



At Yorkshire Martial Arts, we embrace neurodiversity as one key part of our teaching philosophy. We recognise that every individual has unique strengths, challenges, and ways of learning. Our academy is committed to understanding and accommodating neurodiverse students, including those with autism, ADHD, dyslexia, and other neurological differences.

Through training and ongoing education, Mr Hewett has developed a greater understanding of neurodiversity, allowing YMA to adapt the classes effectively. We celebrate the diversity of our students and tailor our teaching methods to foster a supportive environment where everyone can thrive. By embracing neurodiversity, Yorkshire Martial Arts strives to provide inclusive and empowering martial arts experiences for all.

Access to sports and Martial Arts

Neuro diverse individuals (and this document concentrates on individuals with autism), face challenges in accessing sports and leisure activities, as their unique strengths, difficulties, and learning styles are often not adequately considered. Certain sports present more significant access issues due to the nature of the condition. For instance, football requires individuals with autism to function as team members, where the team's success depends on the ability of individuals to collaborate towards a common goal.

Studies show that social interaction, communication, and flexibility of thought; collectively known as the Triad of Impairments, are primary areas of difficulty for those on the autistic spectrum. These challenges can result in social isolation, reluctance to engage with others, and avoidance of group situations. Consequently, this can lead to depression during adolescence and beyond.

Students with autism spectrum disorder (ASD) may often prefer sports that offer structure, repetition, and minimal social interaction. There are several sports in which individuals with autism can excel, including golf, ballet, horse riding, running, and swimming. These sports provide a predictable environment and a clear routine, aligning well with the strengths and preferences of those with ASD.

Martial arts, however, strike a fantastic balance between individual and social aspects. While participation in martial arts involves some social contact, it is to a lesser extent than in team sports. This balance makes martial arts an excellent option for individuals with autism, as it combines the benefits of physical activity with manageable social interaction.

Overview

Alongside the Triad of Impairments, individuals on the autism spectrum often experience physical clumsiness (or apparent clumsiness known as dyspraxia), over-sensitivity to touch, sight, and sound, and a tendency to be easily distracted. These are features that can be addressed in martial arts our training.

Our instructors should also be aware of other indicators of autism, which include:

- Giving seemingly irrelevant answers
- Interrupting others
- Using overly formal language, which may mask their level of comprehension.
- Failing to realise that whole-class instructions apply to them.

However, it is important to note that the characteristics of autism are not solely negative. Key aspects of the condition can present inherent strengths, especially in relation to martial arts. The strengths and abilities associated with autism spectrum disorders (ASD) are often under-utilised or simply not recognised. With appropriate instruction, these strengths can be enhanced, increasing participation and success in martial arts for those with autism.

Why Martial Arts?

Martial arts are an excellent sport for individuals on the autism spectrum, offering multiple benefits that other sports may not provide or may offer to a lesser extent. Martial arts can be a place where those with ASD can flourish and excel, both in a sporting sense and socially. By engaging in martial arts, individuals with autism can develop physical skills, improve social interactions, and harness their unique strengths, leading to a more inclusive and fulfilling experience.

How we understand and embrace difficulties

Eye contact

The anxieties associated with autism can make eye contact uncomfortable and distressing for students. It is crucial for our instructors to understand that an inability to make eye contact does not indicate that the student is not listening. In fact, individuals with autism often look past or seem to ignore people or objects, and they may comprehend more effectively when engaging indirectly, such as through peripheral looking or listening.

Physical effects of ASDs

A substantial amount of our syllabus involves preparing for the next move in drills or kata. Students with autism often show a lack of anticipation when preparing for movement. Motor programming refers to an abstract representation of movement that centrally organises and controls the many degrees of freedom involved in performing an action. However, the nervous system in individuals with autism does not respond as effectively to planning or guiding movement.

Other inherent disabilities specific to karate, particularly in line work and kata, include difficulties with postural stability, varying degrees of altered muscle tone, abnormal slowness of movement, or an increase in muscular activity involving tremors and spasms. These physical manifestations of the mental impairment can result in challenges in martial arts. Our instructors take these factors into consideration when training and examining students.

Despite these challenges, practicing martial arts offers numerous benefits. It helps improve motor skills, enhance muscle memory, and increase overall physical coordination. It also promotes discipline, focus, and confidence, which are valuable for all students, including those with autism and other conditions.

Sequential learning – benefits for line work, drills, kata, and sparring

Individuals with ASD possess a remarkable ability to learn long and complex routines through sequences and visual means, such as having routines modelled or displayed in picture form. They also demonstrate acute diligence, persevering until a sequence is complete. Individuals with ASD excel with predictable routines, repetitive movements, and instructions that are precisely broken down into small steps. Those with autism can be exceptionally gifted students in the martial arts.

The effectiveness of sequential teaching and learning is reflected in our syllabus, providing a structured way for ASD students to learn and develop through a step-by-step approach. This method is extremely beneficial, as new skills are learned more easily if they are broken down into simple steps, instead of being presented all at once. Children with autism are especially liable to be upset by failure and ensuring that the child can succeed with each small stage is a good way of avoiding this problem. Therefore, as instructors, we break down techniques into bite sized chunks to aid ASD students as well as the entire class.

Beginners start with single techniques, which are practiced repetitively while moving in various directions. Techniques are broken down into component parts, with our instructors demonstrating each step and gradually linking them until students can perform the entire technique or combination or parts thereof.

When teaching sparring in Taekwondo, we initially follow set routines; step sparring, moving forwards and backwards to either attack or defend. Although the complexity of attacks and defending techniques increases as the students' progress through our grading system, the routines are still pre-set so that students learn the sequence of each movement.

While pre-set manoeuvres are excellent for basic sparring and step sparring in Taekwondo for those with ASD, teaching competition sparring can pose challenges due to a lack of flexibility in thought and difficulty differentiating facial expressions and bodily cues before an attack. As instructors, we bear this in mind and ensure that students fighting against those with ASD adhere strictly to the rules. This helps prevent distress for the student with ASD if someone throws a prohibited move, such as a kick or an attempt at a sweep when only hand techniques are allowed.

Competing also poses problems as it is "non-uniform." This is not to say that those with ASD cannot excel in competition, but the indicators of the condition need to be at the forefront of students' and instructors' minds when deciding whether to enter competition. Additionally, competition requires quick mental reactions, which can often be delayed for individuals with ASD.

Extract from Level 2 in Understanding Autism:

From the course Mr Hewett has undertaken, it states '*Provide extra thinking time so that the information can be processed correctly and use repetition if necessary. People with an ASD may process auditory information differently or more slowly.*' With this information, we can adapt classes where appropriate.

Rigidity and order

The desire for rigidity and order can produce excellent results and can serve as a foundation for our instructors when structuring lessons. However, when lesson structures change, it can lead to distress, loss of concentration, and behaviours that challenge. This formalised structure does not limit our instructors from trying new things, but the lack of flexibility in thinking and the degree of change needs to be taken into consideration. A structured lesson can also benefit those without ASD, making it a key element of our pre-lesson planning.

Our Academy values — Passion, Respect, Integrity, Discipline, and Excellence — provide all students with clear guidelines on how to behave and demonstrate respect for others. Self-control is emphasised, and unnecessary aggression is not tolerated. In conjunction with routines, these rules serve as an additional aid for ASD students to understand how they should behave.

Visual cues

Individuals with ASD often rely heavily on visual cues in their environments and appreciate order and precision. Children with ASD enjoy the predictability of lining up, preferably in grade order. However, even minor changes can cause stress for those with ASD.

Learning through visual means is often more effective for individuals with ASD when they observe other students rather than relying solely on verbal instructions from instructors. In our classes, most techniques are performed in groups and repeated multiple times. Therefore, if a student with ASD struggles to comprehend verbal instructions, they can watch other students to understand and emulate the movements. The structure of the class, especially during line work and group activities, supports this process and can be utilised to enhance the learning and experience of individuals with ASD during training.

Students tend to find it easier to follow other students rather than the instructor. Typically, instructors teach and demonstrate movements while facing the class; however, ASD students often find it challenging to copy movements in a "mirror image" manner.

Using more than one sense simultaneously can pose challenges for individuals with ASD. These difficulties are heightened when movements are demonstrated alongside verbal instructions, requiring students to process information through both vision and hearing simultaneously. Therefore, it is important to address one sensory mode at a time. Presenting multiple stimuli simultaneously increases the likelihood that a child with autism may miss parts of the lesson.

Language and communication

The language and communication challenges faced by individuals on the autistic spectrum are widely known. A common characteristic is their literal understanding of language.

Individuals with ASD may also have difficulty understanding jokes. Facial expressions and tone of voice can also affect them, sometimes causing them to feel reprimanded even when they are not. Such situations can lead to students taking extended breaks from training due to the distress caused. Therefore, it is important for us to consider the tone of voice when communicating with students with ASD.

However, the language of karate for example is literal. Unlike English, which is known for having words with multiple meanings, Japanese words used in karate have only one clear meaning and are not open to interpretation. This aspect can provide significant benefits for all our students.

The words are descriptive, and they represent the action, for example: “you are performing a 'rising block' or an 'age uke’”. It helps to create a mental picture of what you are trying to achieve.

We can say 'mae geri'; 'mae' means front and 'geri' means kick, so there is a clear description of what to do.

Some of our Karate Instructors teach using a combination of English and Japanese. They often use both languages consecutively, almost forming one phrase, such as “age uke rising block.” This method is overwhelmingly preferred by students with ASD, and we aim to adopt this approach uniformly for all instructors when teaching karate.

However, even slight variations in language used by different instructors can lead to confusion, as one technique may be described in multiple ways, for example, ude uke and soto ude uke both refer to 'outside block.'

Further issues can arise when instructors provide lengthy explanations. Therefore, our instructors will avoid giving an instruction followed by a description of how the technique can be used in numerous ways for different purposes. If any additional context is necessary, the original instruction will be repeated at the end to reinforce memory recall.

Other factors to consider.

Sensory issues can significantly affect students with ASD, so in our Academy, where possible:

- Keep visual distractions and noise to a minimum, especially from the seating area.
- Use plain walls and not have bright coloured posters and text around the Academy.
- Ensure lights are not too bright.
- Ensure that any music is background only.
- Certain parts of uniform, such as belts can cause difficulties. Belt coloured wrist bands are available on request. Sensory wrist bands can help children with autism relax, focus, and calm down due to a scenario or event. It helps them grasp objects with decreased fear and discomfort, ultimately helping them train naturally.

Conclusion

Martial arts are an accessible leisure activity for students with ASD. Many of the difficulties experienced by these students stem from a lack of understanding of autism among instructors and parents/carers who may not be well-educated about autism. However, making moderate adjustments to how we instruct students with ASD can have profoundly beneficial effects. By increasing our understanding of the condition and adapting our classes to leverage the inherent strengths of students with ASD, positive outcomes can be realised for our instructors, students, and parents/carers alike. We at Yorkshire Martial Arts ensure equal opportunities for everyone to train, which may involve modifying the syllabus and the way lessons are conducted, provided these changes are safe, practical, and not detrimental to the planned class, to foster inclusivity. Please note, students should show suitable capability of adaptability under group instruction. We do not provide individual instructor/student training during classes.