

**Presentation Transcript**

Topic: The perceptions of swimming opportunities and the way forward for Inclusive Swimming Framework in Singapore for persons with disabilities: A Mixed Methods Study

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Stefanie: Hi everyone, I'm Stefanie. I'm part of the Disability and Inclusion team within SportCares of the Sport Singapore that execute the recommendations of the Disability Sports Master Plan. A little background myself. I've been involved in the disability sport since 2006, and have been part of the ASEAN Para Games Organising Committee hosted in Singapore during 2015. I also volunteer locally and in major games, such as the ASEAN Para Games and Asian Para Games. Together with me, I have Wei Ren, Li, and Elsa, the Singapore Poly graduates of the Diploma in nutrition health and wellness program. It is our pleasure to be part of this conference to share our preliminary findings of this research.

Here's the snapshot of the content that we'll be presenting today. I'll take you through how did this project actually came about. And, Wei Ren will share more of the research objectives, gaps and the methodology. Li and Elsa will cover the findings. I will share our next steps and the team will share their key learnings and reflections.

Wei Ren: So, Miss Stefanie, I would like to find about how this research idea actually came about.

Stefanie: Oh, Wei Ren actually back into early 2019, SportCares was invited to submit a proposal to the United States US Embassy for a grant. I was then having a chat with one of my colleagues on the possibilities of the project ideas, and we went to Miss Kerry from the US Embassy with the ideas that we've had. And fortunately, our proposal was accepted for the Adaptive Swimming Sport Visitor Programme. I was co- leading the team for this uniquely designed exchange program by FHI 360 and the US Department of State. Together with my colleagues, swim coaches, volunteers and partners, we embarked on the trip in May 2019 to learn from many of our US counterparts in Texas and Cincinnati of the culture at work. As part of the project ideation, we were in discussion and identifying the gaps that was missing in Singapore. As the conversation went on, we found that many caregivers, parents of individuals with disabilities struggled to find suitable coaches and a support structure in swimming for their children with disabilities. And henceforth we proposed the possibility of having a swimming framework for persons with disabilities in Singapore, the inclusive swimming framework (ISF) in short.

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Wei Ren: Okay, so now we understand better as to how this idea actually came about. Indeed, this is what drew us in the most because it was a new area that we have not worked in, and we all deeply enjoy sports.

These are our objectives. In order to help establish the need for this framework, we needed to determine which factors encouraged or hindered participation in PWDs and use appropriate recommendations from stakeholders to create a desired and suitable swimming framework in the future.

There are three main groups of disabilities: sensory, developmental and physical. Each with various specific disabilities under its umbrella. As this is a pilot program, we did not limit ourselves to any specific group of disabilities to ensure we obtain a wide spectrum of information.

Moving on to the research gap, the need for project arises from the lack of a national swimming framework of people with disabilities along with a lack of local research in swimming for PWDs. Majority of current swimming programs only cater to the mainstream, as well as PWDs who already have a background in swimming instead of having any foundational swimming programs for PWDs. Without a national swimming framework, there will be insufficient number of swimming coaches coaching PWDs and limited access for PWDs to swim. Hence, the reason for a project to fit in this research gap.

Moving on to methodology, the overall project follows the Bronfenbrenner's Social Ecological Model. Using the six levels, we were able to support the structure and focus on the study. Onto the next slide.

The mixed methods approach was selected to be used in this study, starting with quantitative to identify some of the barriers and facilitators, then moving on to the qualitative in-depth interviews for understanding more in depth on the barriers and facilitators. And for the focus group discussions was to share with some stakeholders their opinions of some of the recommendations.

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Overall, these were the demographics of the 231 participants of our study. There are 45 PWDs, 108 parents and caregivers and 78 swimming coaches. Some points that we could infer was that the majority of parents and caregivers were female with 89 as compared to male with 19. As well as the majority of coaches were male with 58 as compared to the female with 20. I would like to add on that there are also three more FGDs conducted, but due to the timeline for the project, we were not able to include them in this presentation.

Stefanie: So, would the team like to share some of your findings?

Wei Ren: Oh yes, guess what we found about the benefits of swimming. Firstly, improvements in muscular function and movement. The turbulence and pressure of fluid molecules can challenge balance or assist movement through water and provide pressure on the lungs, respiratory muscles and other inner organs. Causing improvement in coordination, respiration and other functions such as eating and speaking. Next, the buoyancy of water acts as a counterbalance to the force of gravity, which results in the reduced impact to the joints. Swimming also has many therapeutic effects on individuals in terms of socialization, relaxation, quality of life and self-perception. It allows individuals to relieve stress through socially acceptable manner. The social life can also be enriched interaction through people and friends met at the pool. Being physically active can also contribute to the feelings of health and wellness, increasing quality of life overall. Lastly, the high viscosity of water provides gradual resistance along the full range of movement. This makes overstress exercise nearly impossible. Furthermore, this property of water allows for greater progression of resistive exercises in the pool.

Elsa: So Li, what are some facilitators and barriers that we have found in our study?

Li: Good question Elsa. For more results, we've gathered the key facilitators and barriers. Some facilitators include a desire to swim, socialization, and welcoming staff. While some barriers include a lack of motivation and assistance, social stigma, and more. I'll now go into more detail on these points. These results will be presented in the order the socio ecological model.

For the individual level, PWDs and parents often choose to learn swimming, due to a desire to swim and for the physical health benefits. Parents have mentioned, that their children took a liking towards swimming, and PWDs, feel that there are multiple health benefits of swimming, such as an improved immunity, strength and breathing. However, the top two barriers faced are unaffordable class fees and a lack of motivation. PWDs brought up the fact that the class fees are a concern, and some view that they do not have enough push to learn.

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Next, at the interpersonal level, interviewees feel that swimming is able to increase socialisation, as it gives them the opportunity to talk to others. However, PWDs face the barrier of requiring assistance from their caregivers to get to their lessons. If their caregivers are not free, they may not be able to go and swim.

Moving on, the main community facilitator is adaptable and welcoming staff. Interviewees have mentioned that if staff are able to anticipate for certain kind of disability, it will make things easier and in turn encourage more PWDs to swim. However, the main community barrier is that society in general is still not entirely accepting of PWDs. As a swimming coach has mentioned, society in general is not open and receptive, which makes it a challenge for coaches to take on PWDs. Parents have also mentioned that this social stigma has caused them to be afraid to bring our kids to the pool in fear of disturbing others.

For the organizational level, we found that the environment should have minimal distractions and hazards. In addition, parents have suggested that the learning environment should also be fun. This will catch the interests of the students as they will ensure that it's not just hard training. The organisational barrier faced is a lack of accessible inclusive facilities. In the swimming facilities, PWDs have stated that there are insufficient wheelchair accessible bathrooms, and that these bathrooms may not have handles or grip bars, which will make the experience more dangerous for them.

Next, at the policy level, parents feel that current efforts and research to develop an inclusive swimming framework is good. For the policy barrier, there's a lack of publicity on current policies. Parents stated that they are unaware of current policies, even though they try many ways, such as searching online or asking swimming coaches. This shows that maybe there's a gap on how their policies are publicised, which has room for improvement.

Moving on, we will be sharing on some key points found pertaining to swim coaches, including tips for swimming classes, support for coaches and possible resources.

Firstly, from our findings, 70 out of 78 swim coaches interviewed were willing to have or join a support group with other swimming coaches. This is a significant majority. Next, we did an analysis of association and found that sufficient support through infrastructure is linked to the confidence of swimming coaches in teaching PWDs. This shows that coaches do need support.

Hey Elsa, do you have any tips for swimming classes?

Elsa: Yes, I do. And I'd like to share with you some useful tips that will get it from our research and findings that are a great help to our swimming program. Well firstly, I would like to share some tips that are useful prior to, or in the beginning of a swimming class. And it's important to plan your classes with some objectives in mind. Some of which are water safety, should be taught because this includes safe entry and exit from the pool, mental and physical adjustments to water such as breathing control and recovery skills. Next, it's good that students are familiar with the pool surroundings and feel comfortable in their learning environment. Prior to class, setting expectations can also be helpful to have a better understanding and give the students a goal in mind to accomplish. Recapping on what's learned in the previous lessons is also beneficial to give a refresher for the students. Next, from our literature review and findings, a suggested parameter for the curriculum was gathered. An overall duration of about 40 minutes to 60 minutes, and one to two times a week has shown to be beneficial. But in our local context, maybe once a week may be more realistic as some PWDs are actually students and will most likely have school on weekdays. The overall program can last about six to 12 weeks. However, due to differing characteristics or various disabilities, this curriculum is only suggested and should be adapted to meet the needs of various individuals.

Elsa: Next, during the swimming class, an example is people with sensory disabilities may not be able to visualize the lanes. Thus, bringing them to count the number of strokes can be helpful for them to understand where the end of the pool is. Coaches should also try to describe the surrounding noises using clear visual and verbal cues through descriptive speech and actions to make the students feel more at ease. It is also important to ensure that visual consent is given by students before any physical contact by the coaches. This can reduce any misunderstandings. And, in a group setting, it would be more beneficial for coaches to privately give feedback instead of singling them out in class. Last and most importantly, coaches should have extra attention to safety, especially in pools.

Now at the end of a swimming session, it is good that students are able to give some feedback on either the coaches teaching methods or the program itself. This can be done through surveys using a five point Likert Scale of having a big smiley face to represent very good, and a sad one to represent room for improvement. A good tip is to make it anonymous so that individuals are more comfortable giving feedback. As mentioned previously, is not just good to recap at the start, but also at the end for a whole and deeper understanding. Overall, it really comes down to trust and companionship between coaches and students. Some may need more time and attention. Thus, coaches to try to remain understanding throughout.

Wei Ren: Awesome tips Elsa! What about the resources and pools for teaching in the pool?

Elsa: Yes, there are many resources in the market and I would like to share with you some of them.

The first point, sensory profile is a parent report questionnaire to gain insights regarding their child's sensory preferences, audio, visual or physical touch, and swimming goggles have also been used in studies to stimulate tunnel vision for attentional control. Other resources such as floatation devices and visual aids are also good and beneficial. Now, through our research, we have also found some methods that were effective in teaching swimming. Parents and caregivers have a direct effect on students learning experiences and attitudes. So through platforms such as WhatsApp, coaches should update parents on what they do and learn on a weekly basis, so that reinforcements can be done at home and the parents can feel more at ease in letting their child continue swimming. Apart from parents, with the rise of technology, another way of learning can be through animated videos, or videos modeling swimming strokes. These have shown to attract and ease the students into learning the strokes properly. Well lastly, PWDs, on a regular basis may have some barriers engaging with other students. So through partnerships and training it has shown to improve their social interactions, and as a support can help to also build the students courage in learning swimming.

Elsa: Now, apart from interpersonal, environment is also very important. The environment should not hinder PWDs in learning or moving around, but instead to help them and aid them. They should be able to move around independently and be comfortable and feel safe with the security of the lifeguards.

Elsa: Now, to end off this session, I would like to talk about starting young. There are many benefits physical, psychological and social. Physical can help to increase self-control and increase your cardiovascular health and physical strength. This may be from moving a wheelchair to a pool. Psychologically, it can help boost self-confidence and self-esteem. This can help them to push the boundaries to explore new abilities, and also can help to overcome fear of water and its depth. Social aspects like communication skills and social skills can be beneficial and also for family to be in the pool together swimming. Now I'd like to pass over the time to Miss Stefanie.

Stefanie: Thank you Elsa for sharing those tips with our fellow coaches. Based on our results, it appears that having a roadmap in the development of the ISF is crucial in ensuring that the steps taken will foster a longer term successful results within the sport. This is a forward principle of considerations with the ISF. Firstly, everyone should have the opportunity in



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swimming and to be water safe. Every Singaporean should have access to and be given the opportunity to learn swimming and water safety skills and knowledge. Enabling them to lead a safe, healthy and active lifestyle in, on and around water. Secondly, entry and progression may occur at different stage and rates through the framework. The intention of the framework is to support swimming participation at any life stage. It encourages those who have little or no access to a swimming and water safety education to participate and to achieve independent of age. Thirdly, structural programs are essential. However, water play and recreation at home water parks are also equally important. Additional experiences and exposure to different environments will enhance skills, applications and understanding. Opportunities to participate in additional experiences and water activities will not only improve skills, but promote the benefits of an active and healthy lifestyle starting from young, like what you guys have mentioned. Last but not least, the framework is adaptable to support achievement. The person-centric nature of the framework allows adjustments to be made to the pace, level, and the volume of content to match the needs of different individuals and enables them to achieve.

Wei Ren: So Miss Stefanie, what comes after this project?

Stefanie: Well Wei Ren, given your principal considerations in mind, here are some of the efforts that we are currently working in the pipeline. So, we are currently exploring a range of resources to be made accessible centrally in the InclusiveSport.sg website, which will be developed to support understanding, implementation and communication of the framework as we continuously add to our pool of resources. We are currently increasing our efforts in developing capabilities of various stakeholders through continuous education and engagements to support the framework for a longer term. This is done through partnerships with local and overseas expertise to find relevance. We will also pilot research with one to two special schools to investigate the efficacy of swimming programs for PWDs. In conclusion, this research only marks the start the future of the inclusive swimming framework, will be a long term work to enhance the current gaps. But this will not be possible without key stakeholders like yourself, coaches, educators, parents, caregivers, and those with disabilities. So come forward and join us in this journey as we progress into our next phase of the framework. At the same time, here's a question to ponder. Are you willing to embrace anyone with disabilities in your swimming program, even at the foundation level, to give them this opportunity for their very first step? Because we hope to realize the goal that we have set out in providing every individual with disabilities with opportunities in swimming to reach further into their potential. Our next milestone will be here much faster if every Swim School, Swim Club, Teachers, Educators, every one of you are on this journey with us. So, maybe the team would like to share your key learnings and takeaways and reflections of this project.

Li: Sure. Firstly, we would like to give special thanks to Miss Stefanie for giving us this special opportunity. We will also like to thank Mr. Paul for his guidance, the interns from Sports Singapore, and all the participants for their valuable time and contributions throughout this project. Wei Ren as mentioned by you, we were drawn towards this project as it was a new area for us. As we began to do more background research, we became more aware of the local research gap and strongly believe that the groundwork will need to set a strong foundation for a future inclusive swimming framework, and normalized swimming for PWDs. We feel that this project has broadened our horizons and gave us invaluable experiences in this field. It also changed our perspective on inclusivity in a society, which will aid us in our future studies in health care.

Li: With that, thank you for your attention.