



Reach Out and Reveal Resource and Research Pack

Akādemi

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Welcome



A note from the researchers:

Welcome to this resource and research pack, created as part of the research and development carried out between 2022 - 2025, funded by Paul Hamlyn Foundation. Through this process of exploration and research, working closely with the children, teachers, parents and dance artists, we have created this resource pack of activities, supported by existing literature as well as the findings of this research. Each activity is accompanied by details of the research that has informed the activity and the potential benefits to Autistic children. We hope that you find this pack useful and informative.

Claire Farmer and Ashley Brain nee McGill

A note from the dance artists:

Dance is beneficial for so many, both physically and mentally. It helps enhance body awareness, cognitive and motor skills, confidence, social skills, self-esteem, coordination, expression and imagination, as well as bringing much joy and happiness!

It has been a pleasure working with each child and seeing them grow and develop in multiple ways within our weekly dance sessions. I hope these resources can help continue this growth and be a fun activity for you to do with your child. ~ Georgia Cornwell

Dance is a way of life. It creates joy, laughter, and peace. It brings people together and creates a bond like no other. I can't wait to help you incorporate dance into your life and see how you take it into your everyday life! ~ Aishani Ghosh

Research – Music

Music and rhythm have played a strong role in therapeutic interventions for autistic young people with literature suggesting the rhythmic and structural components provide a useful external cue and anchor to help children organise their thoughts and respond accordingly (La-Gasse, 2017). Christensen (2021) argues that rhythm is a key concept in understanding autism. This author outlines many examples of how social interaction can be perceived as rhythmic and how rhythm can be perceived as a way of being. Concepts such as staccato and syncopation are used to describe the sometimes abrupt, irregular or “off-beat” features associated with autism. It is through these perspectives that we can also begin to see how music can be used to help find synchrony and harmony.

A key aim of our research is to look at generalisation and how benefits of the dancing can potentially transfer to other settings. These other settings might be in different subjects, classrooms and situations at school or outside of the school and at home. Throughout our research process and specifically when we were able to meet with parents at coffee mornings, some parents suggested and asked whether it would be possible to share the music that is played in the dance sessions with them so that they can, with their child, engage with the dancing at home. Some parents also noted how wonderful and surprising it was when their child would practice some of the dancing at home and demonstrate new actions and movements that they hadn't realised they could do or achieve.

As a result, Akademi and the dance artists have worked together to form a short playlist of songs so that families can enjoy the music and the dance movement outside of the dance class. Along with providing a better opportunity for the children to engage with the dancing outside of the school environment, it also presents an opportunity for other members of the family to connect and engage with each other through movement while having fun and being physically active.

References:

LaGasse, A. B. (2017). Social outcomes in children with autism spectrum disorder: a review of music therapy outcomes. *Patient Related Outcome Measures*, 8, 23-32. doi: 10.2147/PROM.S106267.

Christensen, F. L. L. (2021). Synchronization and Syncopation: Conceptualizing Autism Through Rhythm. *Culture, Medicine and Psychiatry*, 45(4), 683-705. doi: 10.1007/s11013-020-09698-y.



Play that funky music!

The combination of music and dance has been shown to have beneficial effects for people of all ages, helping to develop rhythm as well as making connections with favourite songs and sounds.

Bring the music from dance class wherever you go with this playlist. Created by the dance artists and used throughout their dance classes, the children will be exploring movements and expression through this music.



Research – mudras and communication

Mudras are hand gestures utilised throughout Indian Classical Dance, with 52 root mudras utilised to express a range of concepts, actions, events or creatures (Pradeep et al. 2023). The practice of storytelling uses these mudras and the dance artists at Akademi integrate mudras into their dance classes at the schools.

From a functional point of view, mudras may help develop dexterity and fine motor skills in the hands which can be useful for a wide variety of functional everyday tasks such as writing and drawing or picking up objects and using technology. Literature suggests that these fine motor tasks may be particularly challenging for autistic young people (Amonkar et al., 2021) and that improvements in motor control are linked with social skills and reduction of stereotypical behaviours (Sefen et al., 2020).

Additionally, mudras can provide another mode of non-verbal communication, particularly useful for learners who find verbalising their needs and wants challenging. In this way, mudras can provide an extension to the utilisation of Makaton in SEND schools, offering an opportunity for the children to develop their own storytelling and communication. Literature on speech and language interventions for autistic children have demonstrated that the inclusion of augmentative and alternative communication systems such as use of sign language can successfully expand and develop language skills and the communication repertoire available to them (Goldstein, 2002).

References:

Amonkar, N., Su, W. C, Bhat, A. N., Srinivasan, S. M. (2021). Effects of Creative Movement Therapies on Social Communication, Behavioral-Affective, Sensorimotor, Cognitive, and Functional Participation Skills of Individuals With Autism Spectrum Disorder: A Systematic Review. *Front Psychiatry*, 12:722874. doi: 10.3389/fpsy.2021.722874.

Goldstein, H. (2002). Communication intervention for children with autism: a review of treatment efficacy. *J Autism Dev Disord*, 32(5), 373-96. doi: 10.1023/a:1020589821992.

R. Pradeep, R. Rajeshwari, V. R. Ruchita, R. Bubna and H. R. Mamatha, (2023) "Recognition of Indian Classical Dance Hand Gestures," 2023 International Conference on Inventive Computation Technologies (ICICT), Lalitpur, Nepal, pp. 814-820, doi: 10.1109/ICICT57646.2023.10134484.

Sefen, J. A. N., Al-Salmi, S., Shaikh, Z., AlMulhem, J. T., Rajab, E., & Fredericks, S. (2020). Beneficial Use and Potential Effectiveness of Physical Activity in Managing Autism Spectrum Disorder. *Frontiers in Behavioral Neuroscience*, 14. <https://doi.org/10.3389/FN-BEH.2020.587560>



Mudras

Mudras (MOOD-RAAs) are really good for telling stories using your hands and for helping with fine motor skills in the wrists and fingers.

Garuda “eagle”

Garuda (GAA-RU-DA) can be used to represent a bird. Gently move the hands to show the bird flapping its wings as it flies.



Kataka-Mukha “link in a chain”

Kataka-Mukha (KAT-AR-KA-MOO-KA) can be used to represent picking a flower, putting on a necklace or earrings.



Ala-Padma “fully opened lotus”

Alapadma (ALLA-PAD-MA) can be used to represent a blooming flower. You can also hold both hands together with the insides of the wrists touching to create a larger flower.



Hamsasya “swan’s face”

Hamsasya (HAM-SAS-YA) can be used to demonstrate drops of water, moonlight or drawing a picture (as if you are holding a pen).



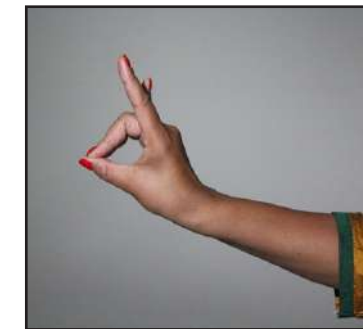
Matsya “fish”

Matsya (MAT-SYA) can be used to represent a fish.



Simhamukha “lion face”

Simhamukha (SIM-HA-MOO-KAH) can be used to represent a lion, deer or rabbit.



Storytime

Can you tell a story with the mudras from the previous page? Write out your story together here and see if you can add the mudras on the right hand page, or make up your own hand gestures to tell the story! Maybe you could take photos of your mudras and stick them to the opposite page.

1.

2.

3.

4.

5.

6.

7.

8.

Research – Range of motion and movement quality

Dance provides a combination of movement and music which can aid children with rhythmic motor coordination (Kattenstroth et al., 2013). Findings from Year 2 of this research demonstrated perceived improvements in a variety of movement skills. Content analysis of artist feedback logs found that 14 learners had notes of improvements in range of motion at the joints (for instance, the shoulder joint), as well as improvements in quality of movement and movement competency. Thirteen learners demonstrated an improved ability to carry out movement independently without the need for physical support from the dance teacher. Furthermore, nine learners saw notes of improved limb coordination with an ability to use both arms and legs in a rhythm at the same time.

To continue this progress and provide another evidence base for potential improvements in range of motion, quality of movement, coordination and movement competency, the researchers and dance artists worked together to develop a short movement sequence targeting specific functional actions useful for everyday activities. This movement phrase was based on movements already carried out in the dance classes and an adaptation of the Bruininks-Oseretsky test of motor proficiency- 2nd edition (BOT-2) as used by Kaur et al. (2018). The BOT-2 is used to measure fine and gross motor performance and include balance and bilateral coordination skills including marching, clapping and drumming actions.

As such through discussions with the dance artists, it was determined that the movement sequence would incorporate the following actions as seen in this resource book.

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

For those children with a good level of focus and engagement in the dance activity, it is anticipated that repetition of this movement phrase might result in improvements in these motor skills. In turn it has been suggested that improvements in motor skills may see an improvement in social skills (Sefen et al., 2020), thus focus on developing this area of movement can have much wider reaching affects on the child's life beyond the dance class.

References:

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>

Sefen, J. A. N., Al-Salmi, S., Shaikh, Z., AlMulhem, J. T., Rajab, E., & Fredericks, S. (2020). Beneficial Use and Potential Effectiveness of Physical Activity in Managing Autism Spectrum Disorder. *Frontiers in Behavioral Neuroscience*, 14. <https://doi.org/10.3389/FN-BEH.2020.587560>

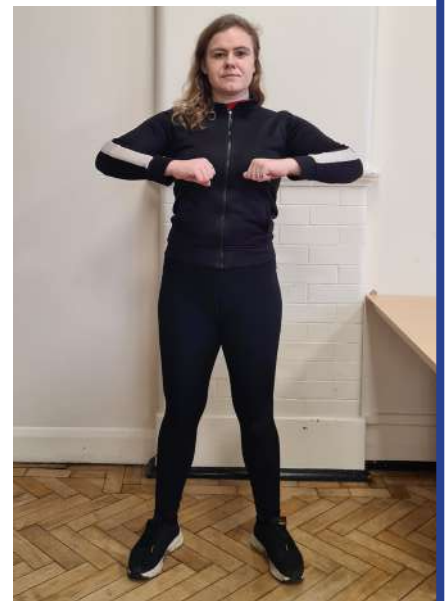
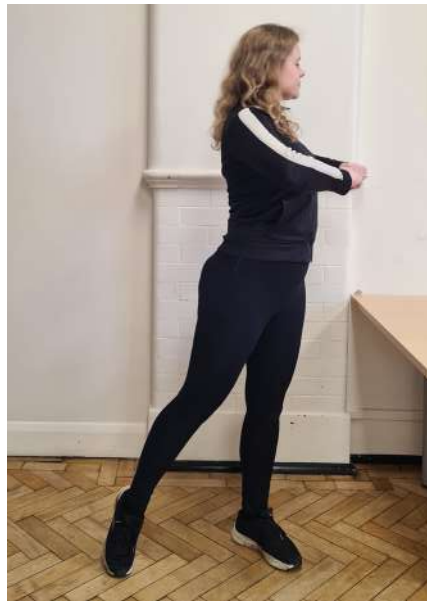
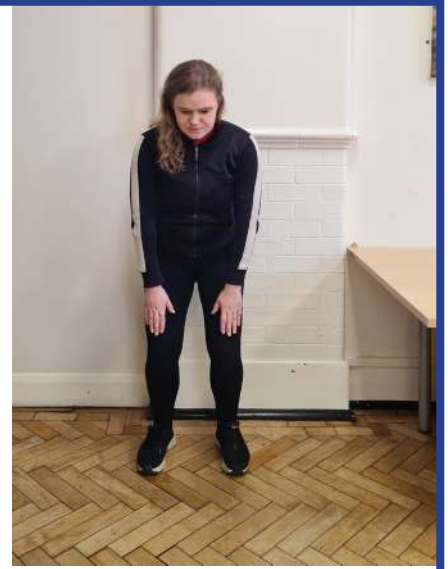
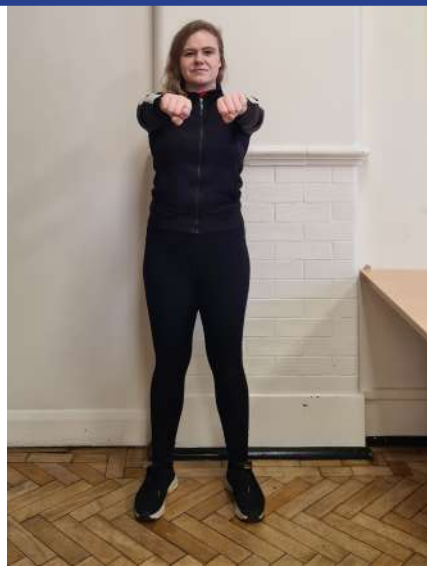
Movement Phrase

This short movement phrase helps to work on range of motion including reaching overhead as well as fully extending joints such as the elbows. The marching also helps develop co-ordination and rhythm.

Try this phrase with your favourite song, or use the playlist from this booklet. You can try the standing version or the seated version (overleaf).

Standing movement phrase





Seated movement phrase





Favourite Moves

There are lots of fun things to do in dance class. Some of these are shown in the images below.



music



loud music



quiet music



dancing alone



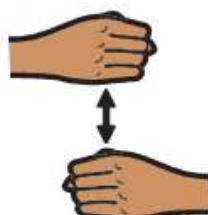
dancing with friends



fast dancing



slow dancing



actions



clap



hands up



hands down



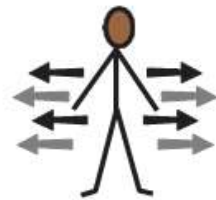
hop



Jump

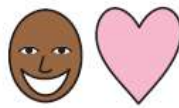


spin



wiggle

My favourite moves are....



like

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