapping
5. Overhead reach
6. Torso rotation
7. Wrist flexion and extension

Images of these movements, both seated and standing can be found in Figure 1 and in the Reach Out and Reveal Research Pack. Video footage was gathered for the start and end of Autumn, Spring, and Summer Terms at Manor School and the start and end of Spring and Summer Terms for Netley School.

Findings (Jan 2024 – July 2025)

Attendance

Attendance was recorded based on entries within the dance artist feedback logs. Figures 7 and 8 demonstrate the variable nature of attendance across the duration of the project. Children missed classes for a variety of reasons including other school activities, transportation issues, illness or absence from school that day, emotional dysregulation and/or behaviour issues. The number of classes in brackets outlines how many classes were available to students in that specific term. The number of classes per term fluctuated throughout the study due to half terms, bank holidays, and if the lead artist needed to miss a session due to illness or other factors.

Figure 7. Number of classes attended per term for Manor School

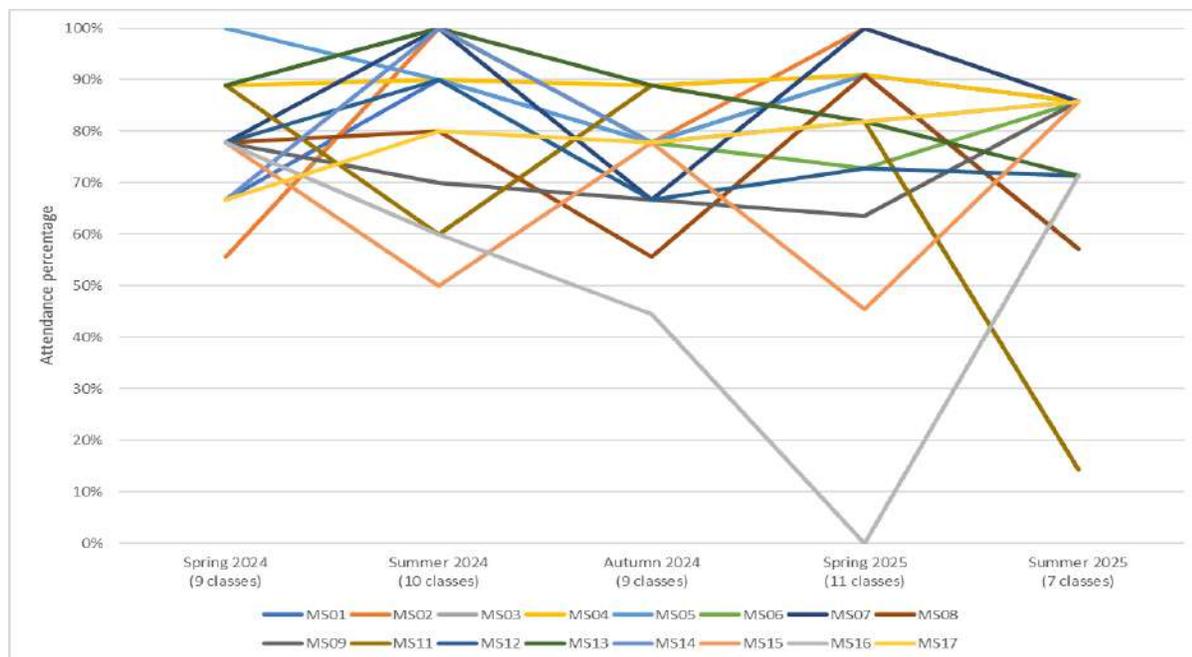
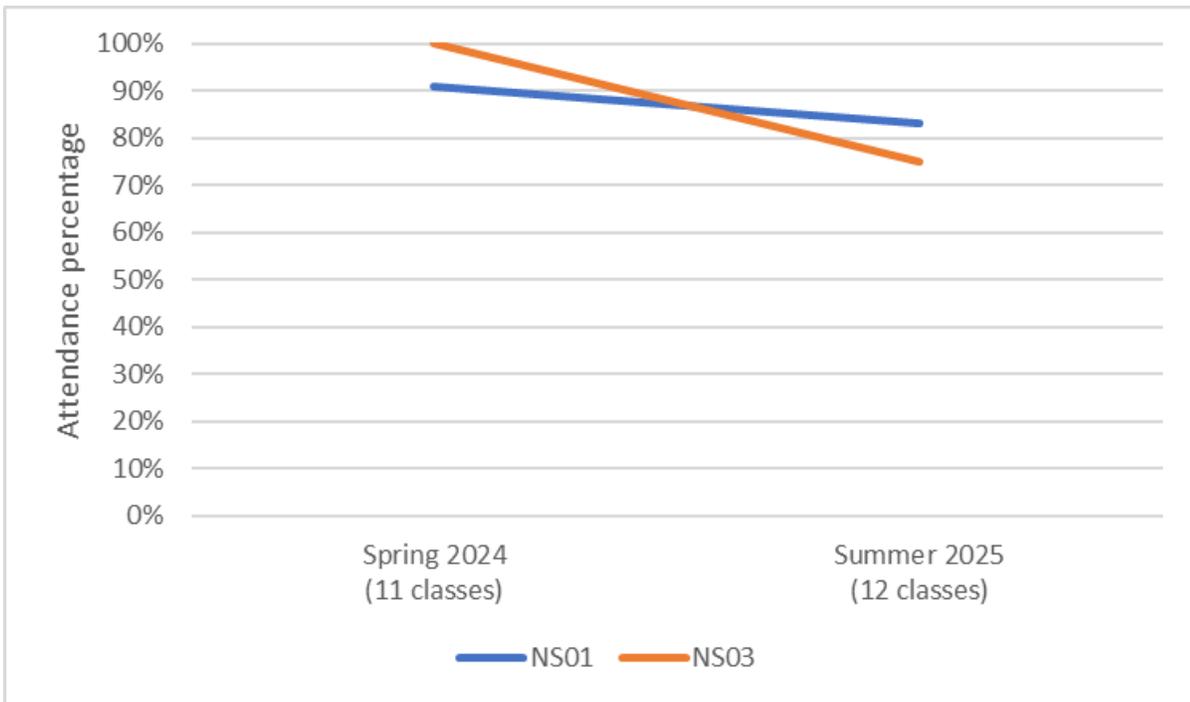


Figure 8: Number of classes attended per term for Netley School



Strengths and Difficulties Questionnaire

Response rates and adherence to the SDQ at Manor School fluctuated and decreased across the duration of the study. At Netley School, responses were also sporadic with not all teachers and parents providing data. As a result of the incomplete data sets across both schools, and also the variety of experiences of the children, it is not possible to understand change over time or compare teacher and parent responses at a group level.

Figures 9 and 10 illustrate the responses over time for each participant from the teachers at the Manor school. The disparity and large gaps in data for many individuals can be seen here, meaning it is often difficult to look at changes over time for the child. This also highlights the heterogeneity of the results and the difficulty grouping this data and making assumptions across all of the children.

Figure 9: Teacher SDQ subscale scores over time for individual participants (MS01 – MS08)

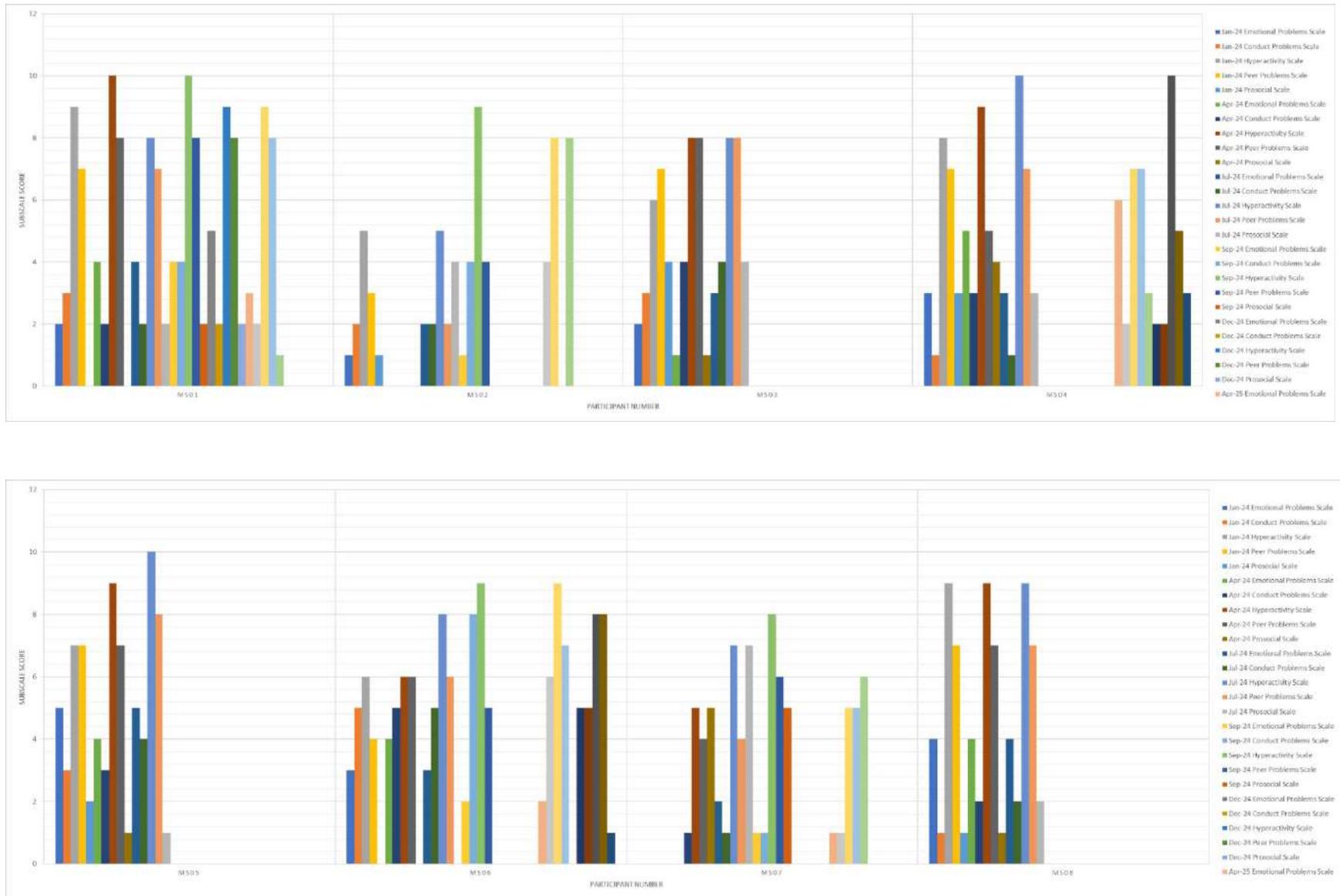
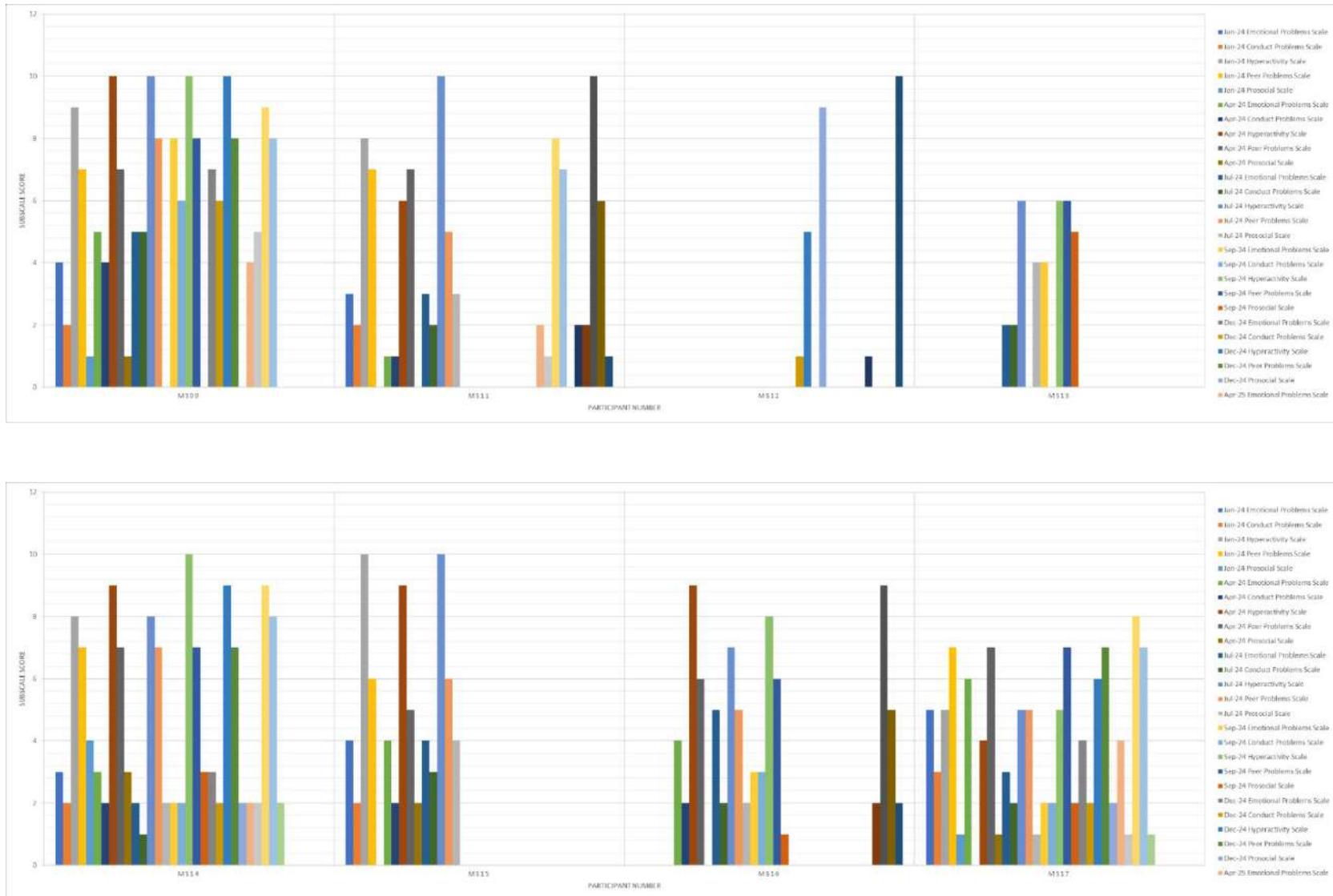


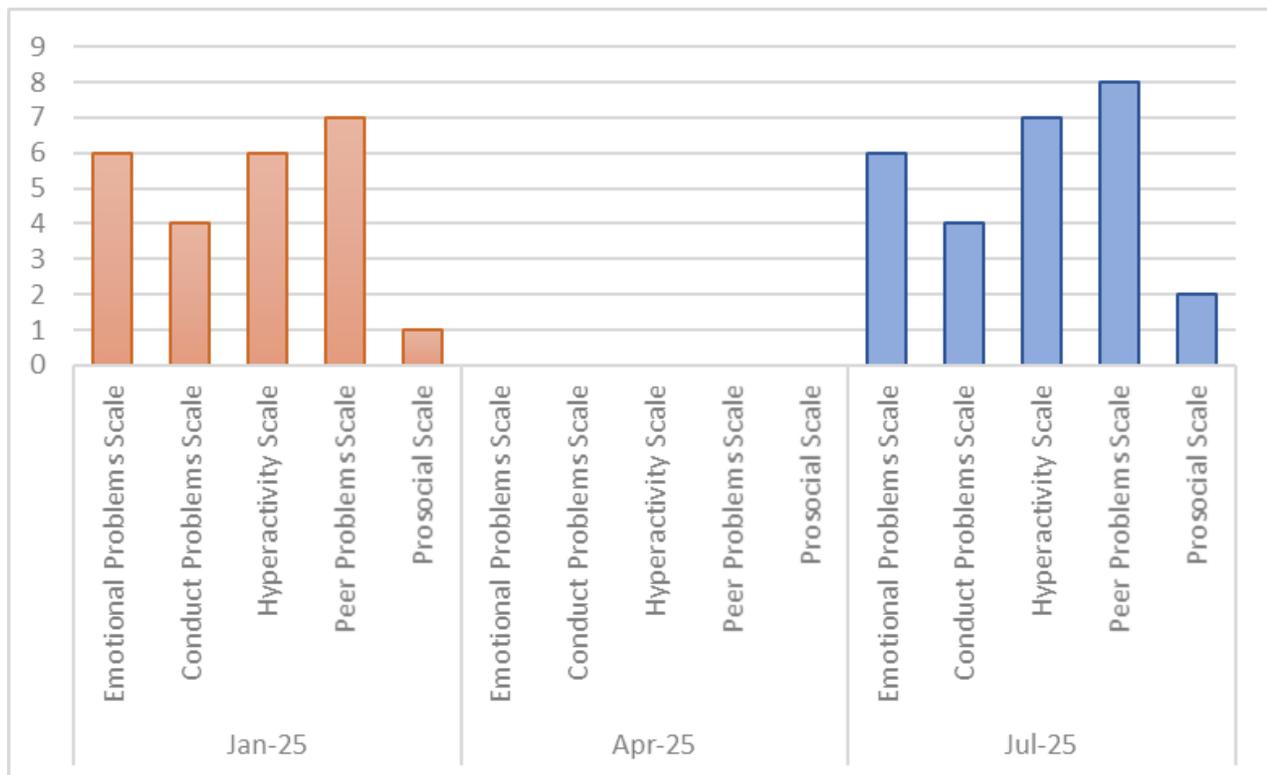
Figure 10: Teacher SDQ subscale scores over time for individual participants (MS09 – MS17)



As outlined in our academic paper *The Impact of South Asian Dance on engagement, independent movement and social skills for autistic children* which examined the 2nd year data of this project, SDQ scores for these children were similar to other autistic children and much higher than general population normative data. However, previous research has grouped the children’s scores into averages for analysis. This can mask the individual journey of each child whose scores may fluctuate over time.

If we look at the results for one child at Netley Primary School during 2025 as scored by the teacher (Figure 11) we can see a slight increase in hyperactivity scores, peer problem scores and prosocial scores. An increase in the prosocial score indicates less difficulty here, whereas an increase in the other subscales indicates more difficulties.

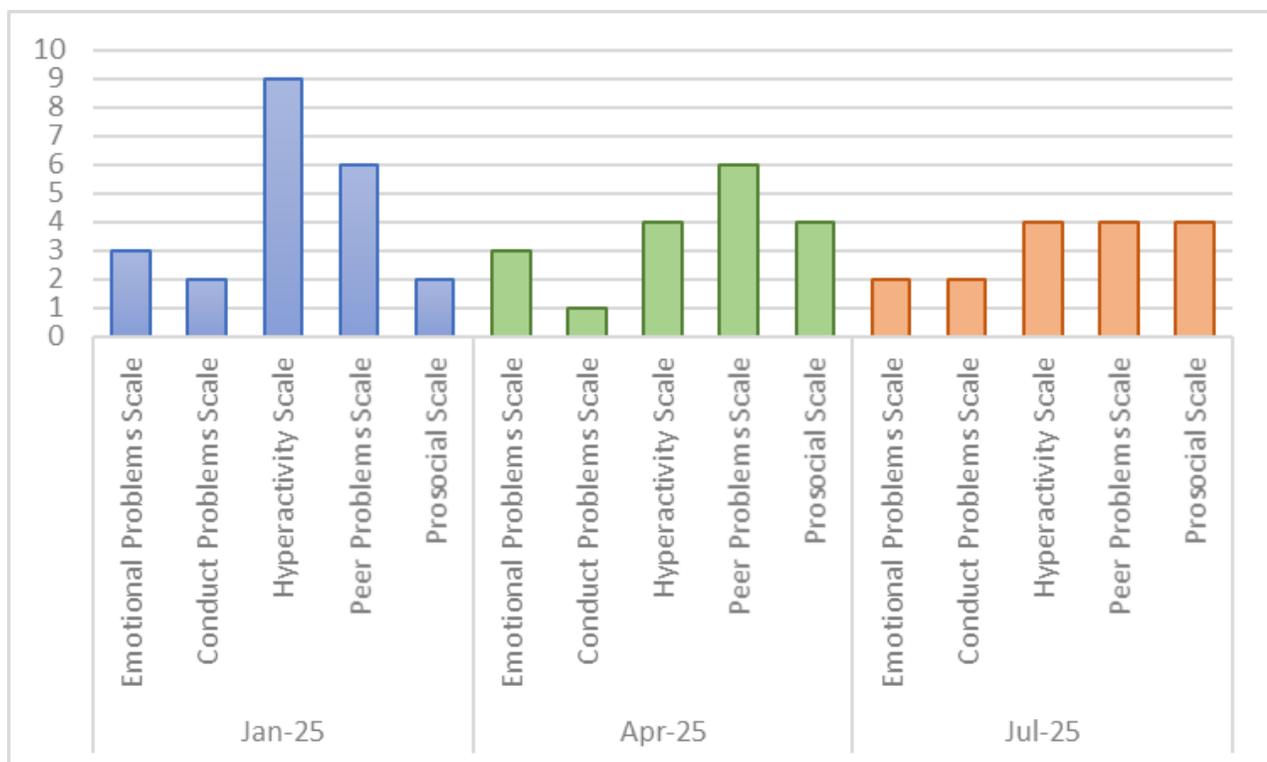
Figure 11: Teacher SDQ scores for one child



However, the parent scores (Figure 12) for the same child tell a different story. Here we can see a substantial decline in hyperactivity scores, smaller reductions in peer problems and emotional

problems scores, as well as a slight increase in prosocial scores. These differences between parents and teachers may be due to different perceptions of the child, but may also relate to the different environmental factors between home and school life. It does however underscore the importance of looking into the impact of dance and physical activity interventions on settings outside of the classroom itself. We can see here that there is a suggestion of a ripple effect from the classes into home life which can be built upon to aid family life and behaviour outside of the school setting.

Figure 12: Parent SDQ scores for one child

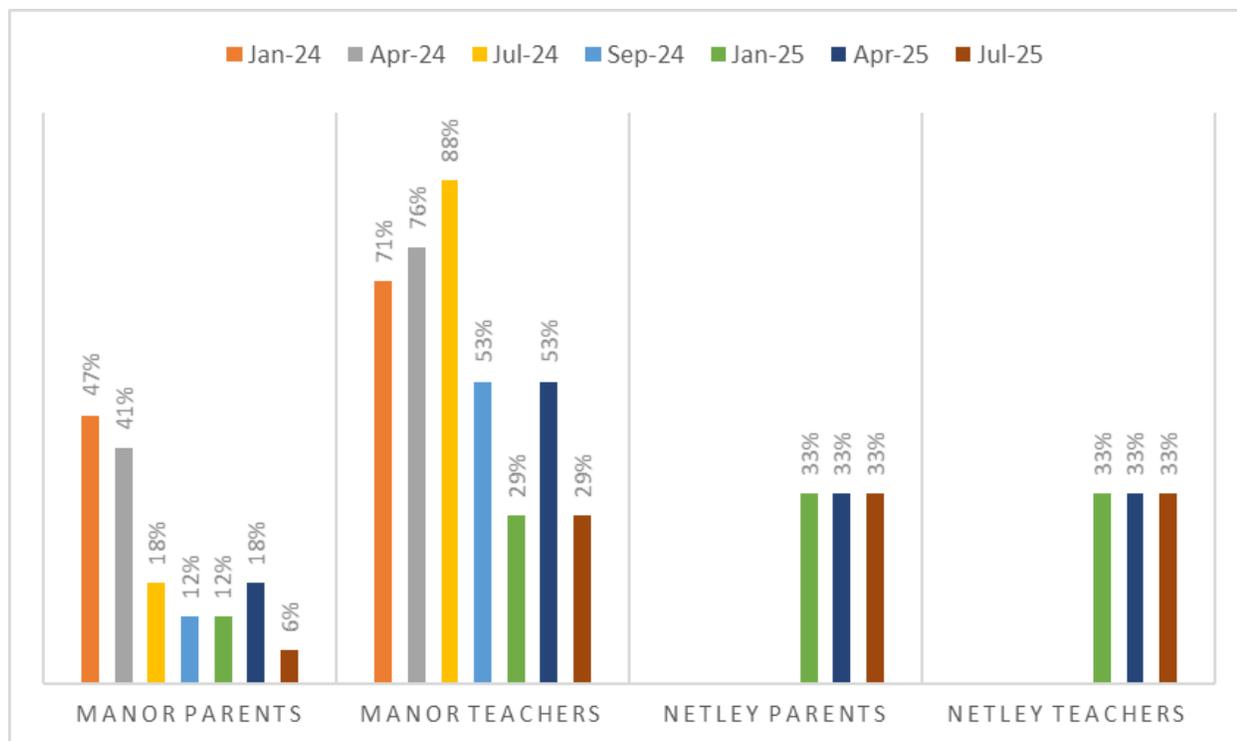


Regarding adherence rates, it appears that both teachers and parents experienced participant research fatigue as the number of responses petered out over time (Figure 13). Overall teachers demonstrated better adherence. This is likely because the surveys became part of their job role and they were reminded by management to complete them frequently, however there was still a decline across time. While the researchers were able to connect directly with the parents via email to ask for their support in completing the SDQ, it could be that these emails were one of

many coming from the school and therefore were 'lost in the mix'. Furthermore, busy work and family lives may have interfered with their availability to complete them.

Participants were asked to complete the same questionnaire at multiple points throughout the year to understand potential change across time. It may be that there was some fatigue relating to answering the same questions which could also cast some doubt on the accuracy of the responses. Initially it was thought that understanding termly progressions would be useful given the many contextual factors that play a role in the children's day to day experiences. Taking only a pre and post measurement would potentially mask those fluctuations throughout an academic year. Furthermore, in the third and final year of the research the team were keen to understand if the resource booklet provided in the 2nd and 3rd terms would potentially impact upon SDQ scores, particularly at home. However, as teachers and parents were asked frequently to complete the SDQ, this was perhaps too onerous leading to a decline in responses.

Figure 13: Adherence to SDQ



Some feedback from parents suggested that the questions asked within the SDQ were not appropriate for their child as the phrasing of some of the questions seemed overly negative or did not feel representative of their child's experience of Autism. During the selection of data collection methods, the research team looked at multiple validated tools with the SDQ being deemed the most appropriate. A validated scale allowed for comparison with existing normative data and the use of a tool that had been tried and tested in this specific age group. However, comments from parents do raise questions as to how the experiences of autistic children (and adults) are quantified for research purposes. As we have noted, their experiences are very different and nuanced per individual and it may be that such quantitative measures do not fully capture the experience of the participants.

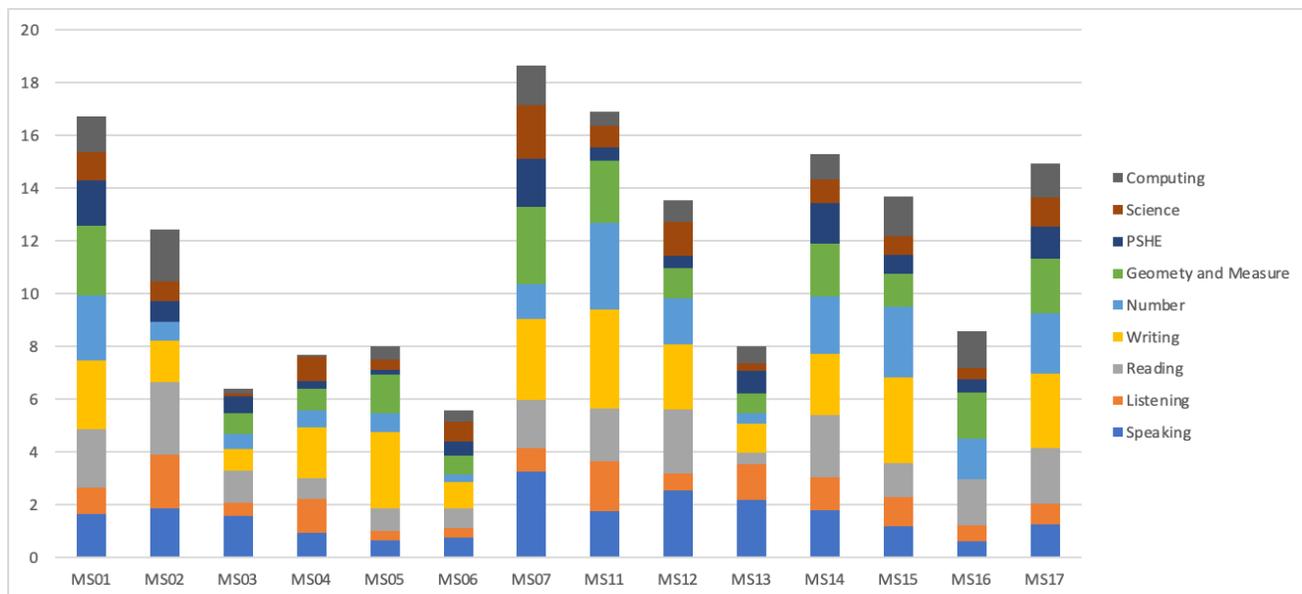
Curriculum Progression

Across the project, the children demonstrated progression in various aspects of the curriculum with writing demonstrating the largest area of improvement at a group level followed by reading and speaking. The stronger improvement in writing skills is an interesting finding in light of the focus on mudras and fine motor skills within South Asian dance. Due to the lack of control group in the present study, a causal effect cannot be stated. However, it was hoped that interim changes and progressions could be triangulated with other data points to understand potential connections between behaviours and abilities in the dance class, school setting, and home life.

As part of their job role, teachers were asked to update the scores at the end of each term. Due to some delays in teachers completing the assessment and the system not recording the date and time of when scores are updated, it was not always clear if and when all teachers had updated the scores or if this coincided with term dates and when they had updated SDQ scores. As a result of these and other challenges described below, final analysis looked at total change across the project rather than looking at interim changes. It should be noted however that interim scores related to curriculum progression did not fluctuate in the same way that SDQ scores did over time. The curriculum scores in general either remained the same or gradually improved term to term for the children.

Figure 14 outlines the amount of change in each subject for each child working on the subject-specific scale. Each column or stack represents an individual child and each colour represents the amount of change in a subject. MS15 moved to the subject specific scale during the project and therefore this child's data has been taken from December 2024 to July 2025.

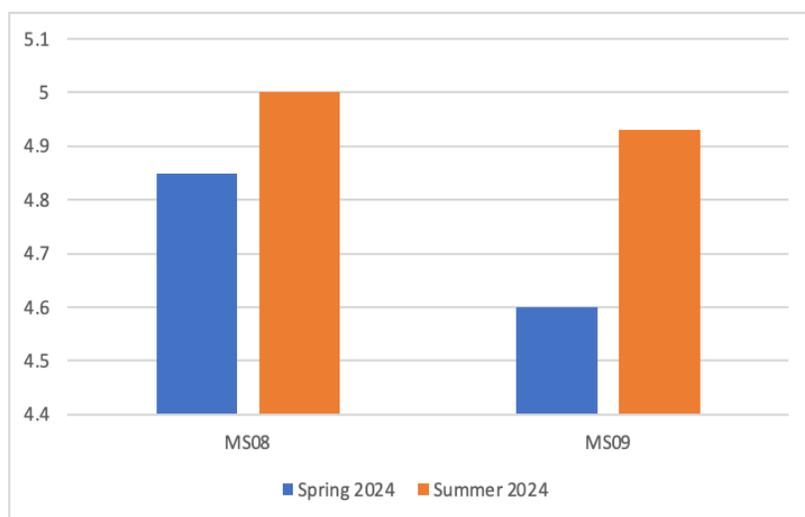
Figure 14: Overall Change to Small Steps Subject Specific Scores



Due to the nature of the assessment, some children had multiple possible scores for a given subject at a given time. This occurred when teachers would mark target statements as achieved across multiple different levels, or when new teachers interpreted the scoring slightly differently. In order to ensure accuracy and rigour, each term the recorded scores were shared with the Assistant Headteacher, Al Miller, who had a good understanding of the children in the school context. In instances where there were multiple possible scores for different subjects, he would highlight the most appropriate score for the child in that subject at that time point. This process felt most rigorous, honest, and truthful in comparison to taking an average score which would create an arbitrary number not representative of where that child was truly sitting within a subject. We discuss these methodological limitations in more detail later in this report.

Results for MS08 and MS09 who are working on a pre-subject specific scale are represented in Figure 15.

Figure 15: Overall Change to Pre Subject Specific Scores



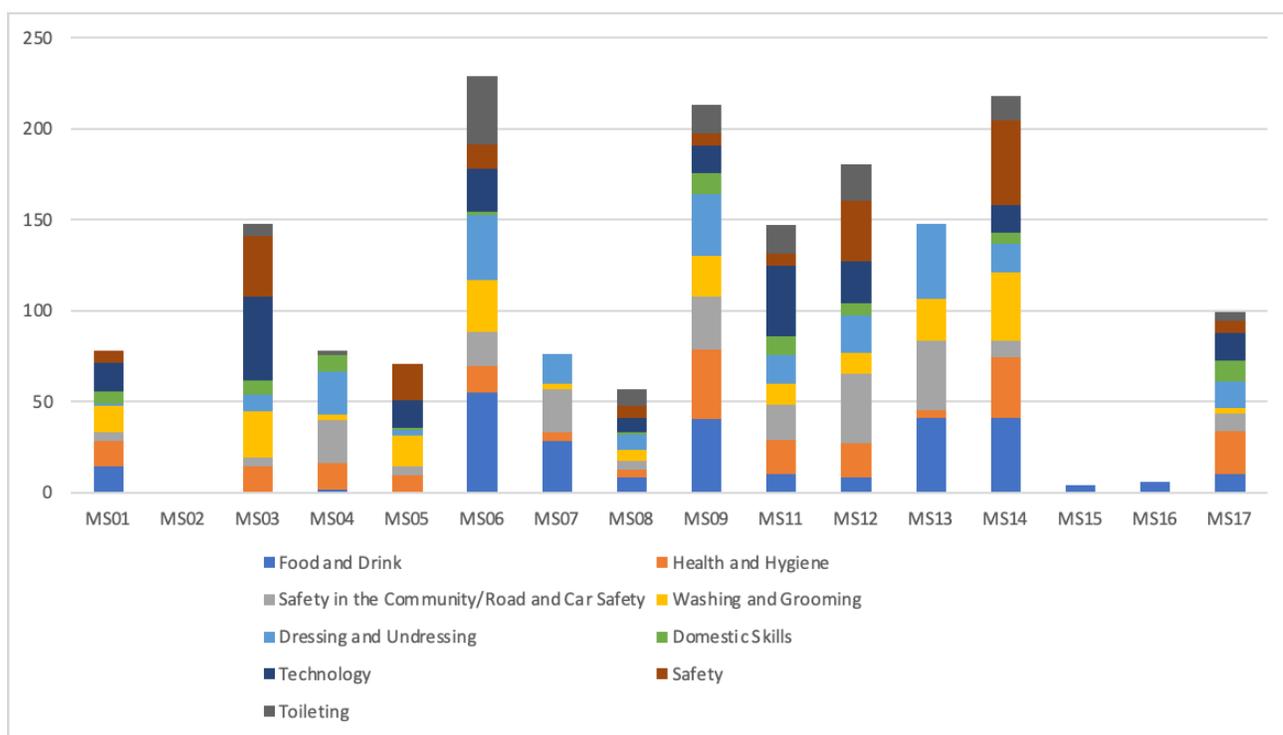
As discussed earlier in the report, a key aim of this work was to look at individual progressions rather than pooling participants together. The necessity for this individualised approach becomes even more evident when looking at the results; each child saw their greatest progressions in different subject areas. For instance, MS11 saw their greatest improvement in writing, while MS03 had their greatest improvement in speaking. These individual progressions would be masked if solely focusing on group means and averages.

Figure 16 below outlines changes to basic functional skills across the project with areas surrounding Food and Drink, Health and Hygiene, and Technology demonstrating some of the larger areas of improvement at a group level. However, similar to the subject areas described above, each child saw their greatest progressions in different skill sets, thus supporting a more individualised approach to analysis.

As noted above, the live online system used by the school does not record the date and time of when teachers last updated the scores. As a result, when scores remained the same across time

points, it was not always clear if this was due to a lack of progression for that particular child, or if scores had not been updated. For instance, data for MS02 has not shown any progression in functional skill sets across time, however this could be due to scores not being updated at the necessary times. Again, this supports a more individualised approach to analysis as blending data into group means and averages would skew the results. Interim changes were removed from analysis to allow the research to look more broadly at change across the project.

Figure 16: Overall Change in Functional Skills



While this particular system presented some challenges, tracking curriculum progression could be useful in future research that wishes to understand how participation in dance can potentially impact other subject areas or how tools from the dance class can be transferred to other settings within the school environment. While not possible for the present study, a control group of students who are not taking part in dancing could help to substantiate causal effects and conclusions. However, it might be more useful to look at curriculum progression on an individual basis taking personal and environmental contextual factors into consideration. This might mean that curriculum progression is assessed via quantitative and qualitative methods that allow for a

deeper investigation into a child's journey through subject areas and that could also help to further explain any numerical data that is gathered. For instance, environmental factors including noise level, other peers, and distracting objects in the space could have a bearing on a child's ability to focus and therefore learn, as could personal factors such as emotional regulation, mood, and other conditions or changes to medications. The extent to which these issues are relevant to a particular child will depend on the individual, however they should be considered when looking at numerical subject scores.

Dance Artist Feedback

Analysis of the dance artist feedback logs occurred in 2 phases. The first phase took place between January and July 2024 with children at Manor School. The second phase took place between September 2024 and July 2025 with additional notes from Netley school integrated from January 2025.

A combination of inductive and deductive content analysis was used to analyse the feedback with the aim of looking for common patterns at a group level as well as understanding individual progressions in the dance context. Content analysis differs slightly from other forms of qualitative analysis. For instance, thematic analysis, a common approach to analysing qualitative data, is interpretive with a focus on depth of meaning within the data (Braun and Clarke, 2006). Content analysis however, describes what is in the data, often by counting frequencies of explicit keywords, phrases, or images and looking at patterns, relationships, and trends (Özden, 2024). A key difference between the two forms is that content analysis is often able to convert qualitative data into quantitative data, at least to a certain extent, thus allowing the research to demonstrate how often a particular theme or idea emerged either across an individual's data set, or across a group of participants. Content analysis in the present study allowed for the research to understand specific areas of improvement for individual children across time and how many participants at a group level may have seen improvements in these areas across the project.

Although the work utilised a framework more akin to content analysis, the process was foregrounded in a reflexive approach (Braun & Clark, 2019) with an understanding that as

researchers, our own biases and backgrounds will have shaped how we viewed the data. Through a continual process of identifying and reflecting upon our own assumptions and decisions and through sharing and discussing our choices between us as researchers, we were able to take a careful and rigorous approach to understanding individual journeys and progressions.

All feedback was organised into separate documents for individual children with data from each lesson listed chronologically. Each document was thoroughly reviewed and key words were located that helped to guide and structure the coding process. As the 3 questions or prompts remained the same across all children and across time, the nature of the feedback and thus how the text was coded, allowed for individual progressions to surface organically. Through this process we were able to see how many individuals saw progression in key areas while also considering personal and environmental contextual factors that influenced how children engaged with the dancing.

Phase 1: January 2024 - July 2024

In the first phase of analysis between January and July 2024, the following key words were identified: engagement, focus, listening, independent, coordination, reach, stretch, lift, mirror, copying, calm, unsettled, and partner work. These key words were then grouped into 6 main coding areas: *Engagement and Focus; Independent Movement; Coordination; Range/Quality of Movement and Movement Competency; Mood, Emotions and Avoidance Behaviours, and lastly Partner Work*. Text was coded based on these general areas.

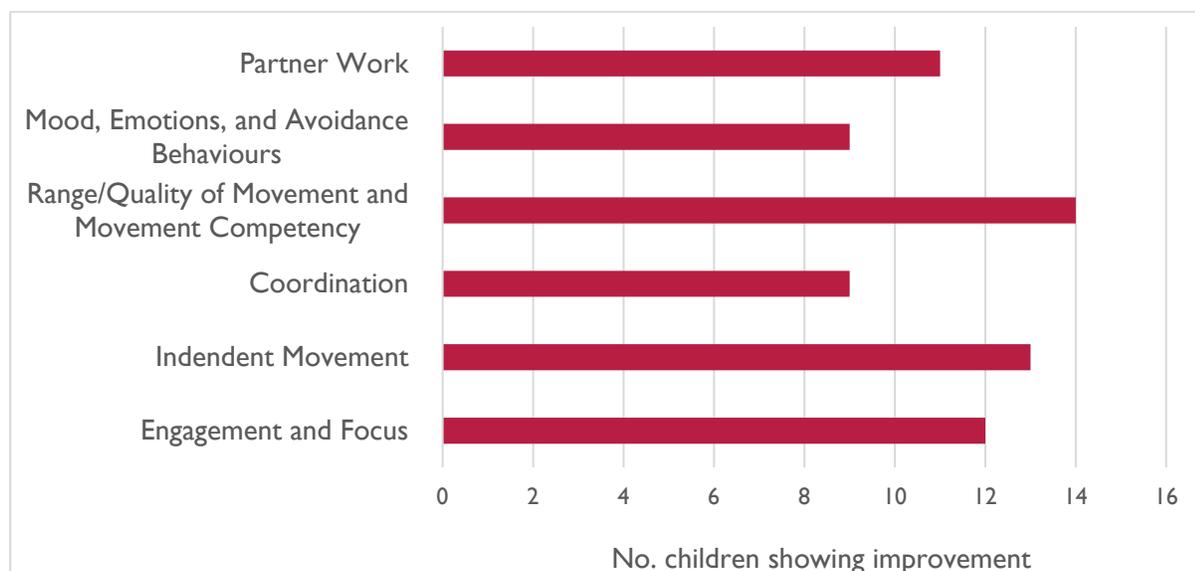
The below points outline key findings that emerged from the group in the first phase of analysis:

1. Engagement and focus improved but fluctuated for many children and were dependent upon other personal and environmental contextual factors (emotions, avoidance behaviours, other peers, different dance spaces, noise level).
2. Engagement and focus improved when the dance artist remained flexible in approach and adapted to the individual child (reducing volume of music, moving from group to 1:1 lessons, moving at a faster pace with quick changes, or moving and speaking more calmly to match the child's needs)

3. Independency in movement improved for many and this led to a wider movement vocabulary with children being able to attempt and demonstrate many different actions without the need for physical support.
4. Many participants improved in their ability to fully and accurately demonstrate the movements. Bilateral Coordination improved for some children however this only happened when engagement and focus were consistently good.
5. Some children experienced reduced levels of avoidance behaviours during the dance sessions (less running around, trying to escape the room, climbing on furniture, or picking up unrelated objects).
6. Partner work appeared to help improve levels of engagement for many children. Some appeared to become more confident, leading partnered movements, and were more willingly dancing with other support staff or the dance artist.

A summary table of individual progressions in specified coded areas was also created to identify exactly how many children saw improvements in these overarching areas across the first phase of the project. Figure 17 below outlines these findings.

Figure 17: Improvements in key areas



The highest improvements were seen in range/quality of movement and movement competency as well as independent movement. These findings could indicate that the dance artist was encouraging the children to physically push beyond what they were normally asked to do in their everyday lives and once realising that they were capable of achieving a wider movement vocabulary, they were better able to accomplish these movements independently without as much need for physical support. Examples of this include; reaching fully overhead and extending the elbows. This was identified early in the project as an area that the children struggle with alongside twisting the torso to aid with daily activities such as toileting.

Many children had notes of improved engagement and focus over time but this fluctuated and was dependent on personal and environmental contextual factors. Some children were able to focus better when the class was adapted for their needs and moved to a 1:1 session where they were less impacted by the behaviour of other children which they sometimes found distracting or distressing. This highlights the need for individualised classes rather than a “one size fits all” approach to dance or physical activity for autistic children.

Approximately half of the children had notes of improvement in their bilateral coordination. However, it was clear that developments in coordination as well as further improvements in movement competency were reliant on good levels of engagement and focus. Interestingly, partner work with TA's or the dance artists aided engagement and focus for many children and also appeared to support movement confidence with children sometimes leading the partnered movement. Furthermore, some children became better able to remember and physically demonstrate movements without the need for prompting.

Phase 2: September 2024 - July 2025

The second phase of analysis followed a similar structure to the first. As the questions and prompts remained the same, unsurprisingly many of the key words also remained the same in this second phase. Analysis noted the following additional key words: extension, balancing, speed, direction, repeated or repetition, emotional regulation/dysregulation, upset, communication and understanding.

Many of the additional key words related to already existing coding areas. For instance, text relating to emotional regulation or dysregulation or feelings of upset were categorised into *Mood, Emotions, and Avoidance Behaviours* for the purpose of coding. Text relating to extension of limbs, balance, ability to change speed or direction, or ability to complete multiple repetitions of an action were categorised into *Range/Quality of Movement and Movement Competency* for coding purposes. Notes of verbal communication and understanding of instructions were left uncoded and then revisited later in analysis as a potential emerging theme.

Due to personal contextual factors, much of the feedback from the dance artist at Manor school for this second phase was done retrospectively using film footage. Interestingly, although comments from the artists continued to be detailed and thorough, there were not as many instances where the text clearly indicated improvement in particular areas. For instance, some children saw comments such as “good coordination”, “brilliant dancing”, “star dancer” across time, however words or phrases indicating change such as “has improved”, “has progressed”, “has developed” were not as common making it more challenging at times to know if improvement had indeed occurred. There were however, instances where comments regarding the need for physical support decreased over time or where comments about having good motor skills became more plentiful, both indicating some level of improvement, however this was determined on a case-by-case basis.

In addition, for children at Manor School this was the 2nd year or longer of participating in dance classes, therefore improvements may have already been made in the previous academic year, and their relationship with the dance artist more securely established. This element of trust and familiarity is important for engagement and focus and may have impacted further development in this particular area.

Given the challenges noted above, it was decided that a quantitative representation of how many children saw improvement in particular areas could not be achieved accurately. Instead, key findings that emerged are outlined below and case studies were able to describe in more depth and detail individual progressions.

1. Engagement and focus continued to fluctuate and were dependent upon emotional regulation and other contextual factors with some comments pointing to children being able to re-engage quicker over time. Reward-based strategies and partner work were helpful to engage some children, however it was not always specifically mentioned what the partner work involved. Comments highlighted the need for individualised approaches to aid engagement.
2. Some children developed in their ability to carry out movement independently without needing physical support. Sometimes independent movement was limited by physical capacity and assistance from a TA was required to move. However, sometimes children were able to physically move independently and chose not to, thus also requiring TA support but for different reasons.
3. While there were notes of “good” and “great” coordination for some children, improvements in this particular area were not as clear. However, many children were able to coordinate more complex actions as the dancing year progressed. There were comments about upper and lower body coordination for movements that happened at the same time, however it was not always clear what these actions involved or whether multi-limb movements were homolateral or contralateral, thus making it challenging to note improvements in developmental movement.
4. Some children had notes of improvements in factors relating to movement capabilities including: extension of limbs, balancing, mirroring, confidence, efficiency and ease, precision, repetition or task endurance, jump height, direction, tempo, rhythm, memory of sequences. These improvements were noted on a case-by-case basis. In general, their capacity to retain and recall a wide range of movements and “dances” e.g. the superman dance, also appeared to improve.

5. Progress appeared to happen in a phased or incremental nature. In order for movement competency and capability to improve, there needed to first be a good level of engagement, focus, and an ability to physically move independently.
6. Emotional regulation and avoidance behaviours fluctuated for many. Some children appeared to show less instances of emotional dysregulation by the end of the year, were able to engage in learned strategies to self-regulate, or through the help of a TA were able to return to dancing more quickly over time.
7. There were more comments regarding the children's ability to communicate (whether verbally or via sign language) and understand what was being asked of them. These comments also included the use of a communication chart.
8. Various contextual factors impacted engagement and participation in dance across the year and these were on a case-by-case basis. Examples of such factors include: lack of attendance for weeks/terms, changes to medications, relationship with supporting staff, injuries, distractions in the space, other peers dancing alongside them, school trips and illness.

Filming

Across the study, film footage has been utilised in different ways to aid understanding of the situation and triangulate with other data points. As both researchers were not present during the dance sessions, this allowed for further insight and context alongside the feedback and notes provided by the dance artists.

A key finding that has emerged from content analysis and was reconfirmed when triangulating with film footage is the significance of the phased or incremental nature of this work. In order for children to experience consistent improvements in motor skills (range, quality, accuracy, etc.), there was a need for a good level of engagement, focus, emotional regulation, and independence

in movement. This is important for future research that wishes to look further at how dance can benefit this population; it may be beneficial to understand level of engagement, focus, emotional regulation, and ability to move independently first before proceeding to understand any potential changes to movement specific concepts. This is also an important finding for future teachers and dance practitioners working with autistic children and can help to structure lesson planning and goal setting in a way that is both realistic and productive.

Across the project and in line with other data points, film footage of some children has demonstrated fluctuating engagement and focus. Some would stim quite a lot, demonstrate avoidance behaviours such as walking away from the dance space, or would become distracted by wanting to touch objects in the room. There were also instances where children did not move or carry out the instructed actions right away and after verbal and/or physical support, would demonstrate a quick succession of only a few repetitions of a particular action. In these instances, using film footage as a means to understand potential improvements in coordination, extension of limbs, range of movement or ability to accurately achieve the action was challenging and not possible.

In the context of the present study, film footage was gathered in real time during the child's lessons. Sometimes children needed to be paired with other peers due to scheduling or space issues, and sometimes the children would be filmed in a solo session. While the movements outlined in the methodology as agreed with the artists were often done one after the other in a set sequence either before or after other dance sequences, the dance artist sometimes spent longer periods of time going through the movements and at other times moved fairly quickly through them with only a few repetitions per movement. Given the fluctuating nature of how the children experienced the set sequence and the personal and environmental contextual factors that will have impacted how the children engaged with the movement, it was concluded that film footage as a means to understanding consistent changes to motor skills would not be possible for the present study. However, for some children, the film footage could be viewed alongside artist feedback to help substantiate comments and observations.

Methodological considerations

As outlined in our methodology above, it was important as researchers to consider the impact of the chosen methods for collecting data on all participants including the children as well as staff at the schools and parents. This included the potential impact of research methods upon the children's dancing experiences with the aim of not altering those experiences, but also to not overly burden parents and teachers with more information to take in and more forms to complete.

Some data collection from parents and teachers however was necessary for us to build a picture of the impact of the dance classes, not only on the children during their time with the dance artist, but also on their time spent in other curriculum classes and activities within school, and their home and family life. In reality though, the adherence to the completion of these forms by parents and teachers was suboptimal (Figure 6), meaning we were not able to comment on their experiences over time. With busy work and home life schedules this is to be expected and is a reality of working in these settings.

Through discussions with the Assistant Headteacher at Manor School and working with across the project, some challenges with the system surfaced from a research perspective. Firstly, throughout each child's educational journey, teachers will rotate and work more closely with a particular child at different time points and will update the scores. As a result, the individual who is rating a particular child will not necessarily be the same across different time points. Secondly individual raters may view the scoring system slightly differently. For instance, there is a point in the writing scale where if a child can type proficiently, they can pass the target even if they do not have the fine motor skills to form letters in writing. Where one teacher may focus solely on writing proficiency, another may consider typing skills.

A similar issue may also appear in other subjects. For instance, in science a child may have been learning about a particular topic and doing well with tasks surrounding that topic. However, if a

new teacher begins working with a child and/or the student begins learning a different topic that is more challenging, the child may be scored at lower levels. This creates a system issue whereby the scores either fluctuate or there are multiple possible scores for that subject at a given time point.

While not ideal from a research perspective, these realisations and discussions have helped to shine light on some of the limitations with the current assessment system being used within a research context and have provided vital context for the numerical data that has been gathered. Furthermore, the research has instigated valuable discussions with the Assistant Headteacher at the school regarding assessment structures and the continued necessity for individualised approaches.

Other research papers have undertaken laboratory testing, taking the child out of their normal setting to carry out specific tests, enabling the completion of a randomised control trial, a research design that is highly valued as gold standard research. However, we as researchers and dance artists ourselves, understand that this action may have an impact upon the results through the child's embodied experience of this testing, and the need for individualised design. For autistic children this change of environment could have a significant impact upon their behaviour and emotions not only in the moment but throughout the rest of the day.

During the research we highlighted the difficulties in balancing academic and research rigour with the realities of working in such real-life settings for [People Dancing's magazine Animated](#).

Although we spent time researching appropriate research methods for this project and selected the validated Strengths and Difficulties Questionnaire, this has come under some scrutiny in the research, as well as from the teachers working in the SEND schools participating in the research. It was felt that some questions within the Strengths and Difficulties Questionnaire (SDQ) were not appropriate and the wording disproportionate to the child's experience of Autism. It also caused some confusion with teachers as to how they should be reflecting on the child's behaviour

whereby some teachers tried to reflect on the child's experience in the dance class despite not being present, rather than focusing on the child's behaviour in their other classes when the teacher was present to observe.

Summary

Research in dance for health has suggested that dance can be beneficial for improvements in physical fitness such as strength, balance, co-ordination as well as aiding with mental wellbeing, social cohesion and community for many different populations. However, variations and limitations with methodologies between studies makes it difficult to draw definitive conclusions about the full impact of participation in dance. Likewise, some of the nuanced changes that we often see as dance artists in the dance space are difficult to capture through existing methodologies and thus some potentially important impacts for the individual may be lost in traditional research methodologies.

Dance for autistic children has focused predominantly on dance movement therapy, a strand of psychotherapy that incorporates the use of movement and dance, however differs somewhat from dance classes that may have therapeutic qualities. This project focused on dance as a creative and fun activity for autistic children that may have had an impact on their communication skills, focus, engagement and physical attributes such as range of motion, quality of movement and co-ordination. Through a collaborative, person-centred approach, we focused on the individualised nature of the children's experiences of both autism and the dance activity.

Alongside recent research, the findings emerging from this project advocate for a more qualitative approach to research in these settings, and indeed an individualised approach to "interventions" for autistic children. No one exact dance class can have the same impact on all autistic children. The classes should be designed by experts in their field, in this instance professional South Asian Dance artists, and with the specific needs of the individual child in mind. For example, for those that struggle with focus, the class can be designed to first engage their attention, build trust and understanding of their physical capabilities that might sometimes be

overlooked. Research has suggested that autistic children's physical capabilities and need to engage in physical activities are often overlooked and so it is imperative to first open the door to these possibilities. Beyond this, dance classes can be specifically designed to encourage full range of movement of the limbs and cross-body co-ordination. This can have a significant impact on their ability to carry out daily tasks such as reaching for objects and toileting, potentially increasing their independence in these daily activities. Making wide ranging, population-based assumptions about the impact of dance, and in this specific instance South Asian dance, risks overlooking important individual progressions and experiences.



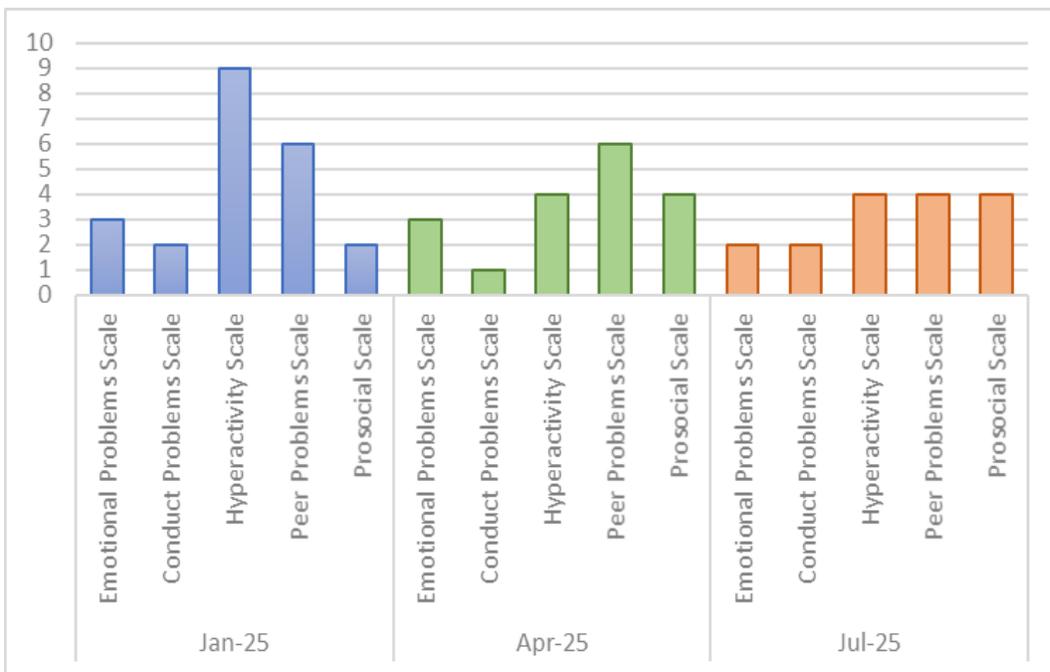
Credit: Justin Jones

Case studies

Case Study 1

This child was 5.7 years old at the beginning of the study and on commencement of the dance classes was very attached to the teaching assistant (TA). They demonstrated signs of anxiety, coming to each class with several objects or toys in their hands and spending much of the time with the TA. Initial dance classes were often characterised with bursts of high energy and hyperactivity. High levels of hyperactivity were also noted in the Strengths and Difficulties Questionnaire returned by their parent (Figure 18) indicating this was a difficulty experienced in the home environment.

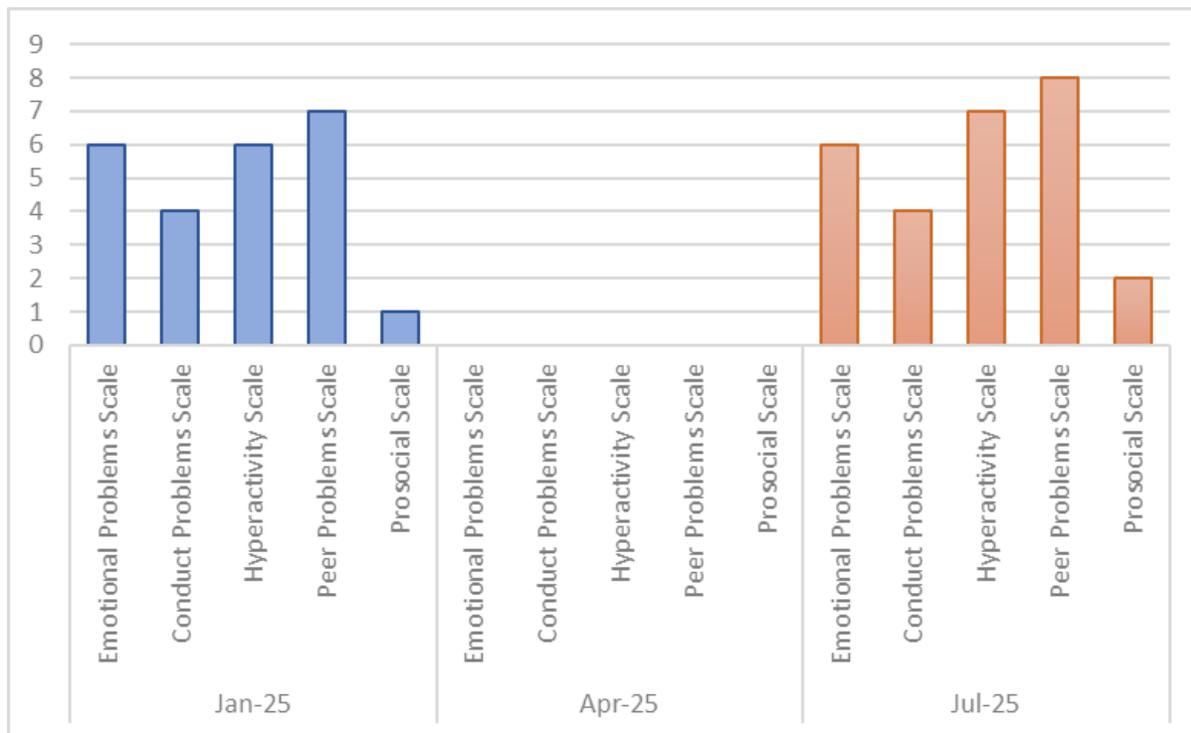
Figure 18: Parent Strengths and Difficulties Questionnaire (SDQ)



Despite this hyperactivity seen within the dance class at school, teachers returned a lower score for hyperactivity on the SDQ (Figure 19) at the same timepoint. The child required physical contact to participate in the dancing activity but only from school staff rather than the dance artists.

However, moving into the second term the learner began to move away from the teaching assistant, exploring the space and textures of the room and spending moments without any toys or objects in their hands.

Figure 19: Teacher Strengths and Difficulties Questionnaire (SDQ)



Interestingly, teacher SDQ scores remained fairly consistent across the academic year, however parent scores saw a marked decrease across most subscales. In addition, parents commented that in attending the dance classes the child’s problems were a little better and that it had helped a lot in other ways e.g. making the problems more bearable. Teachers however only noted a little improvement towards the end of the academic year. This highlights the differences in a child’s behaviour in different settings and with different routines e.g. home routine compared with school routine and behaviour around different individuals. For this reason, generalisation of dance activities and music into the child’s wider life is important as the impact of dancing can be far reaching beyond the classroom and can allow for changes in behaviour that are not immediately observable within only one environment.

Throughout the two terms the learner became more focused and calmer during class, able to leave the toys momentarily to join in activity. Dance movement also progressed from simply brushing the arms in the first few weeks to multiple arm swings and movements by the end of the second term. Shifting focus from objects and people that provide comfort, to the ability to express themselves and move with focus is a wonderful step forwards with a suggestion from the gradual progression across term that with further dancing this would continue to improve. Whilst we know that autistic children's experiences are not linear, despite weeks with less engagement, overall progress can be seen in their engagement with the dancing and their focus in these classes.

Case study 2

This child was 8.5 years old at the beginning of the study. Earlier sessions noted that he often needed to wander and move around the space. This continued across the project and was also seen in film footage. The artist suggested that working with short bursts of activity helped to keep him engaged. He was often dancing alongside one or two other peers across the study, and often needed 1:1 support to maintain engagement and focus. Across the first year this child's focus improved and he was able to concentrate and mirror movement for longer periods of time. Throughout the second and final year of the study, engagement was mixed with some sessions demonstrating great moments of focus and eye contact, and other sessions with shorter bursts of focus as well as some emotional dysregulation/distress and hyper fixations. This carried on throughout the year however there were less instances of being overwhelmed or distressed by the end of project as compared to Autumn Term 2024. Notes also suggested that he was better able to reengage after moments of distraction or stimming by the end of the project.

While 1:1 support was useful to keep this child engaged and in the dance space, he began the study moving fairly independently and this continued to improve across the project with the artist noting more movements that can now be achieved without physical support. In the first year of the project the artist noted some progression in range of movements and ability to do more repetitions of dance movements. In the final year, comments suggested continued improvements in being able

to do more repetitions of actions with the artist also noting a good understanding of how to work with different speeds, directions, and sizes of movement as well as improved coordination in the upper and lower body. This child developed in his ability to twist the body and the hands at the same time.

Film footage demonstrated a freedom and clear ability to twist and rotate the spine, clear leg brushes, a good extension in the arm when reaching above the head to touch hands with a partner, and a clear ability to coordinate lifting one leg and clapping under it while in standing. However, film footage also demonstrated how clarity of these actions fluctuated considerably depending on level of engagement, effort, and how much he needed to wander around the space.

The artist commented on the brilliant fine and gross motor skills that developed by the end of the project. Comments regarding fine motor skills are particularly interesting here given the stronger improvements seen in this child's writing skills within his curriculum progression scores.

The amount of change in subject scores for this child between Spring Term 2024 and Summer 2025 is displayed in Figure 20 below. Alongside the change in writing score (+1.94), this child's stronger areas of improvement were seen in listening (+1.29) and science skills (+0.93).

Figure 20. Amount of change in subject scores

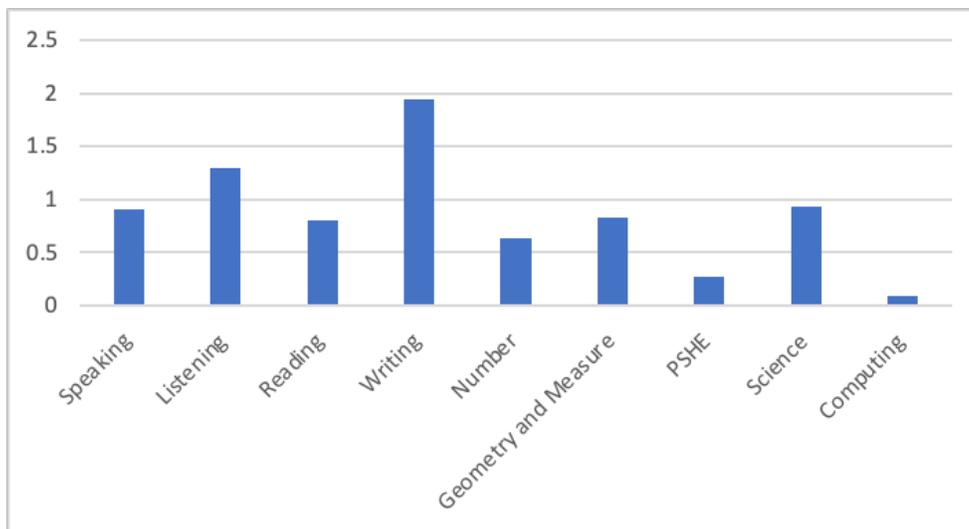
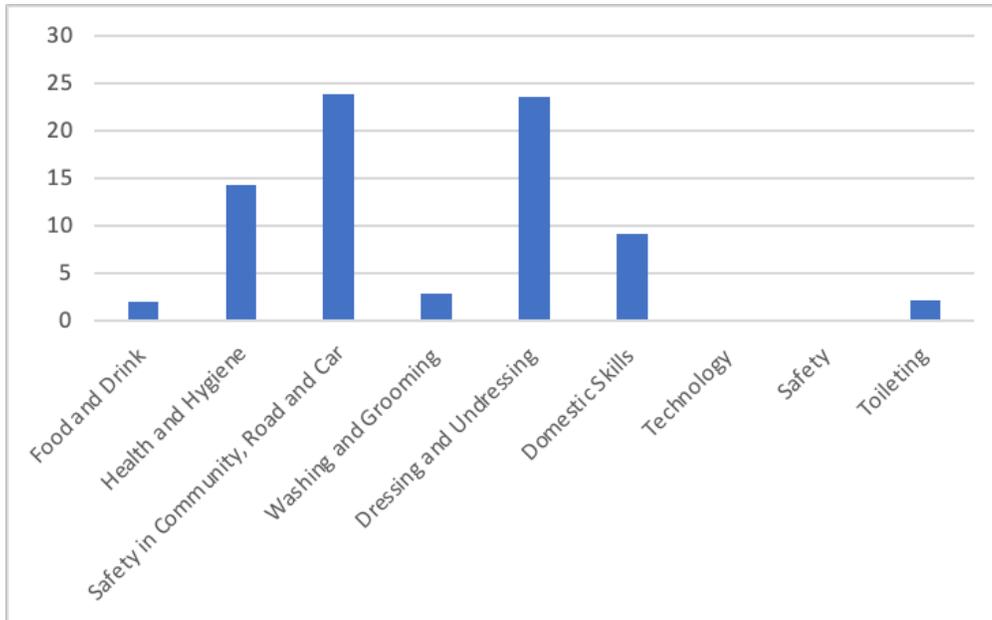


Figure 21. Amount of change in functional skill scores

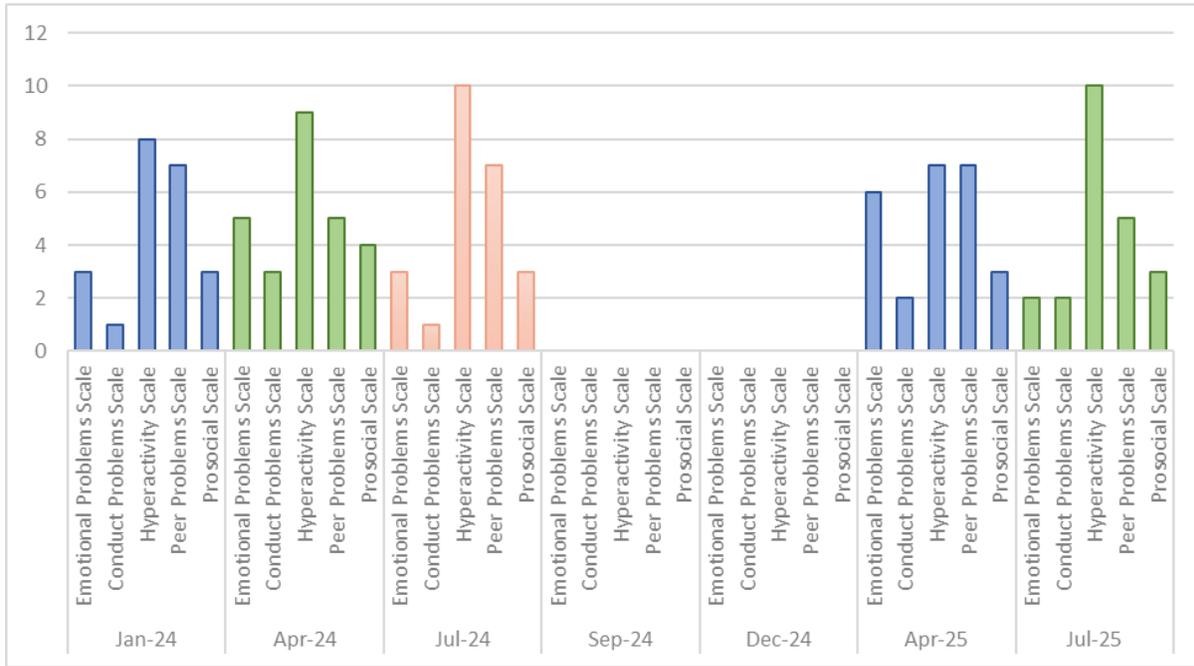


This child saw improvements in many functional skills between Spring 2024 and Summer 2025 and particularly with skills within the safety in the community/road safety and dressing and undressing subscales. Examples of statements seen within the safety in the community subscale include: “I can fasten my seatbelt in a car/minibus when I get into the vehicle” and “I can step off an escalator”. Examples of statements seen within the dressing and undressing subscale include: “I can put on a jumper” and “I can put on shoes”.

Both subject and functional skills scores must be viewed with caution and an understanding of the assessment structure and challenges as described in the report above.

Teacher SDQ data was not submitted for the first half of the 2024/2025 academic year however data was submitted in April and July 2025 allowing for an understanding of change across the duration of the study. Unfortunately, no parent SDQ data was submitted across the duration of the study. Figure 22 outlines the teacher SDQ scores for this child between January 2024 and July 2025.

Figure 22. Teacher Strengths and Difficulties Questionnaire (SDQ)



This child saw a slight decrease in emotional problems and peer problems, however these scores fluctuated over time as did scores in the conduct problems scale which saw a slight increase by the end of the study. Hyperactivity scores saw a steady rise across the study. It could be that the school environment and other peers in the space impact upon his hyperactivity levels. As this child appeared to be better engaged and focused in 1:1 situations and when working with a partner in the dance sessions, this could be a useful consideration for other contexts and environments.

Case study 3

This child was 8 years old at the beginning of the study. Early sessions demonstrated a good level of engagement and focus as well as excitement and enjoyment regarding his dancing that continued to improve across the academic year with the dance artist making notes of improved concentration. Upon entering the second year of the study, this child struggled with a change of class that caused upset and distress. This meant that throughout Autumn Term 2024, it was

challenging to get him to come into the room to dance and there were more instances of emotional dysregulation. However, over the final two terms of the study, this child improved in his engagement and willingness to participate in the dance classes, showing improved focus for longer periods of time, improved listening skills and a better ability to deal with some stimming behaviours and hyper fixations.

The child commenced the study as a fairly independent mover not requiring any physical support to carry out the actions and this continued across the project with some sessions requiring physical support for encouragement purposes. Dance artist feedback suggested he improved in a variety of motor skills including coordination between upper and lower body, mirroring, application of feedback in the moment, changes of speed and direction, precision, memory of sequences, and balance. Film footage gathered between Spring and Summer 2025 aligns with these findings with the child demonstrating a good level of coordination, extension of limbs, and balance ability in the set movement sequence. Initially he found it difficult to coordinate bending and stretching the knees when moving the arms and would slightly hinge at the waist instead. Into the second year the dance artist noted improvement with coordination and ability to bend and stretch at the knee. Across the second year of the study the artist also commented multiple times on his ability to communicate verbally and understand instructions. Interestingly, speaking skills were one of his stronger areas of improvement when looking at curriculum progression.

The amount of change in subject scores for this child between Spring Term 2024 and Summer 2025 is displayed in Figure 23 below. Overall, there was slight improvement in all subject scores with writing showing the largest improvement (+1.0) followed by reading (+0.76) and speaking (+0.75).

Figure 23. Amount of change in subject scores

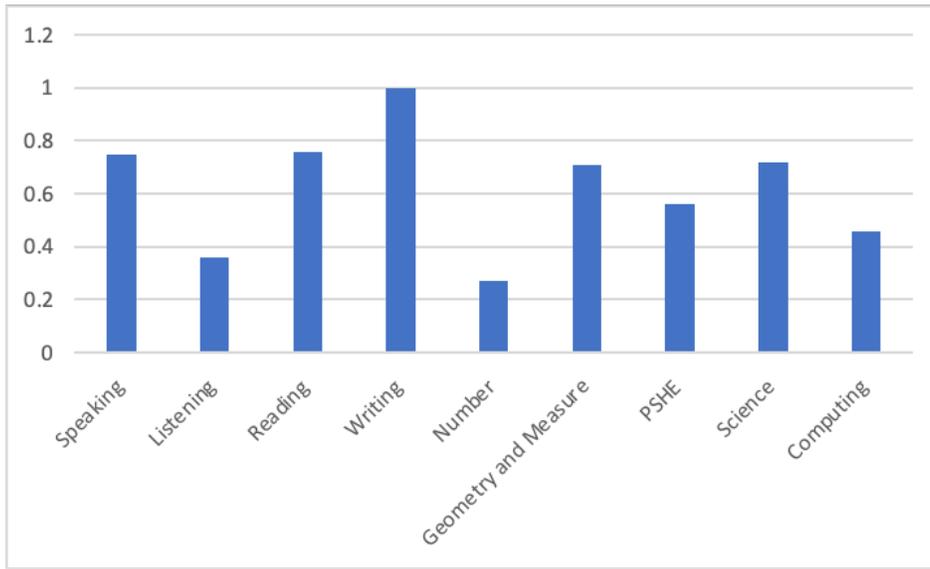
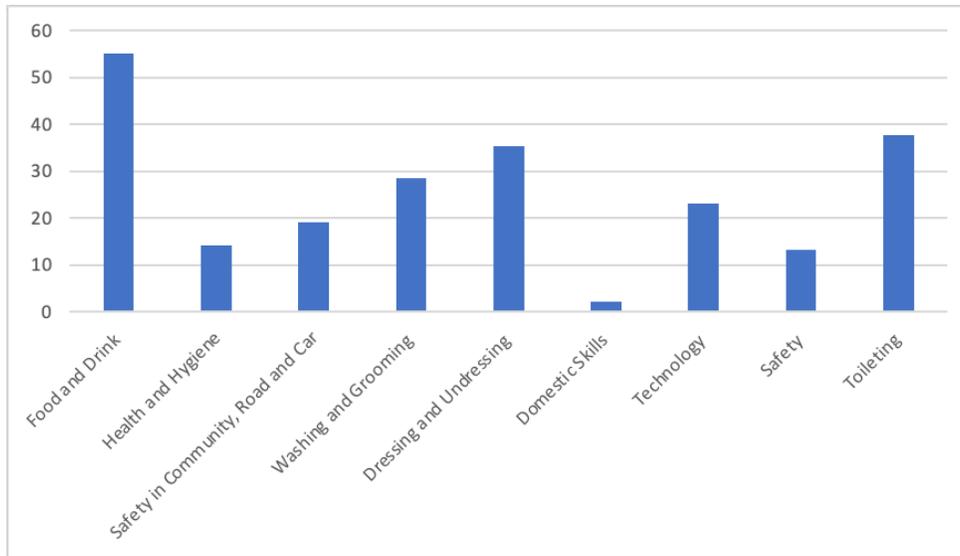


Figure 24. Amount of change in functional skill scores



This child saw improvements in many functional skills between Spring 2024 and Summer 2025 and particularly with skills involving fine motor movements including Food and Drink, Dressing and Undressing, Toileting, and Washing and Grooming. However, subject and functional skills scores must be viewed with caution and an understanding of the assessment limitations as described in the report above. On the Strengths and Difficulties Questionnaire, this child saw more difficulties with peer problems and hyperactivity within the school environment however these scores fluctuated. Teacher scores (Figure 25) have also noted some variability and increase in emotional

problems. Artist feedback did note some challenges in Autumn 2024 which meant that this learner was not as willing to engage with the dancing during that term and experienced emotional dysregulation frequently.

Figure 25. Teacher Strengths and Difficulties Questionnaire (SDQ)

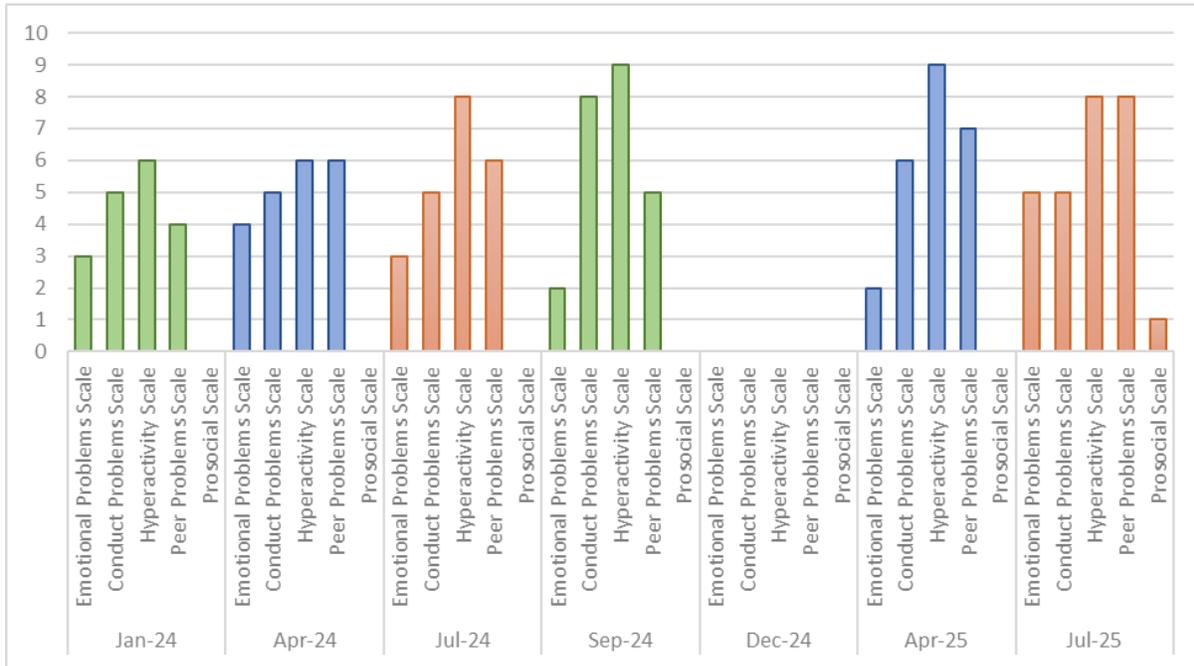
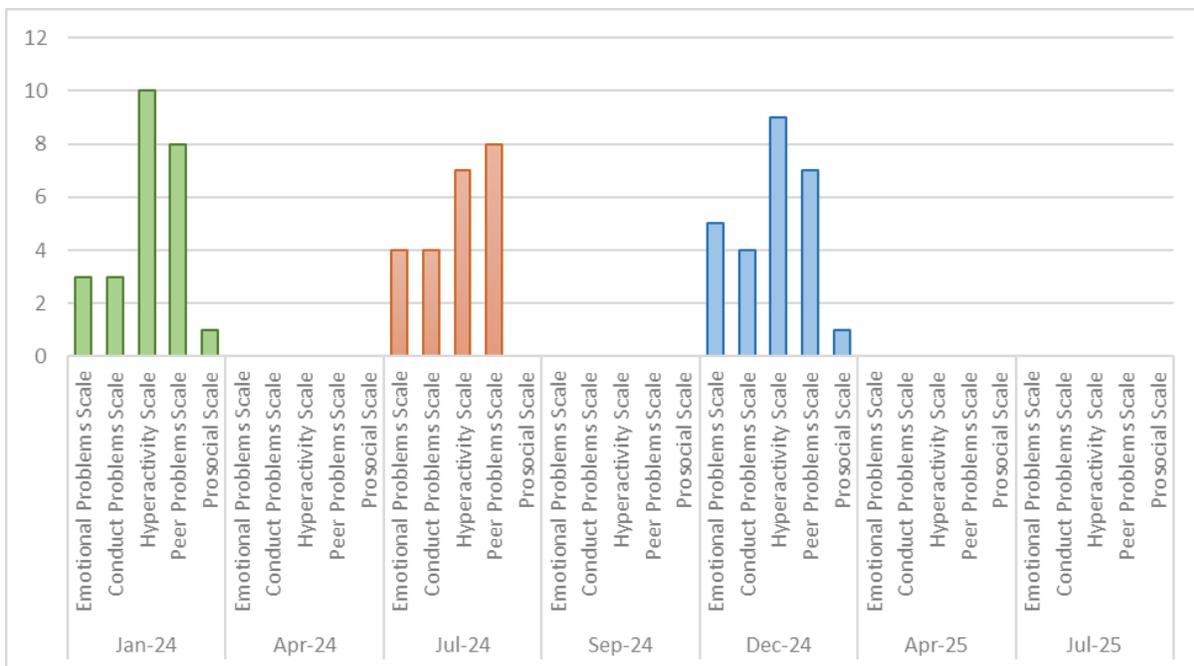


Figure 26. Parent Strengths and Difficulties Questionnaire (SDQ)



Interestingly the parent SDQ data (Figure 26) shows a slight reduction in hyperactivity scores whereas teacher scores show an increase in this subscale across that same time indicating that perhaps this learner struggles more in the school environment where there is possibility for more distractions and stimulation as well as interaction with other peers. Throughout the project, he worked 1:1 with the dance artist in solo classes which likely helped the learner remain engaged and focused, therefore allowing the opportunity for further improvements in motor skills.

Project Outputs

It was important from the outset of the project that the outputs were varied in nature and in medium, including blog posts, peer-reviewed journal articles, magazine articles, videos, short reports and resource materials. The nature of these outputs meant that different audiences including dance artists, parents, teachers, other community practitioners and researchers could all engage with the research and its outcomes.

A range of resources and publications have been created across the 3-year project and will continue beyond the end of the 3 years of funding. Please find below links and citations to these resources.

Resources

A range of downloadable resources including the research books listed below are available at <https://www.akademi.co.uk/akademi-resources/send-digital-resources/>

Resource Book for Parents and Teachers

This short handbook is designed for parents and teachers and contains a playlist from the dance artists, images of some of the dance movement they experience in class and some mudras for storytelling. The aim of this book is that parents and teachers can continue to work with the dance class material at home with the children and/or to understand what they may have been working on with the dance artists.

Resource and Research Book

This book is a development of the above listed resource book. It contains all of the same information as the parents and teachers handbook but also includes a brief explanation of the research that has underpinned the chosen activity. This book is aimed at those that wish to have a greater understanding of the class content and how it might be beneficial for autistic individuals.

Research Handbook

This research handbook is a guide to implementing the research outlined above. It contains a step-by-step guide to the methodology used, guiding the dance artists in how to complete the relevant forms and questionnaires. This was an accompaniment to the project in year 3 as a working guide for those involved in the research.

Research Framework

This short guide was designed to give a brief overview of the research design to participating schools or interested parties. It outlines the approach and general methodology used in the research.

Publications

Farmer, C., Brain, A., and Subramaniam, S. 2025. The impact of South Asian Dance on engagement, independent movement and social skills for autistic children, *Journal of dance medicine & science : official publication of the International Association for Dance Medicine & Science [In print]*

Farmer, C. and Brain, A. 2025. Rigour and Reality. Animated magazine, People Dancing, Winter Edition <https://www.communitydance.org.uk/DB/animated-editions/winter-2025>

Conference presentations

Dance in SEND schools, 2024, Imperial College Dance for Health Show and Tell, Royal Academy of Dance and Helix Centre

Researching the impact of South Asian Dance on Autistic children, 2024. IADMS 34th Annual Conference, Rimini, Italy

Blogs

2025 SEND Schools research project update <https://www.akademi.co.uk/send-schools-research-project-year3-update/>

2024 SEND Schools research project year 2 update
<https://www.akademi.co.uk/send-schools-research-project-year-2-update/>

2023 SEND Schools research project year 1 update
<https://www.akademi.co.uk/send-schools-research-project-update/>

IADMS International Association
for Dance Medicine & Science



ROaR researchers with Akademi team & artists
Photo: Antareepa Thakur

Researching the Impact of South Asian Dance for Autistic Young People

In September 2022, a prospective research project was begun at [Akademi South Asian Dance](#) to investigate the impact of dance classes on autistic young people in a UK school setting. Across this 3-year longitudinal study, professional dance artists offer 10-15 minute small group or individual dance sessions each week during the academic term.

These sessions are influenced by practices including Kathak, Bharatanatyam, Bollywood, and Yoga, which utilize fine motor skills, hand gestures (mudras), and facial expressions (abhinaya) to communicate stories and express emotions.

The project uses a co-created, multi-modal approach to research that focuses on the individuality of the learner's experiences. We have utilized dance artist feedback, the Strength and Difficulties Questionnaire to be completed by parents (SDQ P4-17) and teachers (SDQ T4-17), curriculum progress assessed through the school, and video observations. The project is still within its second year, however initial case study analysis demonstrates improvements for many learners in motor control and coordination, use of space and ability to fully extend limbs, and ability to carry out movement independently. While improvements have been noted in engagement and focus, this is very much dependent on the day, how the learner is feeling, and other contextual and environmental factors that are not possible to control for.

The next stages of this research will look to understand in more detail how the noted benefits seen within the young people's dance classes can be generalized to other settings, including home and curriculum classes, to aid their learning and communication.

Submitted by Claire Farmer, MSc & Ashley McGill, PhD

References

- Aithal S, Karkou V, Makris S, Karaminis T, Powell J. A Dance Movement Psychotherapy Intervention for the Wellbeing of Children With an Autism Spectrum Disorder: A Pilot Intervention Study. *Front Psychol.* 2021;12. doi:10.3389/fpsyg.2021.588418
- Barnes, C. S., Mellor, J. R., & Rehfeldt, R. A. (2014). Implementing the Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP): Teaching Assessment Techniques. *The Analysis of Verbal Behavior*, 30(1), 36.
<https://doi.org/10.1007/S40616-013-0004-5>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Bremer E, Crozier M, Lloyd M. A systematic review of the behavioural outcomes following exercise interventions for children and youth with autism spectrum disorder. *Autism.* 2016;20(8):899-915. doi:10.1177/1362361315616002
- Chappell K, Redding E, Crickmay U, Stancliffe R, Jobbins V, Smith S. The aesthetic, artistic and creative contributions of dance for health and wellbeing across the lifecourse: a systematic review. *International Journal of Qualitative Studies on Health and Well-being.* 2021;16(1):1950891. doi:10.1080/17482631.2021.1950891
- DeJesus BM, Oliveira RC, de Carvalho FO, de Jesus Mari J, Arida RM, Teixeira-Machado L. Dance promotes positive benefits for negative symptoms in autism spectrum disorder (ASD): A systematic review. *Complement Ther Med.* 2020;49. doi:10.1016/J.CTIM.2020.102299
- Fancourt, D., & Poon, M. (2015). Validation of the Arts Observational Scale (ArtsObs) for the evaluation of performing arts activities in health care settings.
[Http://Dx.Doi.Org/10.1080/17533015.2015.1048695](http://Dx.Doi.Org/10.1080/17533015.2015.1048695), 8(2), 140–153.
<https://doi.org/10.1080/17533015.2015.1048695>
- Goodman R. The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry.* 1997;38(5):581-586. doi:10.1111/J.1469-7610.1997.TB01545.X
- Kaur, M., M Srinivasan, S., & N Bhat, A. (2018). Comparing motor performance, praxis, coordination, and interpersonal synchrony between children with and without Autism Spectrum

Disorder (ASD). *Research in developmental disabilities*, 72, 79–95.

<https://doi.org/10.1016/j.ridd.2017.10.025>

Lindor, E., Papadopoulos, N., Devenish, B., Bellows, S., Mantilla, A., McGillivray, J., & Rinehart, N. (2023). The feasibility and acceptability of AllPlay Dance for autistic children: A pilot randomised controlled trial. *Research in Autism Spectrum Disorders*, 109. 102271.

<https://doi.org/10.1016/j.rasd.2023.102271>.

Manders E, Goodill S, Koch SC, Giarelli E, Polansky M, Fisher K and Fuchs T (2021) The Mirroring Dance: Synchrony and Interaction Quality of Five Adolescents and Adults on the Autism Spectrum in Dance/Movement Therapy. *Front. Psychol.* 12:717389.

doi: 10.3389/fpsyg.2021.717389

Özden, M. (2024). Content and thematic analysis techniques in qualitative research: Purpose, process and features. *Qualitative Inquiry in Education: Theory & Practice*, 2(1), 64-

81. <https://doi.org/10.59455/qietp.20>

Petts L & McGill A. Disrupting the Obligation of Objective Knowledge in Dance Science Research.

Journal of Dance Medicine & Science. 2024; 28(3), 196-208. doi: [10.1177/1089313X241245493](https://doi.org/10.1177/1089313X241245493).

Samaritter R, Payne H. Through the Kinesthetic Lens: Observation of Social Attunement in Autism Spectrum Disorders. *Behavioral sciences (Basel, Switzerland)*. 2017;7(1). doi:10.3390/BS7010014

Sefen JAN, Al-Salmi S, Shaikh Z, AlMulhem JT, Rajab E, Fredericks S. Beneficial Use and Potential Effectiveness of Physical Activity in Managing Autism Spectrum Disorder. *Front Behav Neurosci*. 2020;14. doi:10.3389/FNBEH.2020.587560

Stone LL, Otten R, Engels RCME, Vermulst AA, Janssens JMAM. Psychometric properties of the parent and teacher versions of the strengths and difficulties questionnaire for 4- to 12-year-olds: a review. *Clin Child Fam Psychol Rev*. 2010;13(3):254-274. doi:10.1007/S10567-010-0071-2

Sundberg, M. (2008). Verbal behavior milestones assessment and placement program.

Whatley S. Why Dance and Dance Studies Matter. Palgrave Macmillan. 2020. Available at:

<https://www.palgrave.com/gp/blogs/humanities/sarah-whatley-blog>.



Credit: Justin Jones

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