INCLUSIVE SPORT CONFERENCE

Presentation Transcript

Topic: Fostering an active lifestyle for children with disability
From evidence to practice

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Good Morning everyone, my name is Micheal. Firstly, thanks to the organisers for the invitation to speak at this inaugural Inclusive Sport Conference. Today, I'll be sharing about the importance of physical activity in children with disability, and also to discuss some strategies to get them active from a young age.

Now, this will be the outline of my presentation.

Now regular participation in physical activity can provide various health benefits and this actually similar for children with and without disability or special needs. Benefits can include improvements in physical, physiological, psychological functioning, as shown from the list on the left.

Now, in children with disabilities, aside from the general health improvements, they stand to gain benefits specific for their impairments. Regular participation and exercise can optimise their physical function, manage functional decline and reverse any de-conditioning specific to their impaired mobility. Improvements in both their function and health can prevent the development or control the progress of chronic disease and mediate or reduce the psychosocial impact of disability. Engagement in activities supports the development of life skills and can lead to improvements in functioning and independence. Through group activities, socialisation can be enhanced and can facilitate and improve overall inclusion in both family and community life.

This general and disability specific health benefits can lead to improved overall functioning, social emotional wellbeing and enhance a child's overall quality of life.

So, the next question here is, how active our children with disability?

Before we discuss that, we first need to know or understand what are the recommended physical activity for children living with disabilities. Now this is from the recent WHO Physical Activity guidelines published in 2020. Now, the guidelines stipulates that in children and youth with disabilities, they should aim to firstly accumulate at least 60 minutes of Moderate to Vigorous Physical Activity (MVPA) across the week, with most of the activities being aerobic based. In addition to that, on three days per week, they should engage in vigorous intensity activities, as well as those that strengthen the muscles and bone. Now, last but not least, they should limit the amount of time spent on sedentary activities, particularly time spent on recreational screen

So how active are our children with disability? Now, children and youth are less physically active and spend more time engaged in sedentary behaviour than their typically developing peers. There are numerous evidence showing that only 16% to 24% of children with disabilities meet the recommended guidelines of 60 minutes of moderate to vigorous physical activity as compared to 55% in typically developing youth. Now, similar to typically developing youth physical activity participation in girls are shown to be less than boys with a higher proportion of informal or unstructured activity participation as compared to formal activities. Now, what this shows is that children and youth with disabilities are not immune to the secular trends of inactive lifestyle. With reduction in physical activity across all intensities, and an increase in time spent on sedentary behaviours.

Early intervention matters, we need to get children to get active from a young age. This is because childhood is a period of physical and cognitive development and participation in play, recreation as sport has a positive impact on the overall growth and development and helps to optimise their long-term health. It is also a critical period when children and youth develop self-concept, attitudes and behaviours that they will likely transfer into adulthood. Now, it is a time when habits are formed, and habits both from the child and also from the family lifestyles are formed and open to changes and adaptations. And when these are sustained, it can have a long-term impact on the overall functioning and health in adulthood. Therefore, early investment in their health is important.

Now, to help us understand why children are not as active, we need to know that physical activity as a behaviour can be influenced by various factors, including intrinsic and extrinsic factors. This is a conceptual framework developed by a group of researchers in Netherlands, the aim is to guide the promotion of physical activity participation in individuals with disability.

Now if we look at the model, we can see that intention is the central determine of physical activity participation. Without the intention to participate in certain structural behaviour, the actual activity behaviour will not take place. Now a person's intention to be active can be influenced by two factors including personal factors and environmental factors. Now, I'll use this framework to help us understand what are some of the common factors influencing activity participation in children with disabilities.

This is a simplified illustration showing both the environmental and personal factors that can influence a child intention and subsequent physical activity behaviour. I'll highlight some of the common barriers to physical activity and later on use a case study to share strategies which can facilitate engagement and participation.

First, we will look at common personal factors, health condition. Now the status of a child's health is an important determinant of physical activity behaviour. The severity of health condition can result in a higher degree of disability, which can influence subsequent physical activity participation. This is what we know of as a vicious cycle of inactivity and health, and some of these health issues if they're not timely or intervened early enough can persist through to adulthood.

Now, the lack of skills or abilities can have varying impacts on a child's activity participation. Now, if a child does not have basic movement abilities, such as ability to run, to hop, to bounce or throw a ball, he will have lesser options for activity participation. Now, this basic movements used are the building blocks to sports. And an analogy to this is how we focus on the importance of teaching ABCs to children to help them to learn, to read and write and also to develop their literacy skills. Without a basic skill sets for movement, a child may have a lower chance of success in their sporting pursuits and can lead to frustration and subsequently resulting in the loss in confidence of his/her own physical abilities. Now, for younger kids, the lack of skills may not be so much of an issue. However, as the child gets older, the skill get widens, especially when the sporting activities become more competitive. It is hence very crucial that we expose them to this movement skills from a young age, build and improve their physical illiteracy early and give them the competence, the confidence and motivation to be more active. Help them develop this mentality of I can, I believe, and I want to be active.

Programmes need to cater for different special needs and to create a conducive and positive learning environment to encourage physical activity participation. And one type of programme may not be suitable for children with different levels of disabilities. Now, the lack of developmentally appropriate learning environment, for example, not adapting teaching methods or not matching activities to their disabilities can potentially affect their skill development and reduce opportunities for mastery of the skills. For sporting activities, the lack of adaptive rules can lead to negative experiences affecting the enjoyment and adherence to the programme. Therefore, the success for any exercise programmes hinges on the ability to adapt teaching methods, modify activities to include children with different disabilities.

Now, a child's ability to cope is vital, especially in children with developmental special needs, because commonly they have issues such as attention deficit, which can affect the attention to task and they have a reduced ability to process instructions, especially in a group environment. Now, this can have significant downstream effect potentially affecting the learning process and subsequently activity engagement experience. Now similarly, unforeseeable triggers may result in resistance to participation, quite commonly when they're exposed to new activities, new environment or new people. Not to address this is important for providers or caregivers to seek or provide segregated opportunities that is individual programmes to work on this social behavioural issue before slowly integrating them into group activities from facilitator led, to independent group activities.

Now, every child with disability is different. They have different needs and reasons for engagement in physical activity. And very importantly, they all have their unique preference for what type of activity or sports or exercise they enjoy doing. It is very important to provide them with autonomy to choose what enjoy doing as this can actually encourage adherence. However, very often some children may have unrealistic thoughts about their abilities. And therefore, it is important that as parents and caregivers, we help to manage some of these expectations, discuss with them and provide alternative activities which the child can choose from.

Next, we're going to be looking at environmental factors.

First is access and opportunities, programmes need to be affordable and accessible, and most importantly, equipped with disability friendly equipment and facilities. Now, the development of inclusive gyms by SportCares is a prime example of that. Now there was a hardware bit, the software bit is also equally and if not more important.

For this, I'm referring to programmes and the staff managing and running such programmes. Firstly, programmes for children with disabilities needs to consider and cater to the different age groups, the different developmental level and also most importantly consider for the different levels of disability or special needs. Staff who are managing these programmes or providing these activities needs to be trained to understand the different level of disabilities and as the as discussed previously, demonstrate ability to adapt learning and to modify activity so as to create a positive learning experience for the child.

Often, activities and programmes for children with disabilities occurs as a ‘once off’ or in isolation. Now, what happens with such a setup is the lack of progression opportunities for children. Now ideally, programmes need to be integrated into an inclusive pathway with consideration for structure progression. This will create opportunities, for a child to progress from segregated or individual activity to integrated activities to independent participation in leisure, mainstream activities, social competitions right across to engagement in competitive sports. In summary, it is important to develop affordable and accessible programmes which are integrated into structured inclusive pathways. Now once these are available, it is vital for organisations and stakeholders involved to communicate and create awareness to the community so that they are aware of such programmes existing.

People make a huge difference. The attitudes of people close to the child with disabilities, from families, to peers, to healthcare professionals and the broader community is central to the engagement and participation of physical activity.

It starts within the family and this is where parents play a vital role. It is important for parents, number one to be a role model, modelling an active lifestyle for the child. And they should actively find and create opportunities for child to be active and to facilitate activity for engagement with the child.

For healthcare professionals, the key lies in the three Es, to Educate, to Empower and to Engage parents and caregivers. Know the guidelines and ask or discuss physical activity at every opportunity, and where possible, prescribe and encourage physical activity participation and refer to available intervention, resources and programmes.

Now for children, it's about being with friends, and doing things that they enjoy, and therefore positive peer relationship fosters participation. Of course, a lot of this will require awareness and education from a policy level, fostering positive societal attitudes towards disabilities from acceptance to inclusion. Nonetheless, on the ground at the programme level, it is important for providers to adapt activities and consider for the integration of children with and without disabilities.

Now, as discussed earlier, programmes shouldn't be happening in isolation. For individuals in the broader community, it is important to collaborate with different stakeholders, working hand in hand to establish partnership, developing adaptive exercise programme, integrate them into inclusive pathways and most importantly, train staff to be able to manage them. I guess a platform like this conference is ideal, where the community actually comes together to learn, to share and to network. And hopefully from this meeting like this, we can start some meaningful conversations on how we can build a more inclusive and active environment for children with disabilities.

In summary, there are two key factors that influence intention for activity engagement for children with disabilities. It is important to understand address these common barriers so as to facilitate a positive and sustainable physical activity experience.

Now, I will share about this case that we've been saying and use this to illustrate some of the strategies that we have put in place to foster and create opportunities for this child to be more physically active. Sam, not his real name, is currently 19 years old, with a history of developmental disability and also with gross motor delay. He first presented to us at the age of 14, when he was attending mainstream school and subsequently transited to vocational schools.

Now overall, due to his underlying ADHD or ASD traits, he is impulsive, highly rigid at times, chatty, and to the point of being socially inappropriate. Now, when he first came in, he was assessed to have poor fundamental movement skills, and was not able to perform simple local motor skills such as skipping and hopping, even at the age of 14. Now, due to his inactivity, his exercise tolerance is decreased with very low aerobic fitness and muscular strength. He gets upset with unfulfilled demands and often testing boundaries, and as such can be deemed as a high risk, to exercise or in a public gym setting.

Now let's bring this model back and look at how we facilitated activity engagement and participation for Sam and his parents.

As I mentioned earlier, when he first presented to us, he has poor fundamental movement skills and as a result of his learning ability require longer learning time. Teaching methods needs to be adapted with emphasis on skill breakdown and repeated exposure to skills in order to optimize his learning and acquisition. Now, he has acquired all fundamental movement skills, and has basic proficiency for basic sport skills and in fact, in the recent two to three years, we have progressed into more complex exercises such as resistance exercise, which is an activity which has always enjoyed and wanted to do. He is now able to complete this safely and independently with minimal supervision and he is now actually doing exercises independently at home, at the fitness corners and even participate in community-based activities such as community runs, and all these are supported facilities by his parents.

Now, as mentioned previously, teaching methods need to be adapted for Sam and teaching delivery often changes. We have used different teaching methods including visual to reward system and have adapted teaching instructions in both individual and group exercise environments. He has made huge progress, and now require minimal adaptation in teaching methods, and is now able to understand basic instructions adhering to identified and mutually agreed rules in the gym.

Sam has poor attention to task and gets easily distracted, especially when there's a new person in the gym, he will want to engage and speak to him, but the lack of social boundaries often resulted in socially inappropriate advances or communication. Now within the programme itself, we worked on having him understand the difference between demand and request and actively provided him with the space to engage in social behaviours and to learn from his mistakes. All these were closely facilitated by our staff and often end up with a follow up conversation to discuss and most of the time inappropriate behaviours so he can learn from them.

When first presented, he is definitely unsuitable for exercise in a public gym environment. I guess this is mainly due to his impulsive and risky behaviours such as picking up weights randomly in the gym, and his social inappropriateness. Like I mentioned earlier, there has been improvements and he is now able to perform exercises independently and socialise in the facilitated environment. We are currently working to find suitable programmes to transit him to the community. However, the challenge is really finding one that can manage stimulation, and also finding one that can provide a high level of guidance and support for him. It is largely still work in progress. I guess, this is where we feel the need for stakeholders within the community to come together to collaborate, to develop and integrate progress for children and youths like Sam.

Now, his parents have been one of the key drivers to the success we are seeing in Sam today. They believe and make time for physical activity, often sourcing and creating opportunities to keep him active. They will bring him to the fitness corners, create homemade equipment, actively engage him in community events like charity runs, etc. He has had negative experiences with programmes in the past which has caused some distress to him. I guess, this highlights the important point, on the need to train and develop staff to have the capacity and ability to deliver the programme, to manage such individuals and most importantly to create a positive and meaningful experiences for them. Now overall, in the five plus years that Sam has been with us, he has made huge significant progress. And our next goal for him is to source and transit him to community-based programmes and also to encourage more independent functioning.

Now to conclude, children with disabilities are not immune to the secular trends of inactivity. Inactivity can have a negative impact on their health and function. Strategies to facilitate activity engagement needs to consider for both personal and environmental factors. We need to invest in their health early,

build their physical literacy from a young age to develop this mentality of I Can, I Believe and I want to be Active, be it for health or as part of sports development in future.

With that, I'll thank you for your time.