

TOWARDS AN INCLUSIVE SOCIETY THROUGH SPORTS

# INCLUSIVE SPORT CONFERENCE 2021

DATE & TIME  
16 TO 18 MARCH 2021  
9AM - 5PM



Host



Ministry of Culture, Community and Youth



Co-host



INCLUSIVE  
SPORT  
CONFERENCE  
2021

# Fostering an active lifestyle for children with disability

From evidence to practice

Inclusive Sport Conference, 16-18 March 2021

*Michael Lim | Head & Principal Clinical Exercise Physiologist | Sports Medicine Service, KK Women's and Children's Hospital*



## **OUTLINE**

- Physical activity & health in children with disabilities
  - Are children with disability active enough?
  - Need to focus on promoting physical activity during childhood
- Barriers and facilitators to PA participation
- Strategies to encourage PA participation

# PHYSICAL ACTIVITY & HEALTH IN CHILDREN WITH DISABILITIES

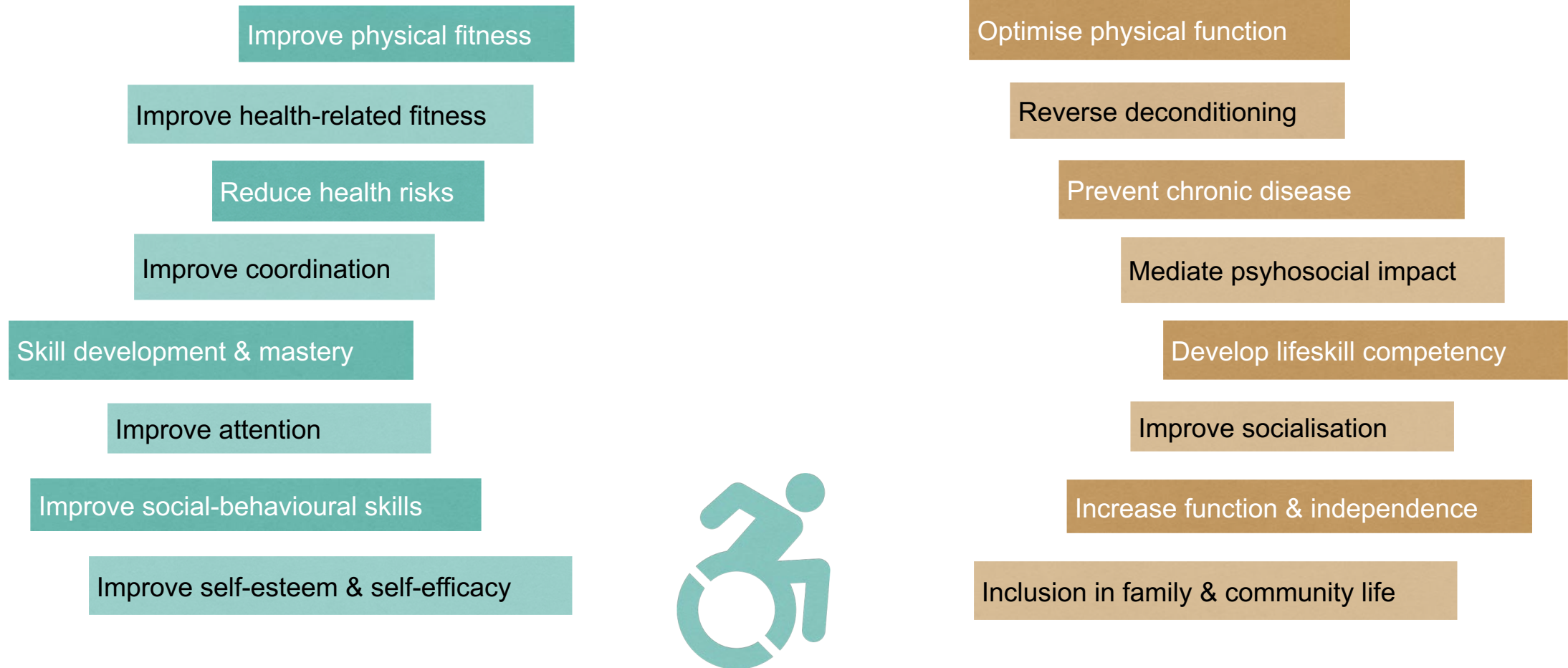
## Importance and benefits of an active lifestyle

- Improve physical fitness
- Improve health-related fitness
- Reduce health risks
- Improve coordination
- Skill development & mastery
- Improve attention
- Improve social-behavioural skills
- Improve self-esteem & self-efficacy



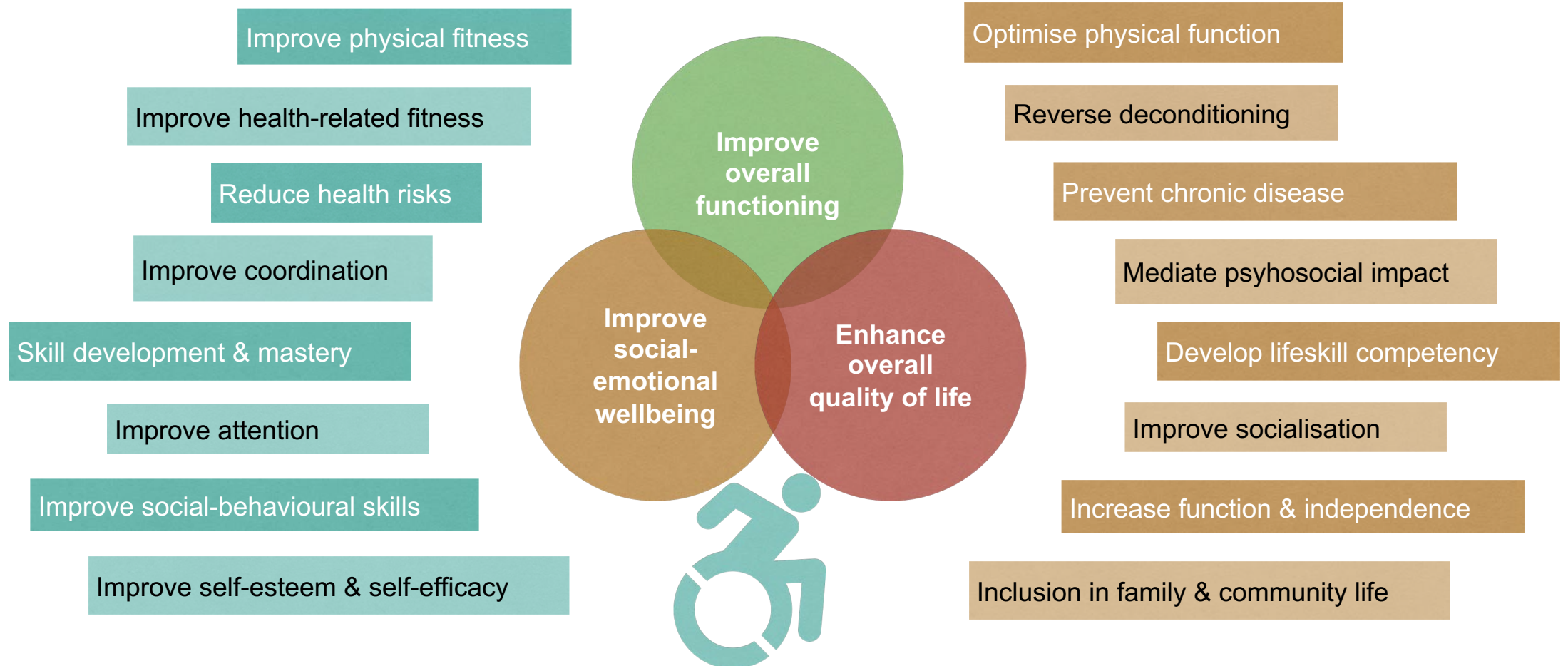
# PHYSICAL ACTIVITY & HEALTH IN CHILDREN WITH DISABILITIES

Specific benefits for children with disability / special needs



# PHYSICAL ACTIVITY & HEALTH IN CHILDREN WITH DISABILITIES

Specific benefits for children with disability / special needs



# **How active are our children with disability?**



# PA GUIDELINES FOR CHILDREN WITH DISABILITIES

## WHO Physical Activity Guidelines 2020

At least



**60** minutes a day



**moderate- to vigorous-intensity physical activity** across the week; most of this physical activity should be aerobic.



On at least



**3** days a week



**vigorous-intensity aerobic activities**, as well as those that **strengthen muscle and bone** should be incorporated.



**LIMIT**

**the amount of time spent being sedentary**, particularly recreational screen time.





# ARE CHILDREN WITH DISABILITY ACTIVE ENOUGH?

## Levels of PA participation in children with disability

**Youths with physical and sensory disabilities**

*16-24% meet MVPA*

*Girls < Boys*

*Informal > Formal activities*



**Typically developing youths**

*55% meet MVPA*

*Girls < Boys*

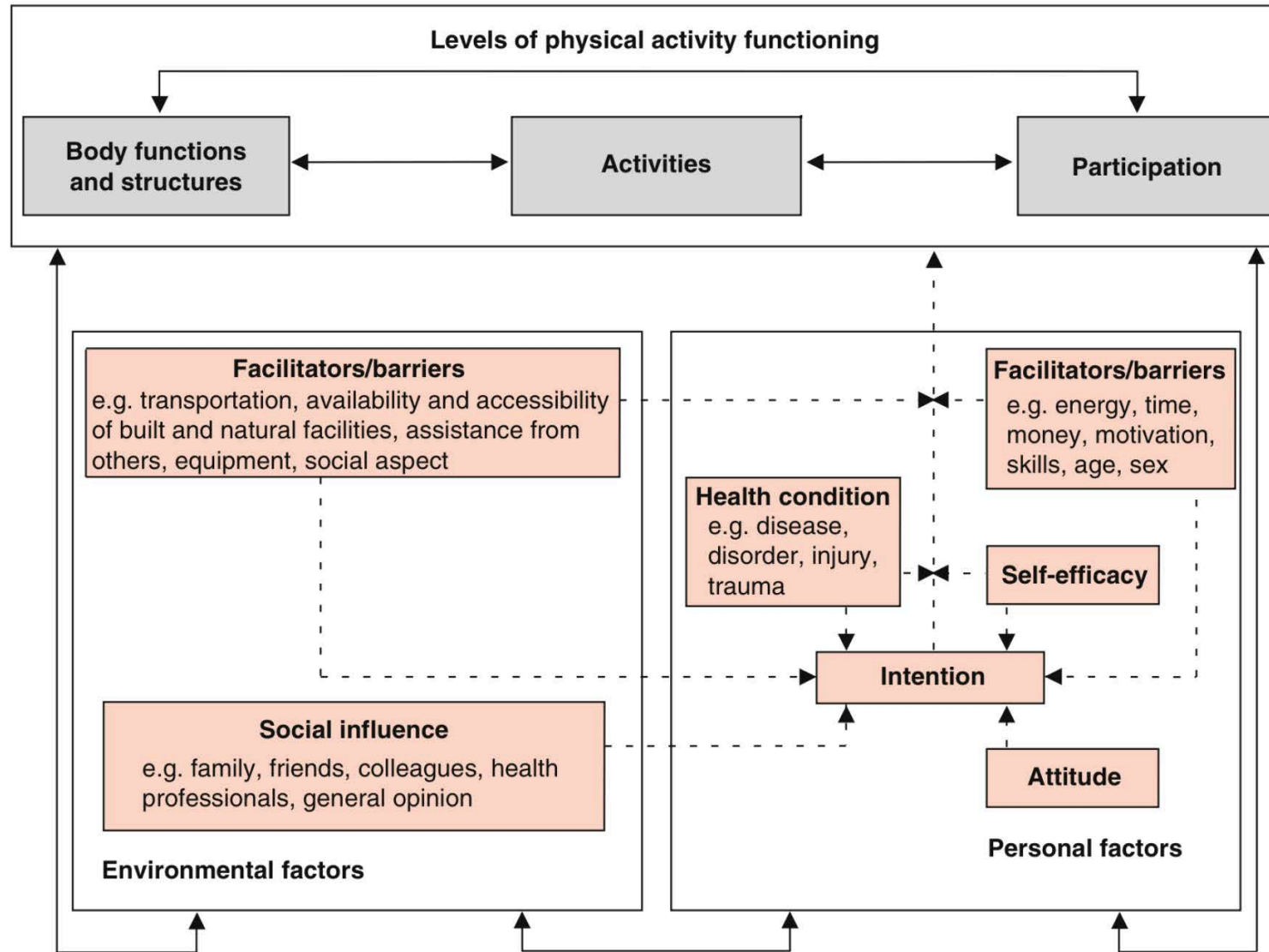
**Children and youths with disabilities are not immune to the secular trends of inactive lifestyle!**

## NEED TO FOCUS ON PROMOTING PHYSICAL ACTIVITY DURING CHILDHOOD

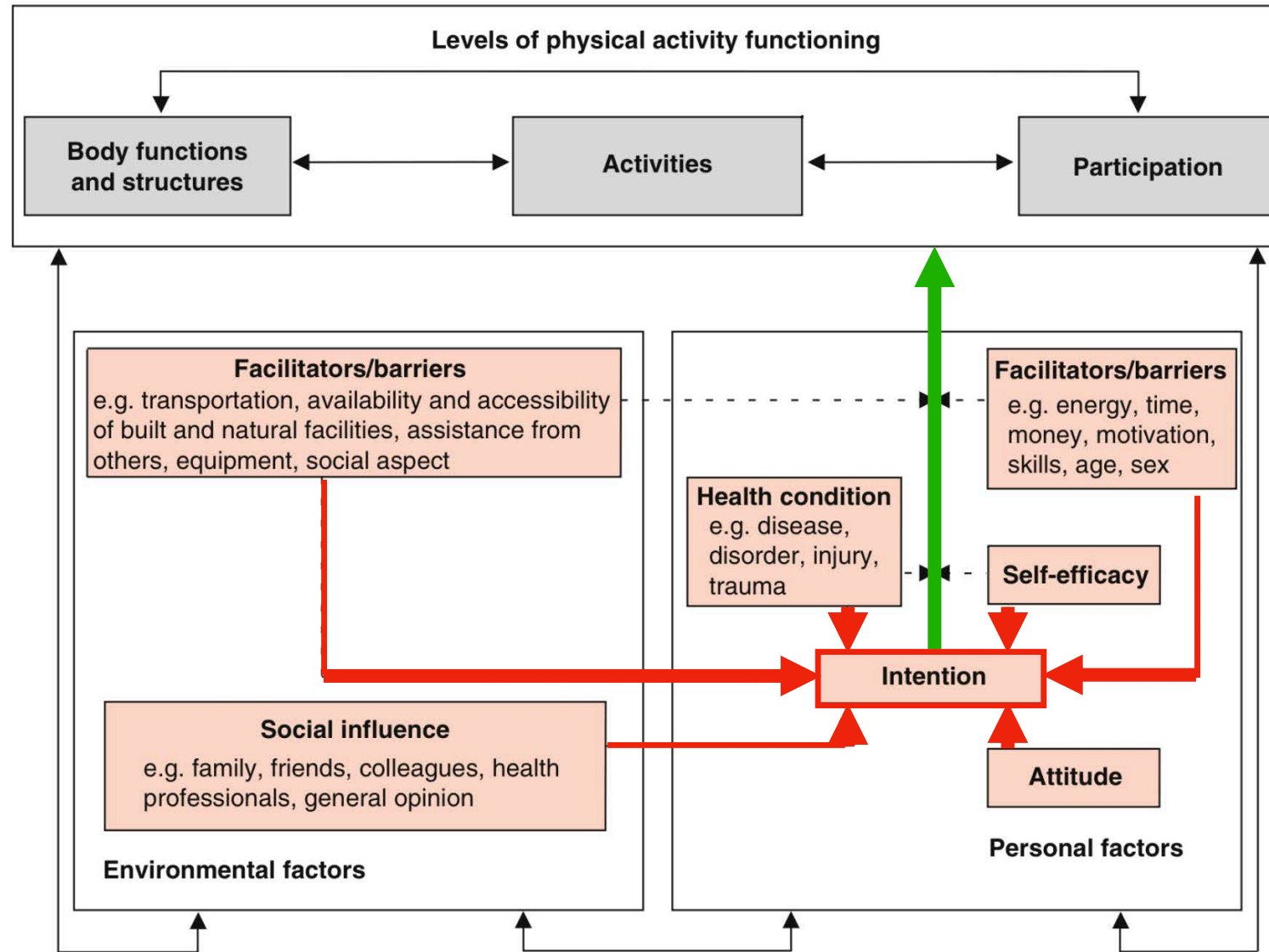
### Early intervention matters!

- Childhood is **period of physical and cognitive development**
  - Participation in play, recreation and sport has a positive impact on **overall growth and development and optimises health**
- A **critical period** when children and youth **develop self-concept, attitudes and behaviours** that they will likely transfer into adulthood
  - A time which child's **habits are formed** and **family's lifestyle habits are open to changes** and adaptations
  - Long term impact on functioning and health in adulthood
- **Early investment in their health is important!!**

## TOWARDS AN INCLUSIVE SOCIETY THROUGH SPORTS



## TOWARDS AN INCLUSIVE SOCIETY THROUGH SPORTS



**TOWARDS AN INCLUSIVE SOCIETY THROUGH SPORTS**

Personal factors

Environmental factors



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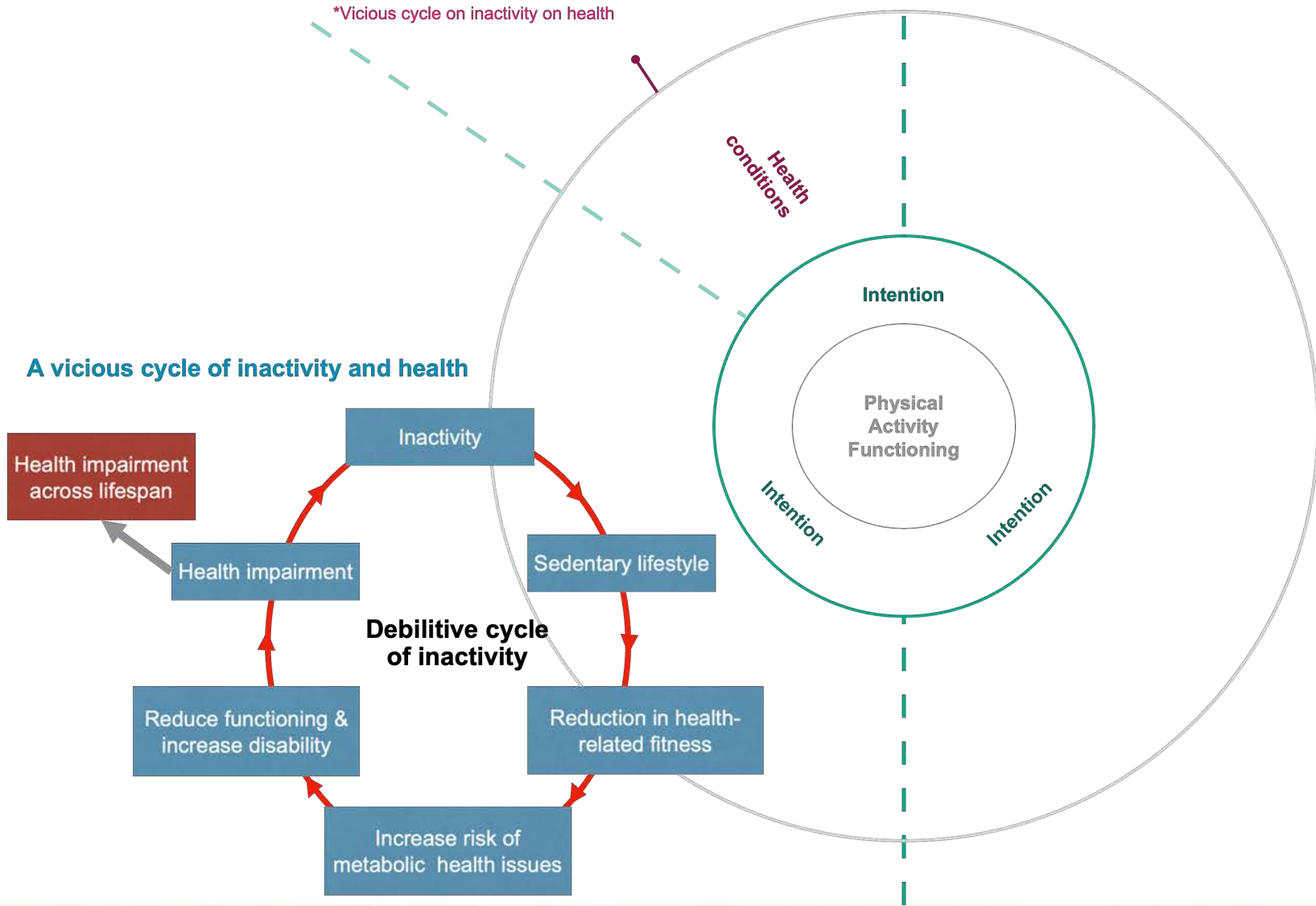
Personal factors

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## Key determinant of PA behaviour

- Severity of health condition -> degrees of disability -> PA participation

\*Vicious cycle on inactivity on health



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## Lack of skills / ability can have varying impacts

- reduce options for physical activity participation
- sense of frustration -> loss of confidence

**\*Build physical literacy from a young age. Skill gap widens as child gets older, when sports become more competitive**



Body Control	Locomotor	Object Control
Agility Balance Coordination Speed Rhythm and more	Running Jumping Swimming Wheeling Striking Skating and more	Sending Receiving Dribbling Striking Kicking and more

**Physical literacy**  
is the...

**I want!**  
motivation  
knowledge  
valuing

**I can!**  
physical  
competence

**I believe!**  
...to be  
**active for life**

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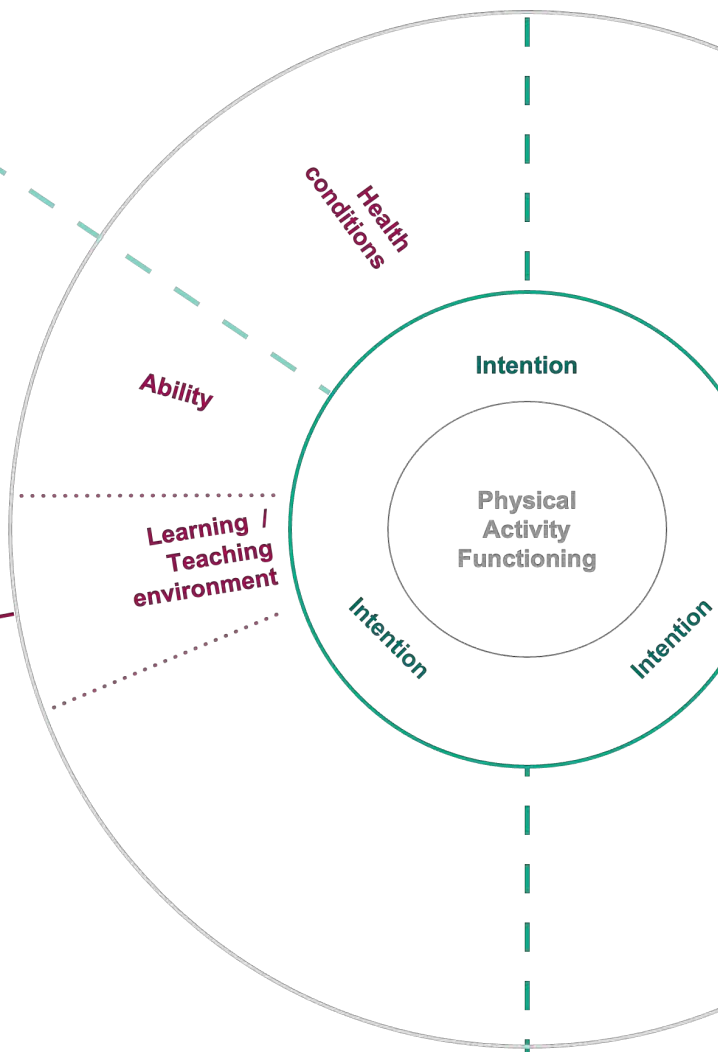
Personal factors

Environmental factors

## One size does not fit all

- lack of developmentally (disability) appropriate learning environment can affect skill development, **reducing opportunities for skill mastery**
- lack of adapted rules can lead to **negative experiences**, affecting enjoyment and long-term adherence

**\*Success hinges on ability to adapt teaching methods, modify activities to include child with disability**



Arrival at school		
1		Take off coat <small>(scarf, mittens, boots and hat)</small>
2		Open Backpack
3		Take out work
4		Take out lunch
5		Hang up coat
6		Hang up backpack

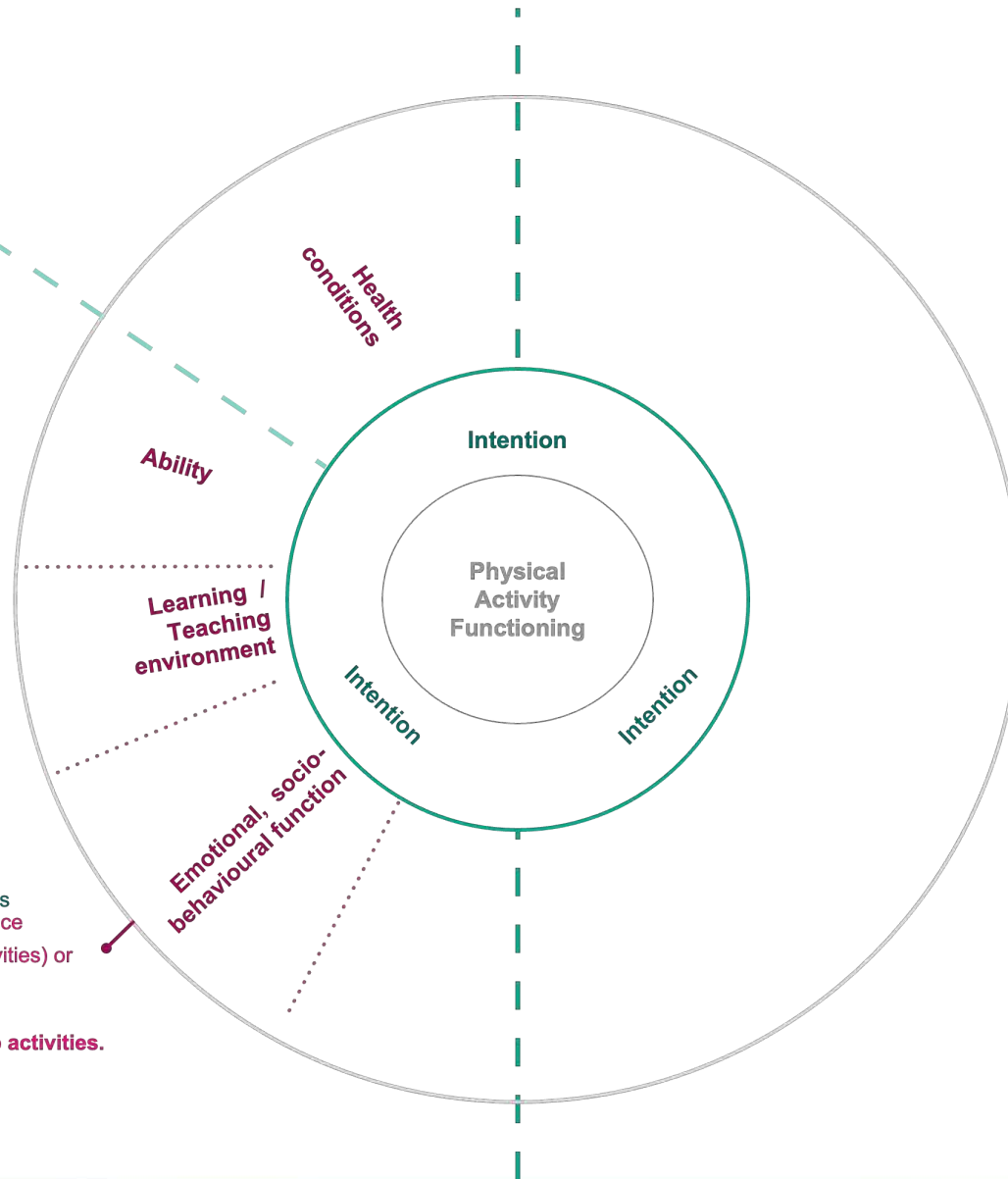




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## Child's ability to cope is vital

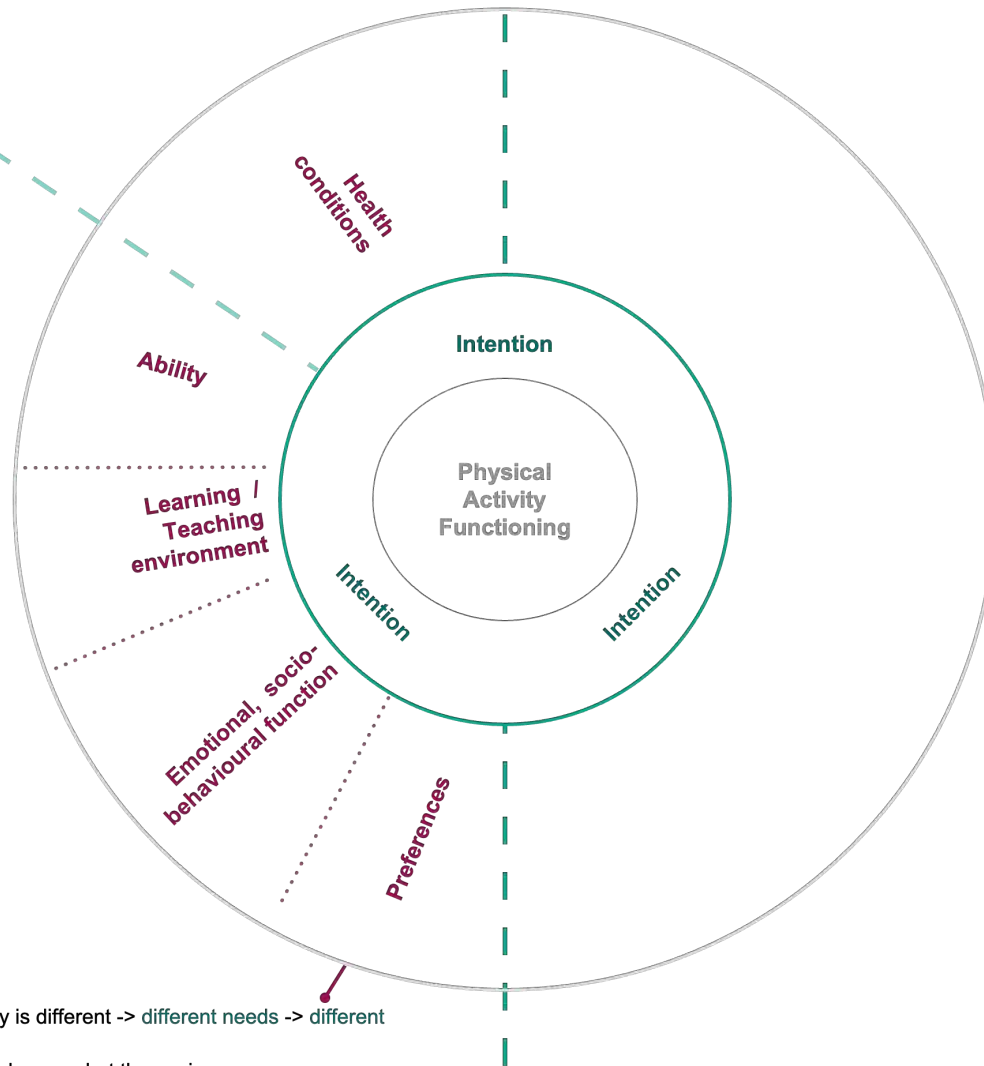
- attention deficit -> reduce attention to tasks, inability to process instructions -> affect skill development / engagement experience
- unforeseeable triggers -> resistance to participation (new activities) or cooperation

**\*Provide segregated activities before integration into group activities.**

# TOWARDS AN INCLUSIVE SOCIETY THROUGH SPORTS

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## Choice matters

- every child with disability is different -> different needs -> different preference of activities
- give them autonomy to choose what they enjoy

**\*Parents key role: manage expectations based on their abilities**

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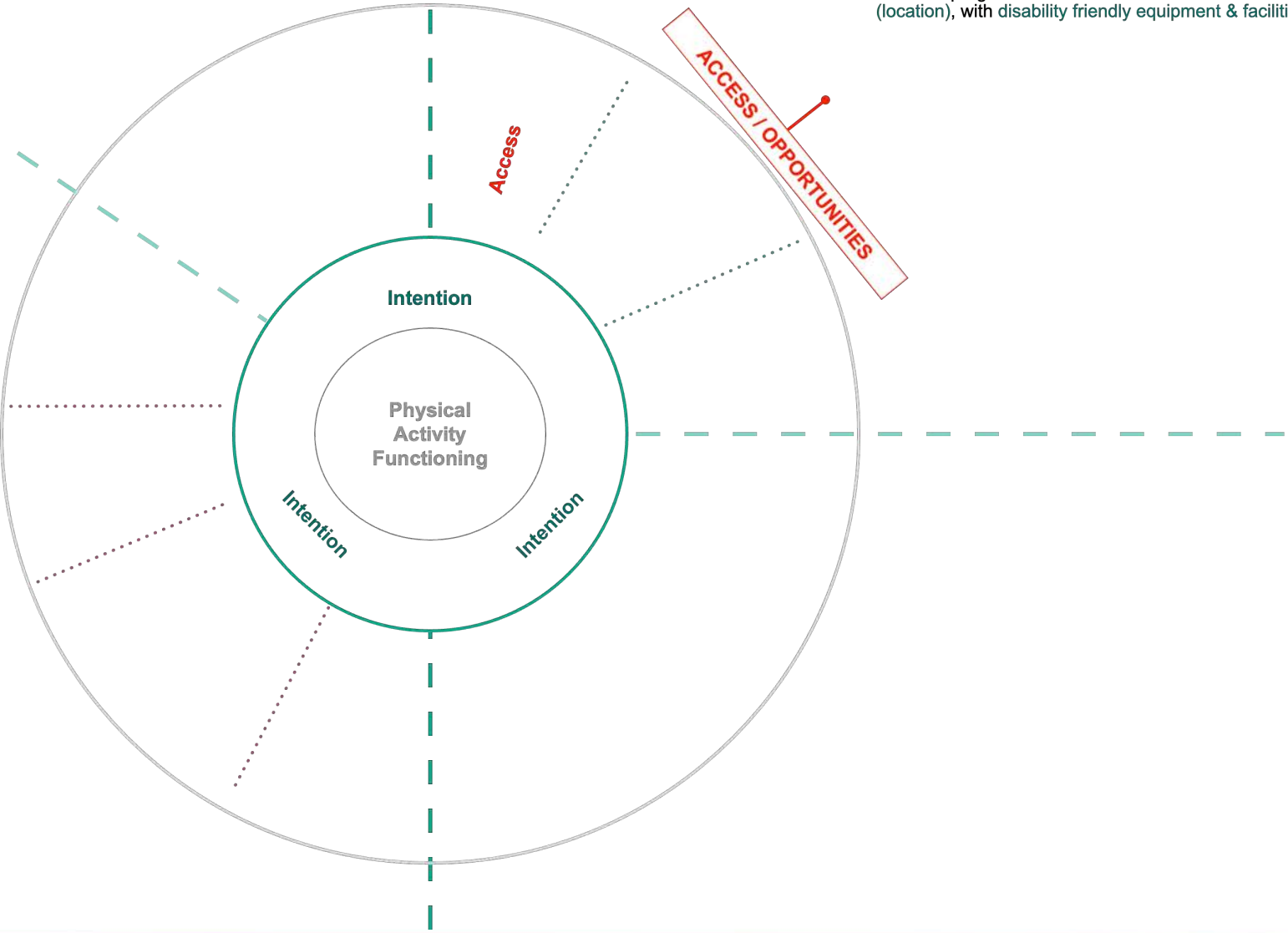


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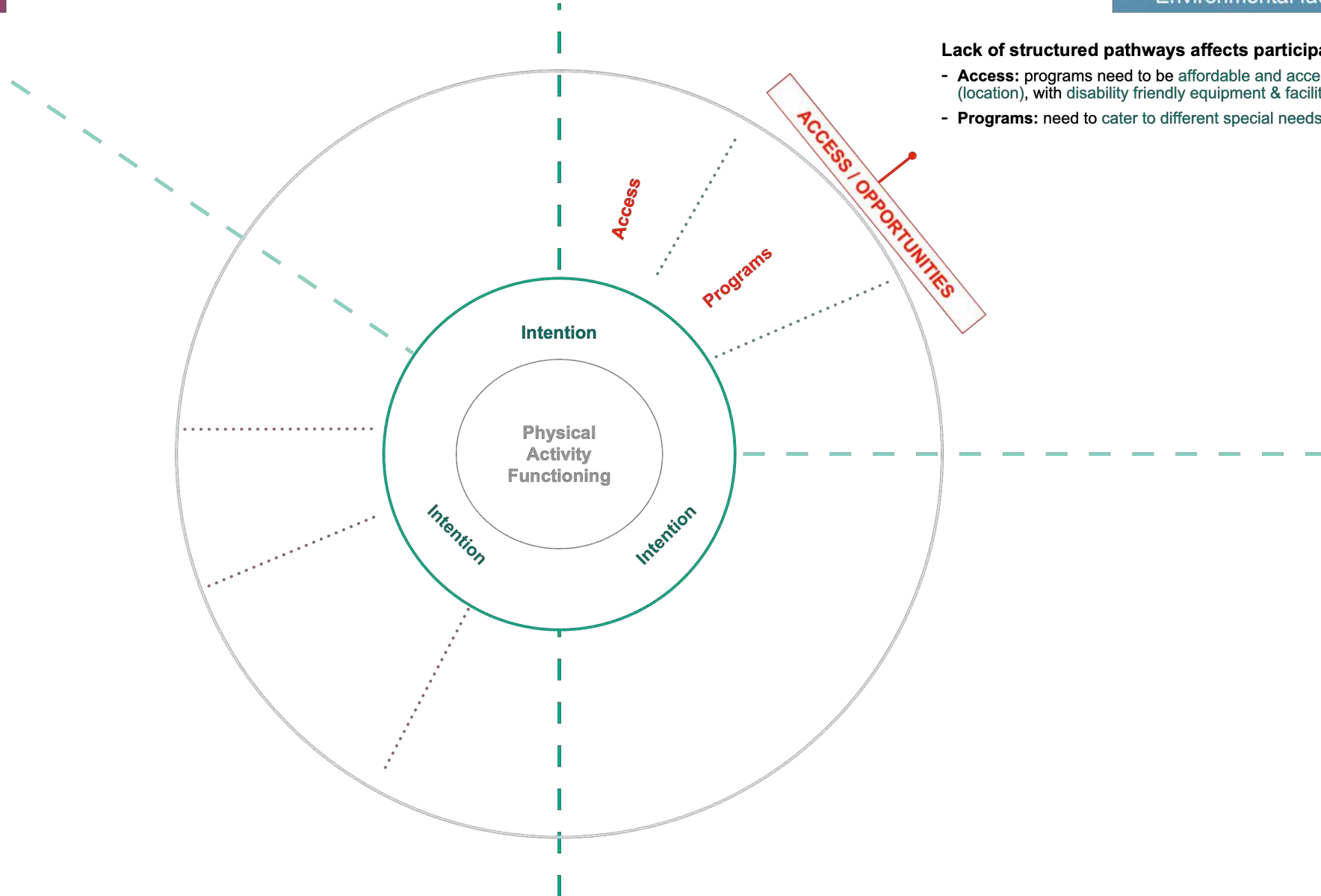
**Lack of structured pathways affects participation**  
- **Access:** programs need to be affordable and accessible (location), with disability friendly equipment & facilities



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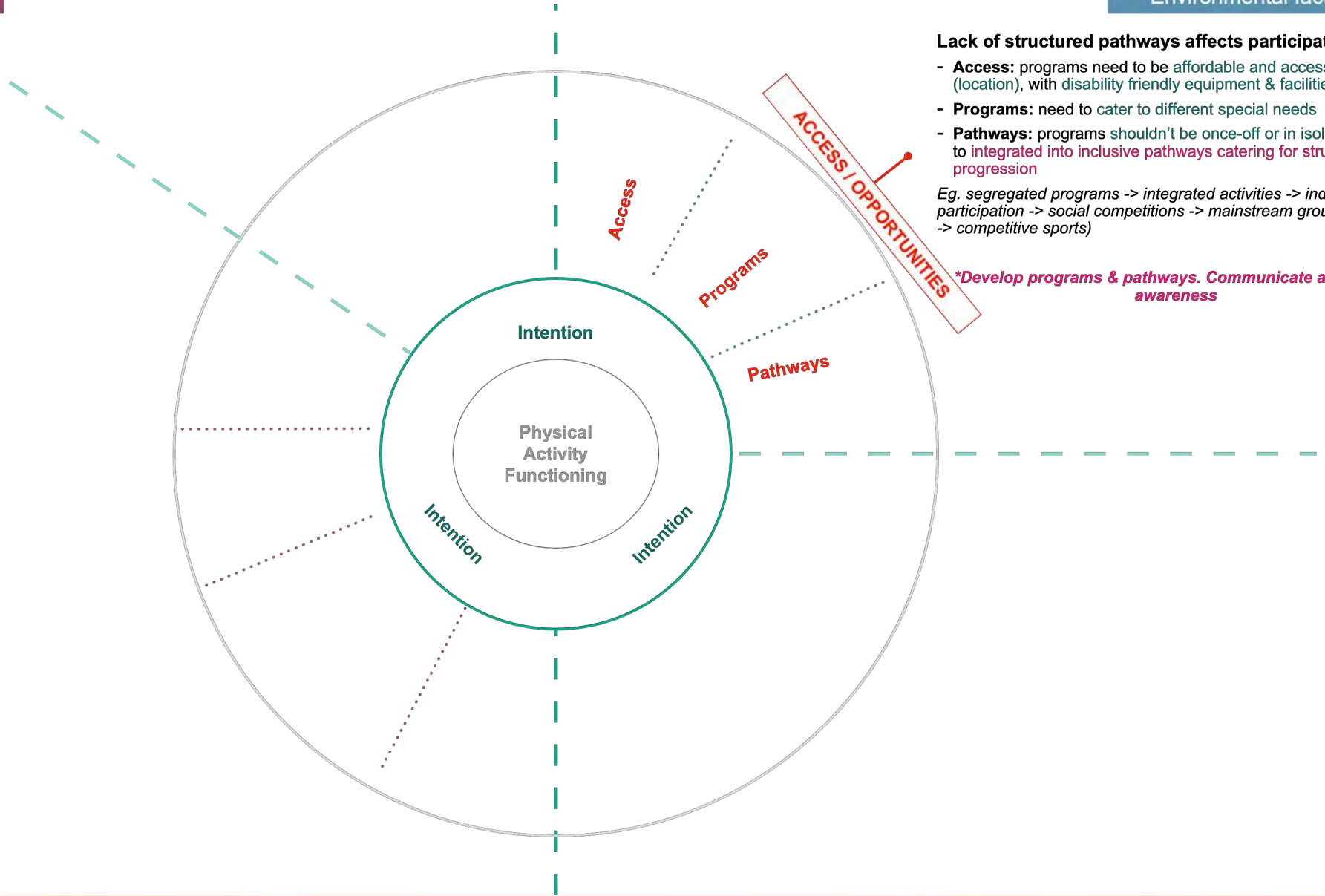
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- **Programs:** need to cater to different special needs
- **Pathways:** programs shouldn't be once-off or in isolation; need to be **integrated into inclusive pathways catering for structured progression**

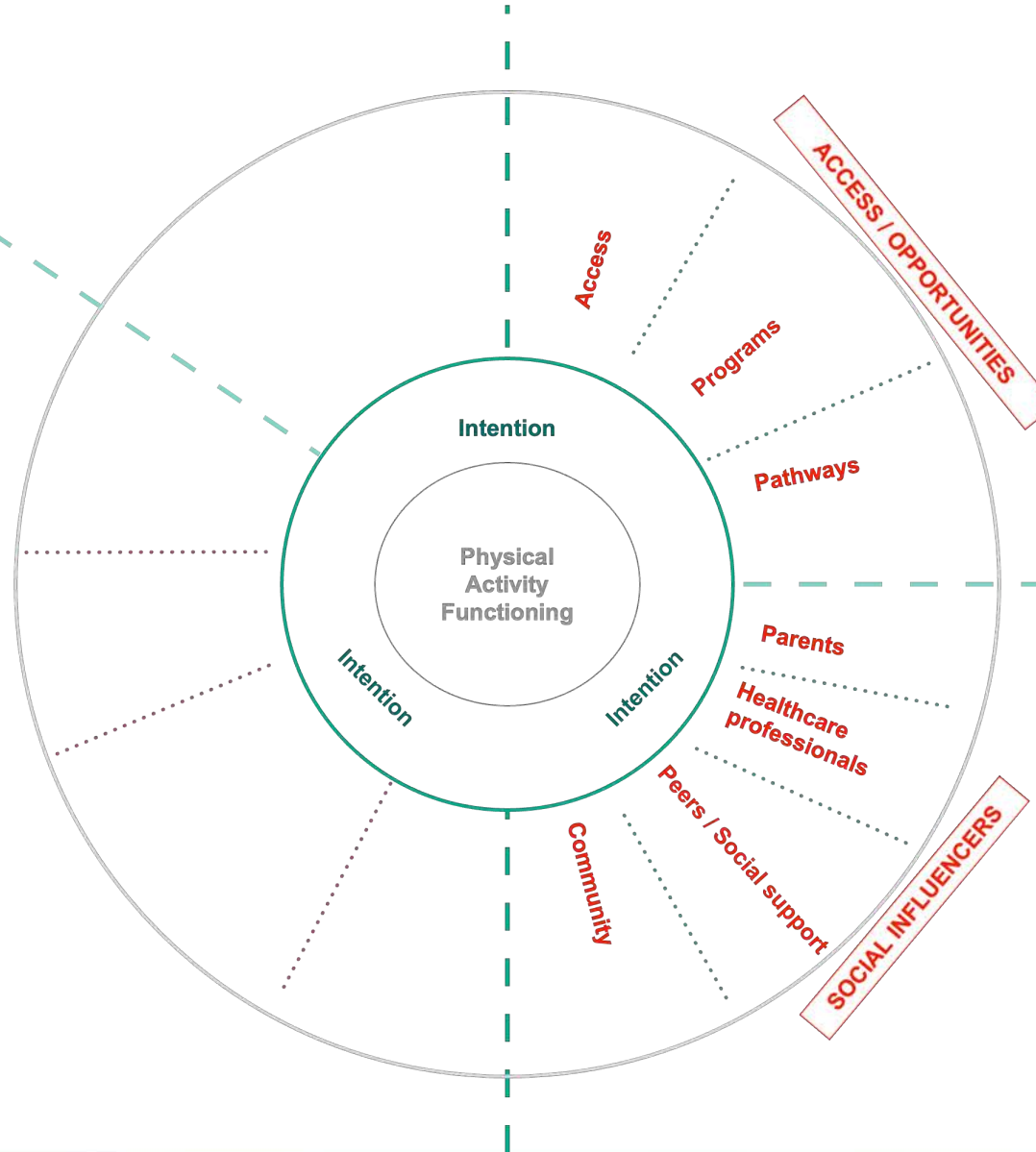
*Eg. segregated programs -> integrated activities -> individual participation -> social competitions -> mainstream group activities -> competitive sports)*

*\*Develop programs & pathways. Communicate and create awareness*

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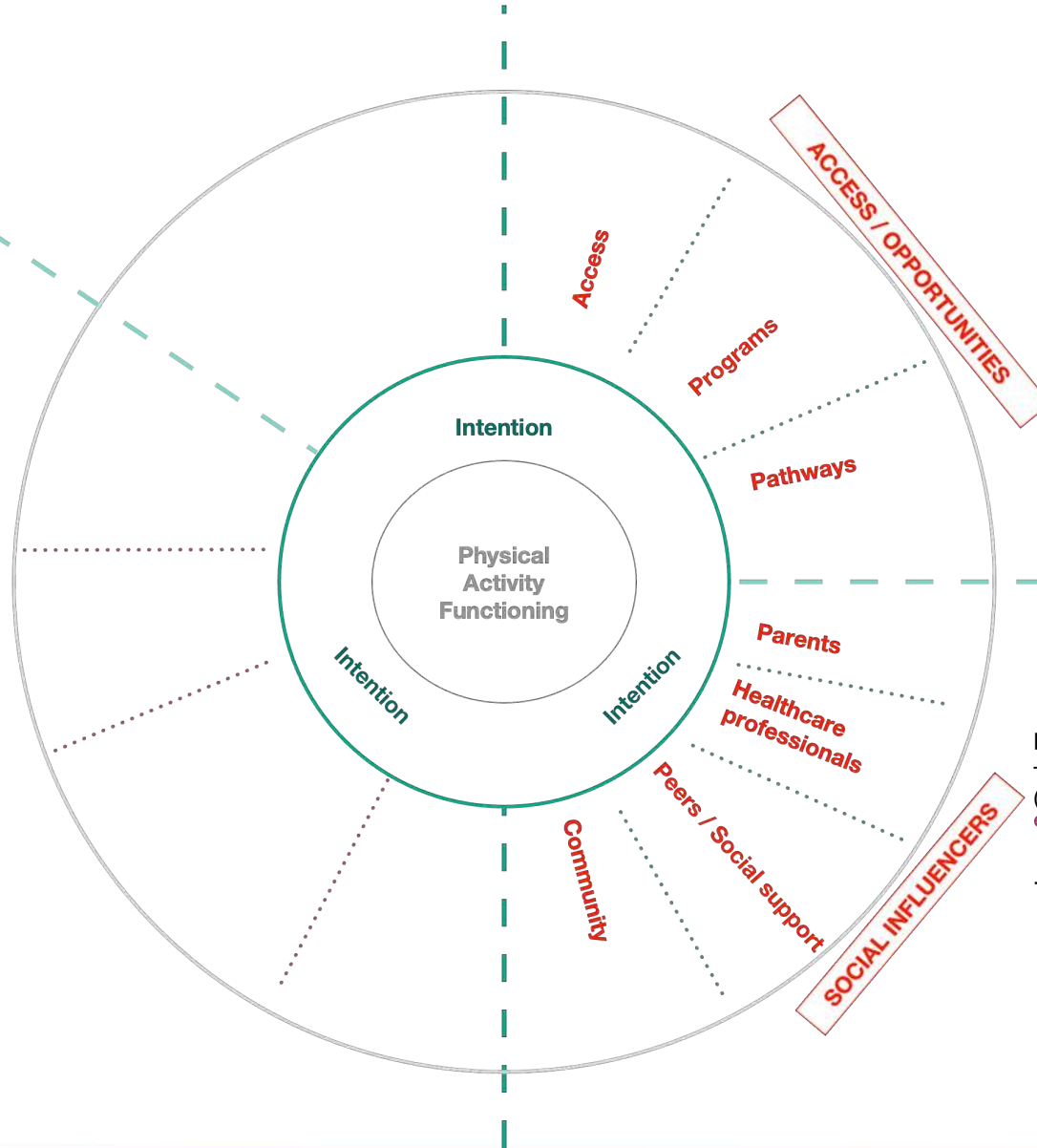
## People make the difference

The attitudes of people close to children with disability (e.g. families, HCPs, peers, community) -> central to engagement and participation in physical activity

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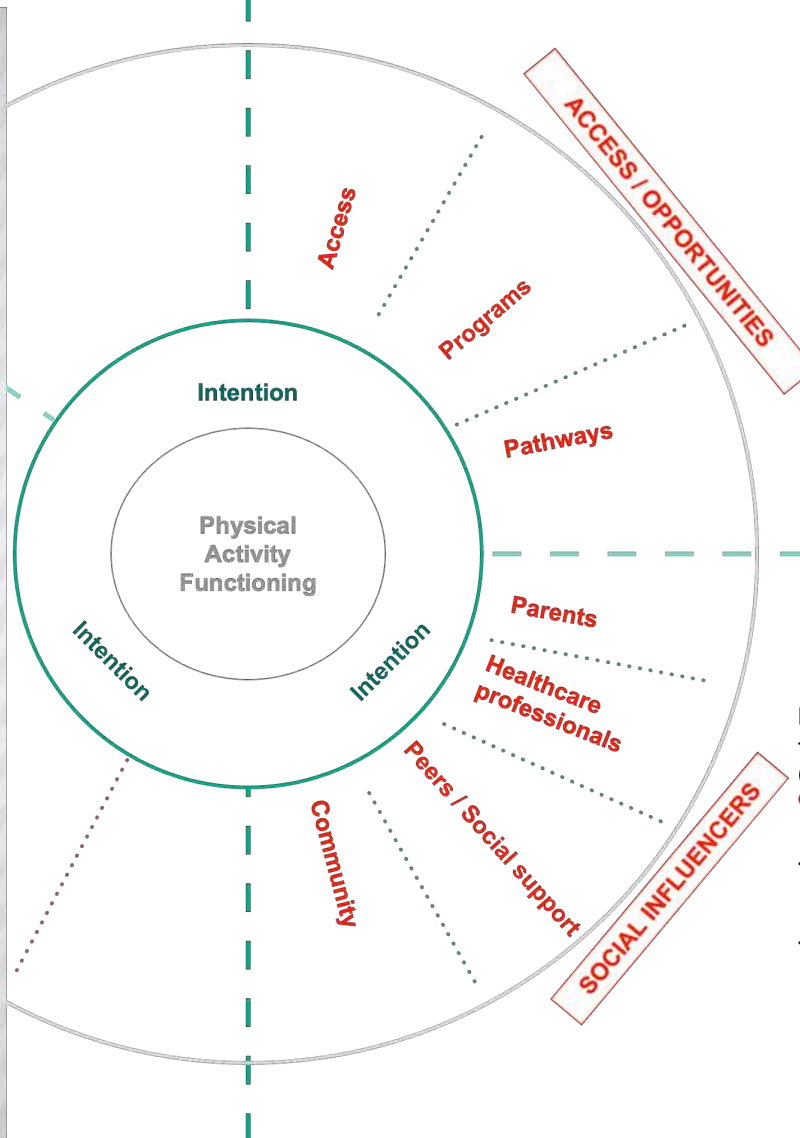
- **Parents:** role models, find / create opportunities, provide child with choice and autonomy with selecting preferred activity, facilitate activity engagement



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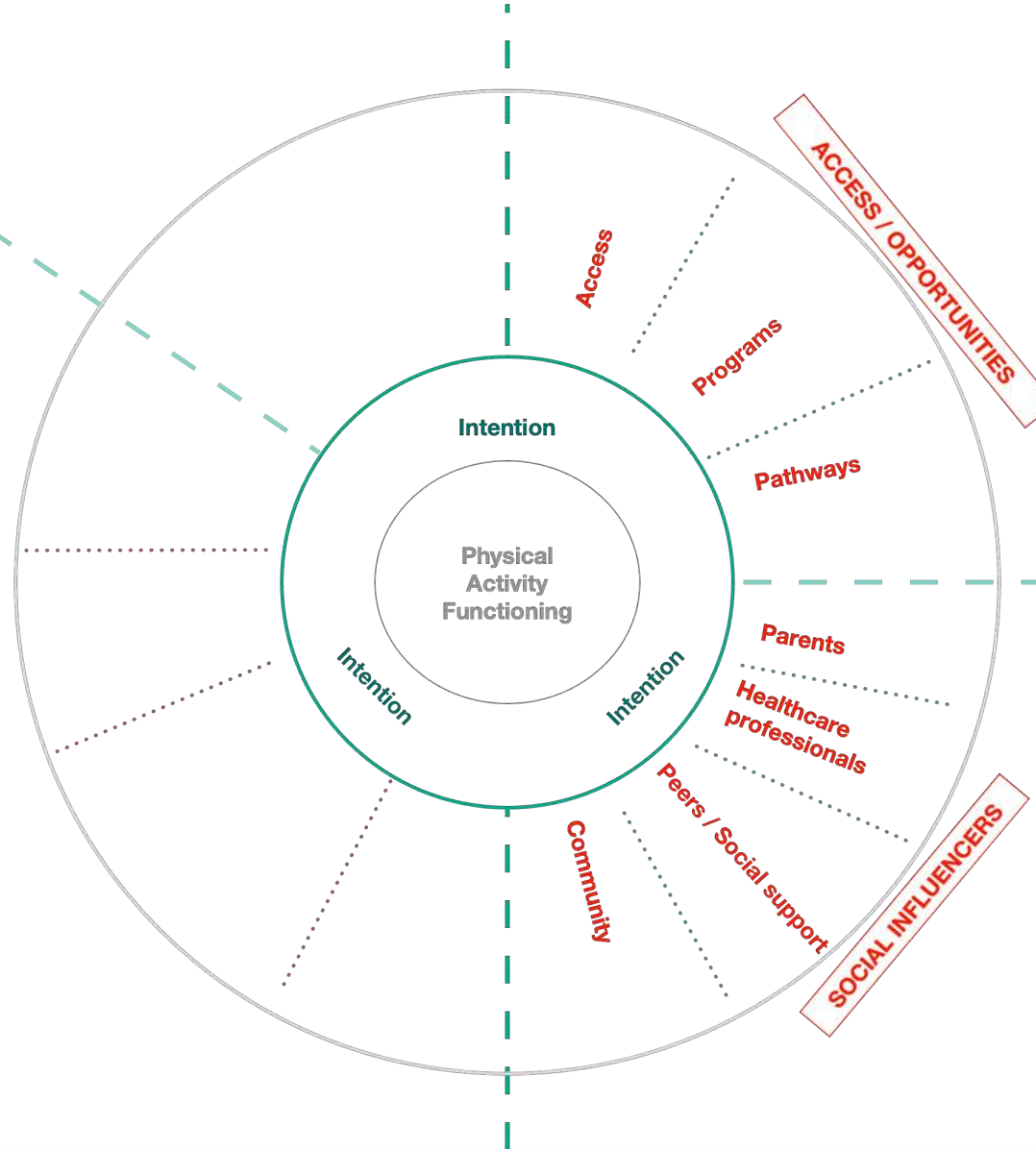
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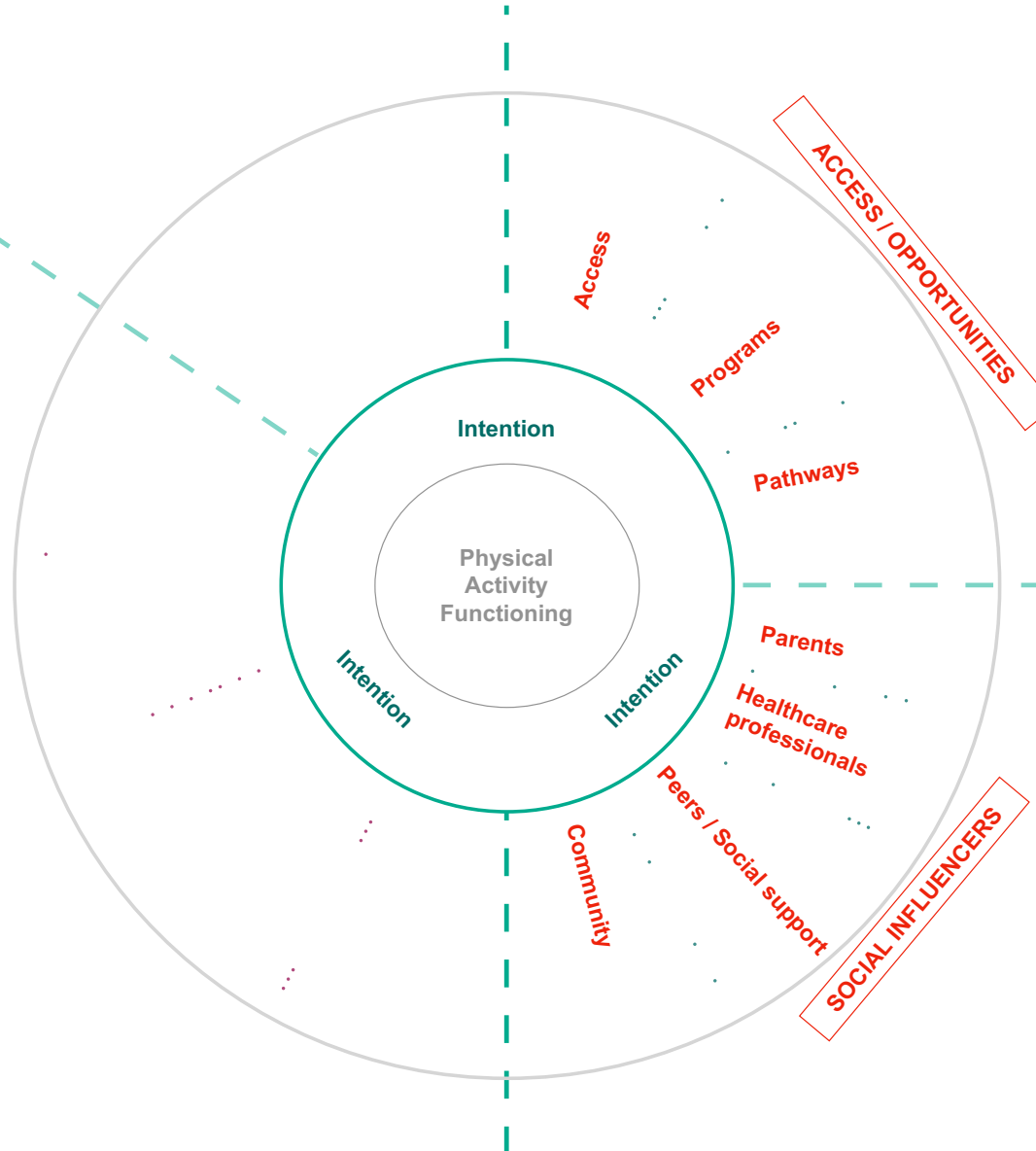
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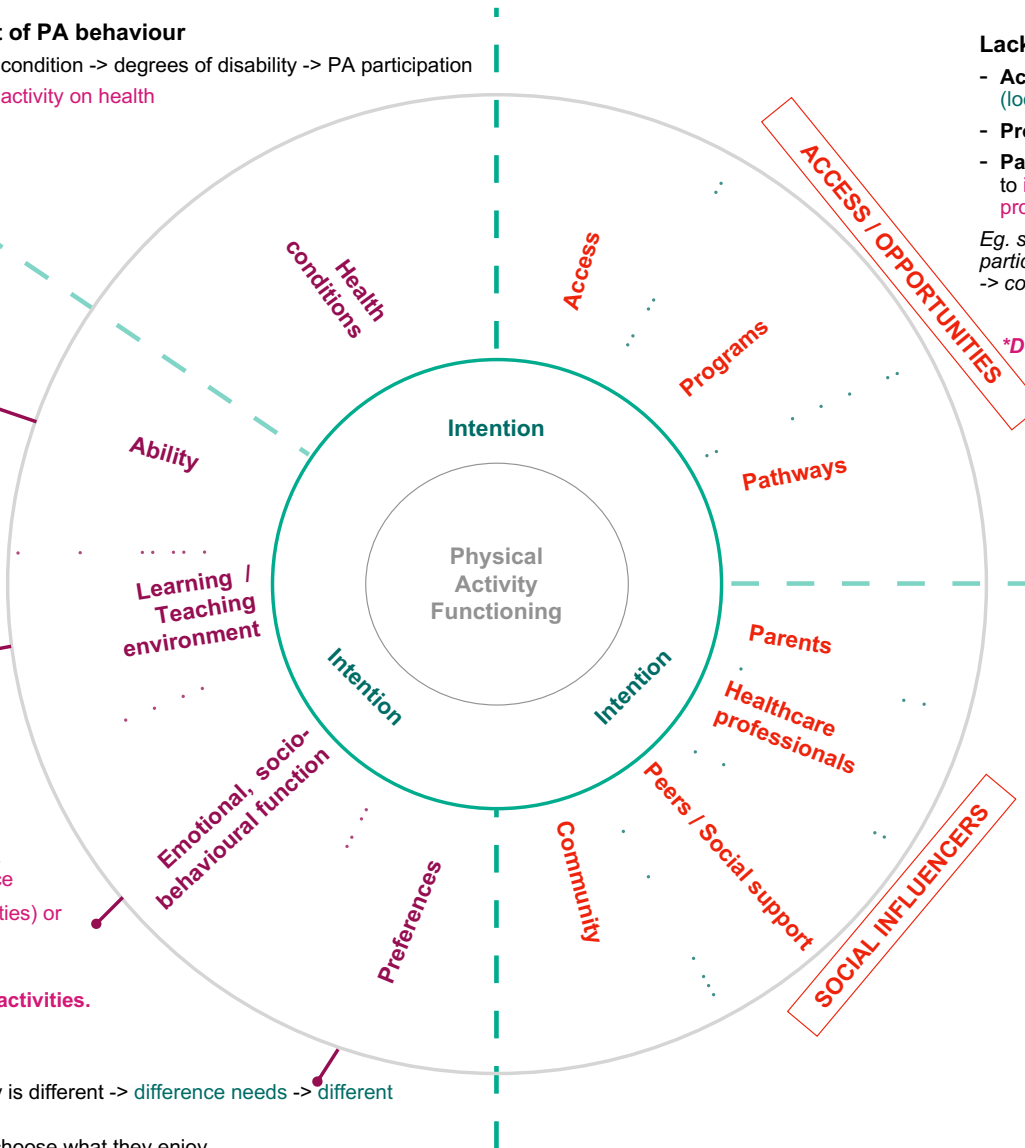
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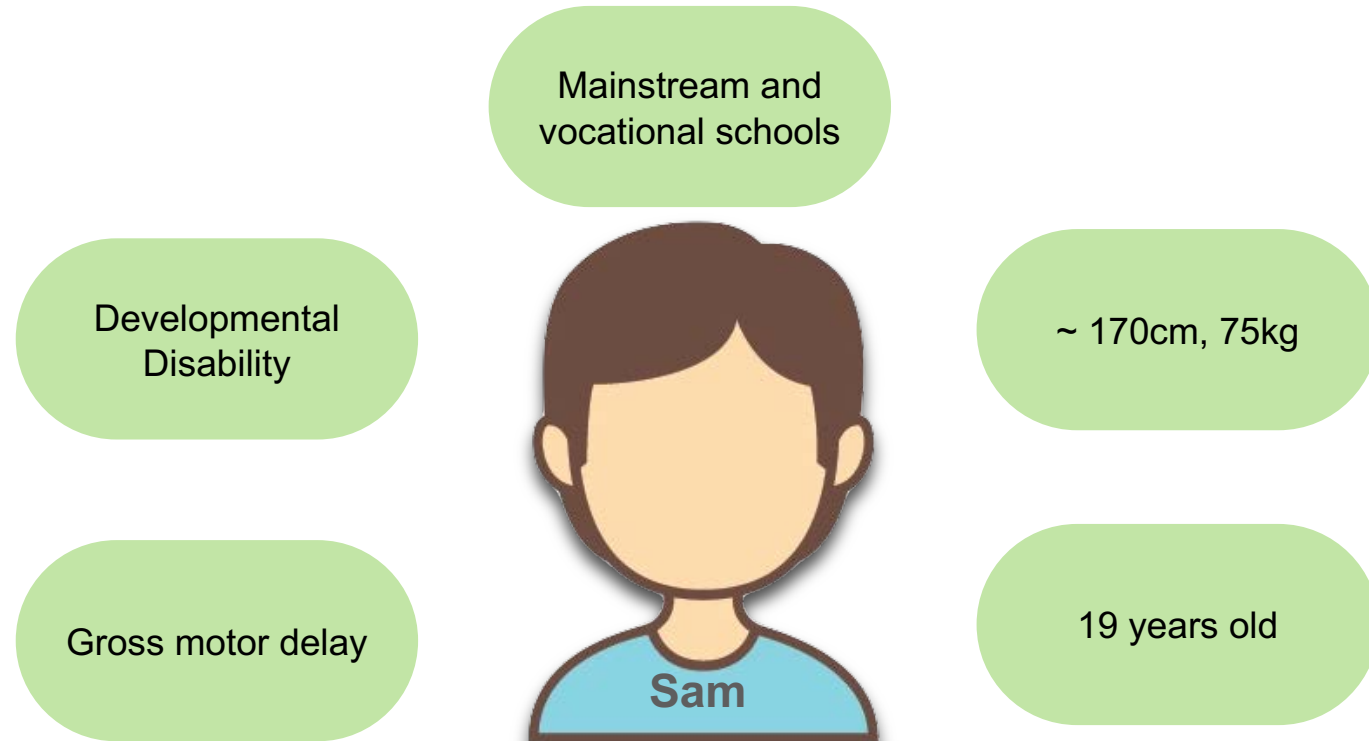
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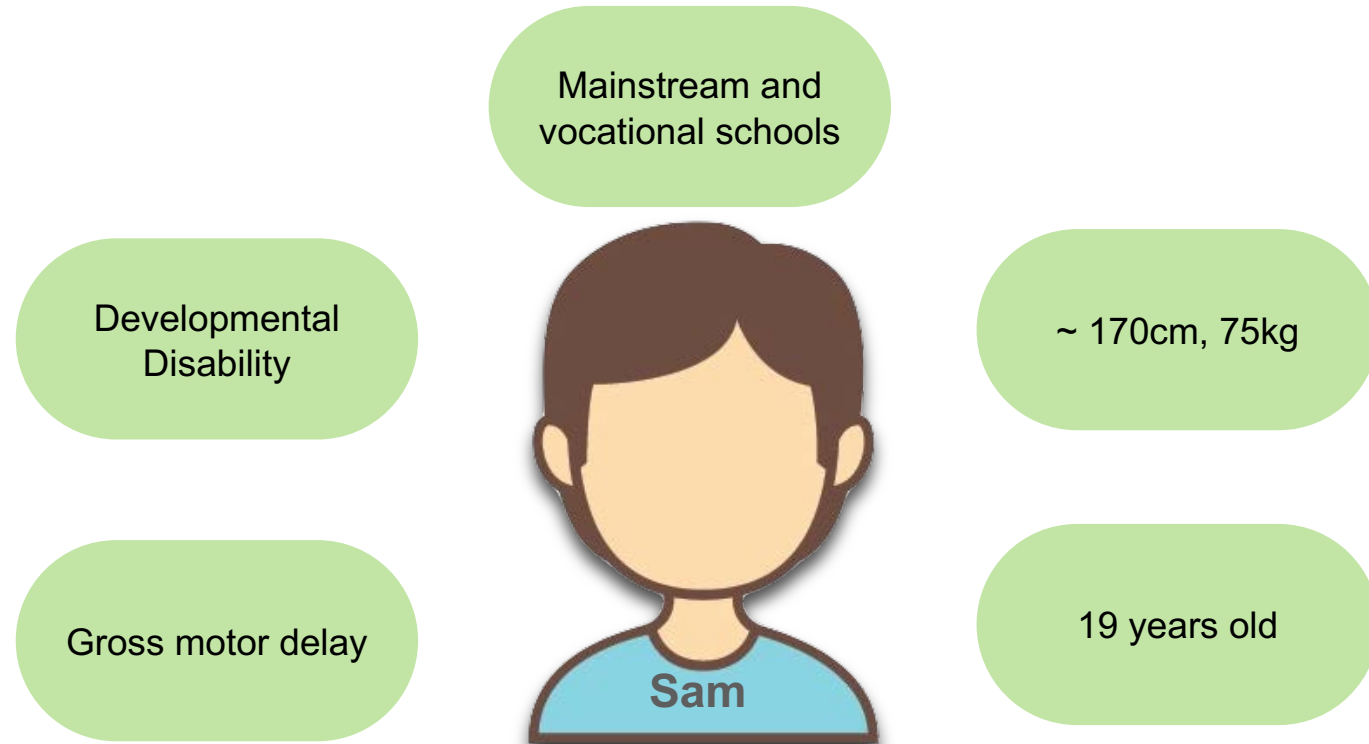
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Impulsive  
Chatty / Socially inappropriate  
Disorganised  
Rigidity

Below average FUNdamental skills  
Decreased Exercise tolerance  
Poor posture

Gets upset with unfulfilled demands  
Testing the boundaries  
Deem high risk in a gym setting

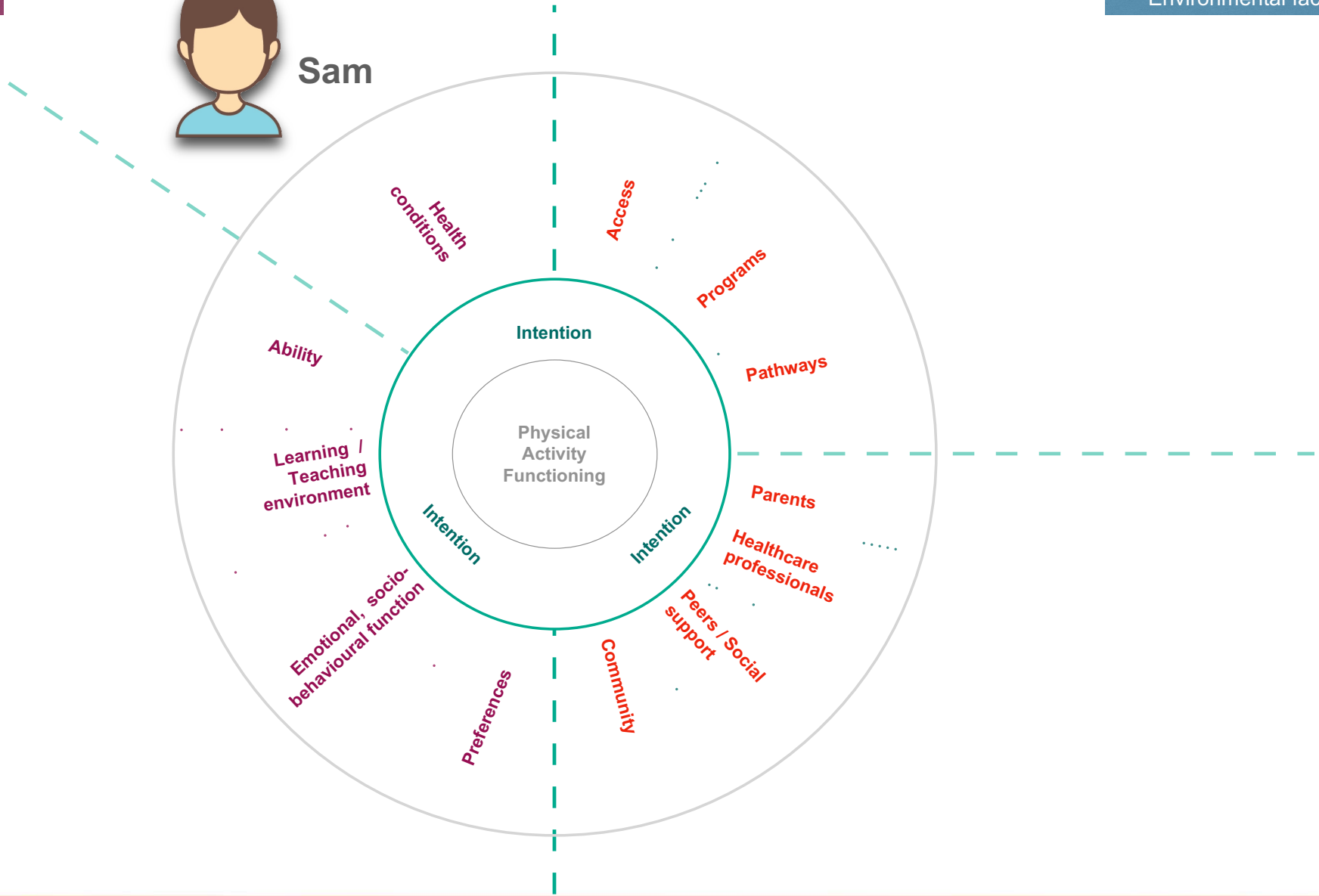
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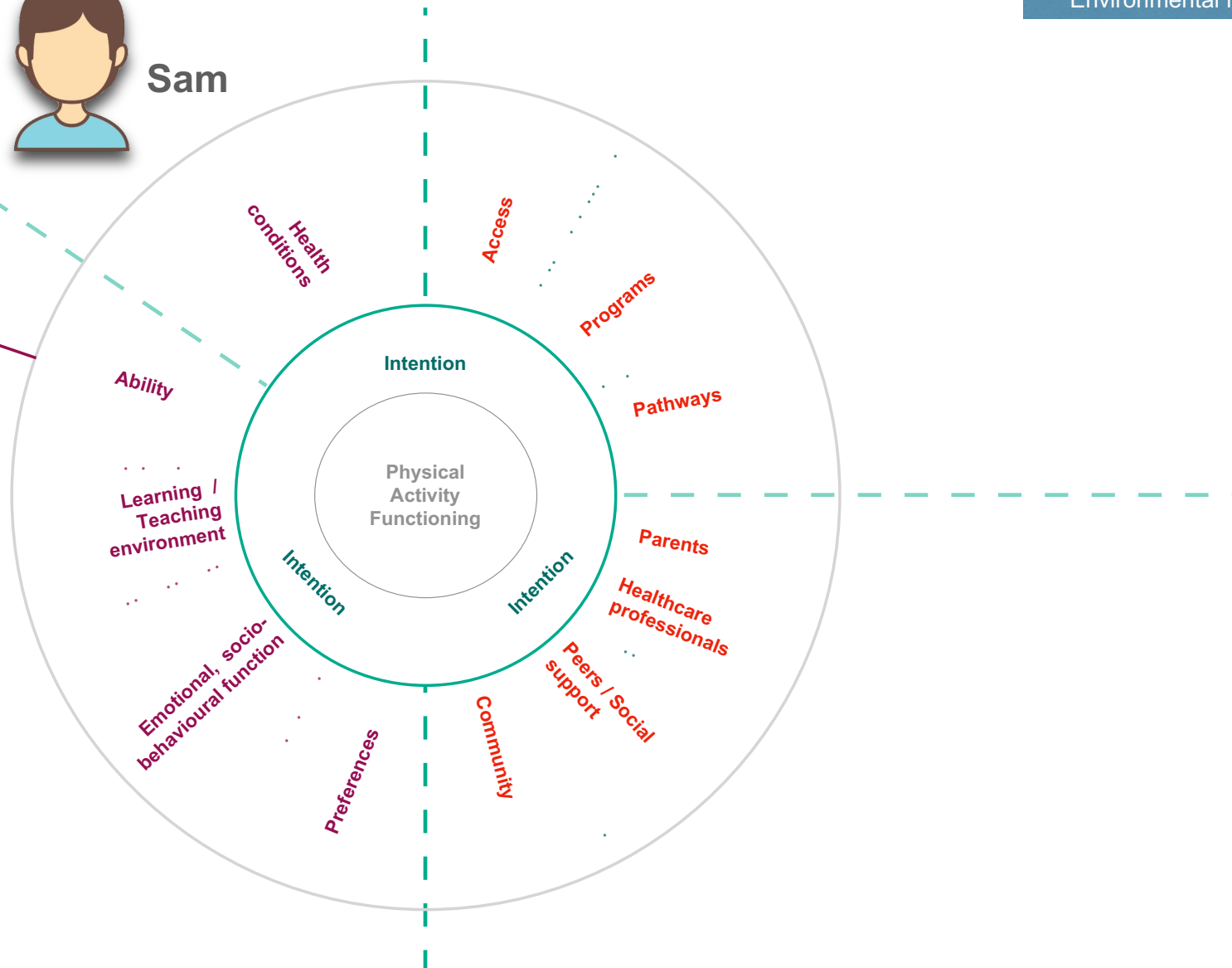
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### Lack of skills / ability can have varying impacts

- Longer learning time, due to poorer learning ability. Required repeated exposure to skill sets for learning to happen and adapted teaching instructions.
- Now have the ability to perform all fundamental movement skills, basic sports skills, and progressing on to resistance exercises. Able to complete bench press, cable pull machines SAFELY on his own with minimal supervision

\*independent exercise at home, fitness corners an participates in community-based programs





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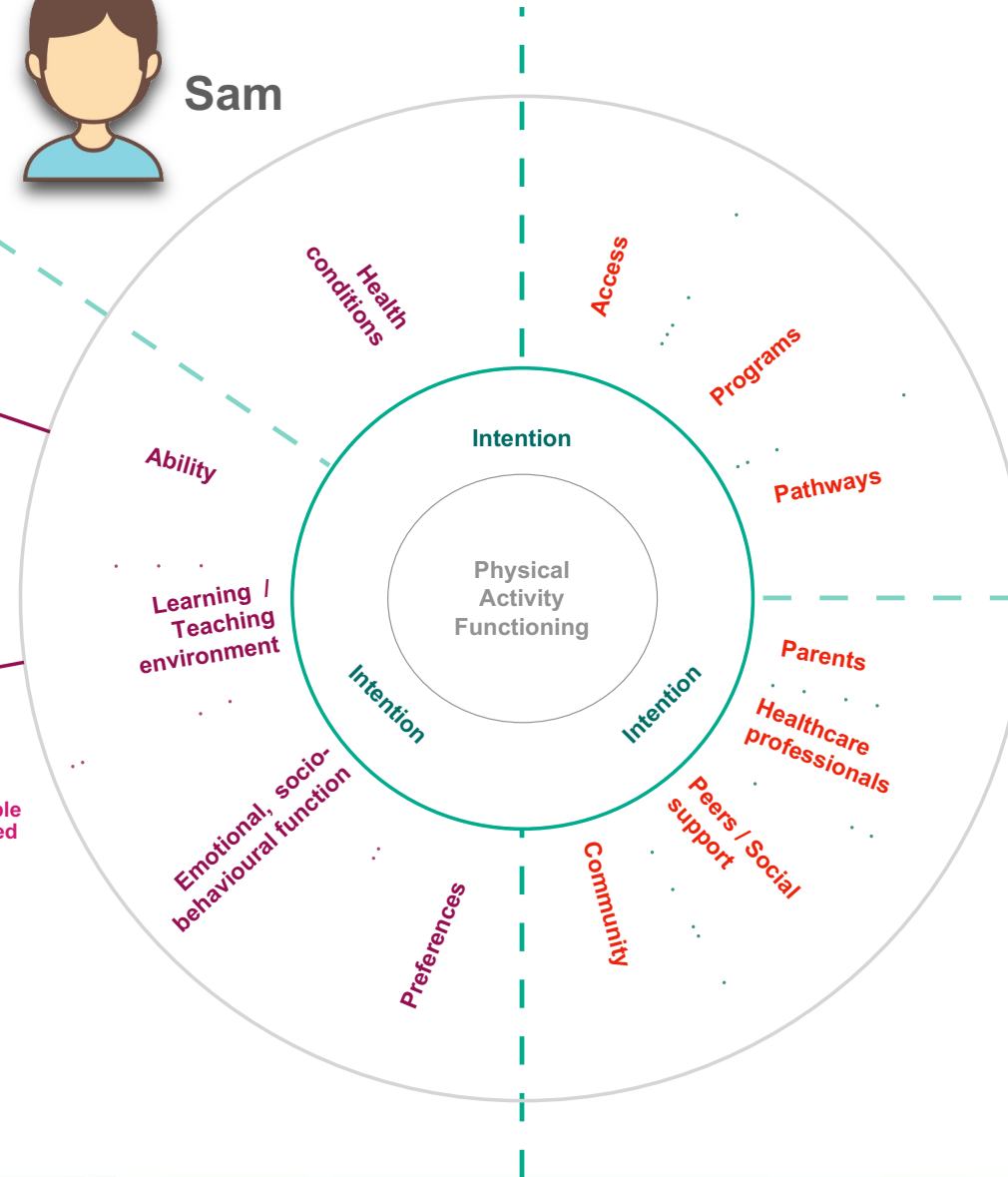
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### One size does not fit all

- Teaching delivery changes VERY OFTEN.
  - Visual system to reward system
  - Adapted teaching instructions
  - Individual to Group (occasionally)
- Fixed - RULES and REGULATIONS

\*Requires minimal adapted teaching methods , and able to understand basic instructions, adhering to identified rules and regulations.



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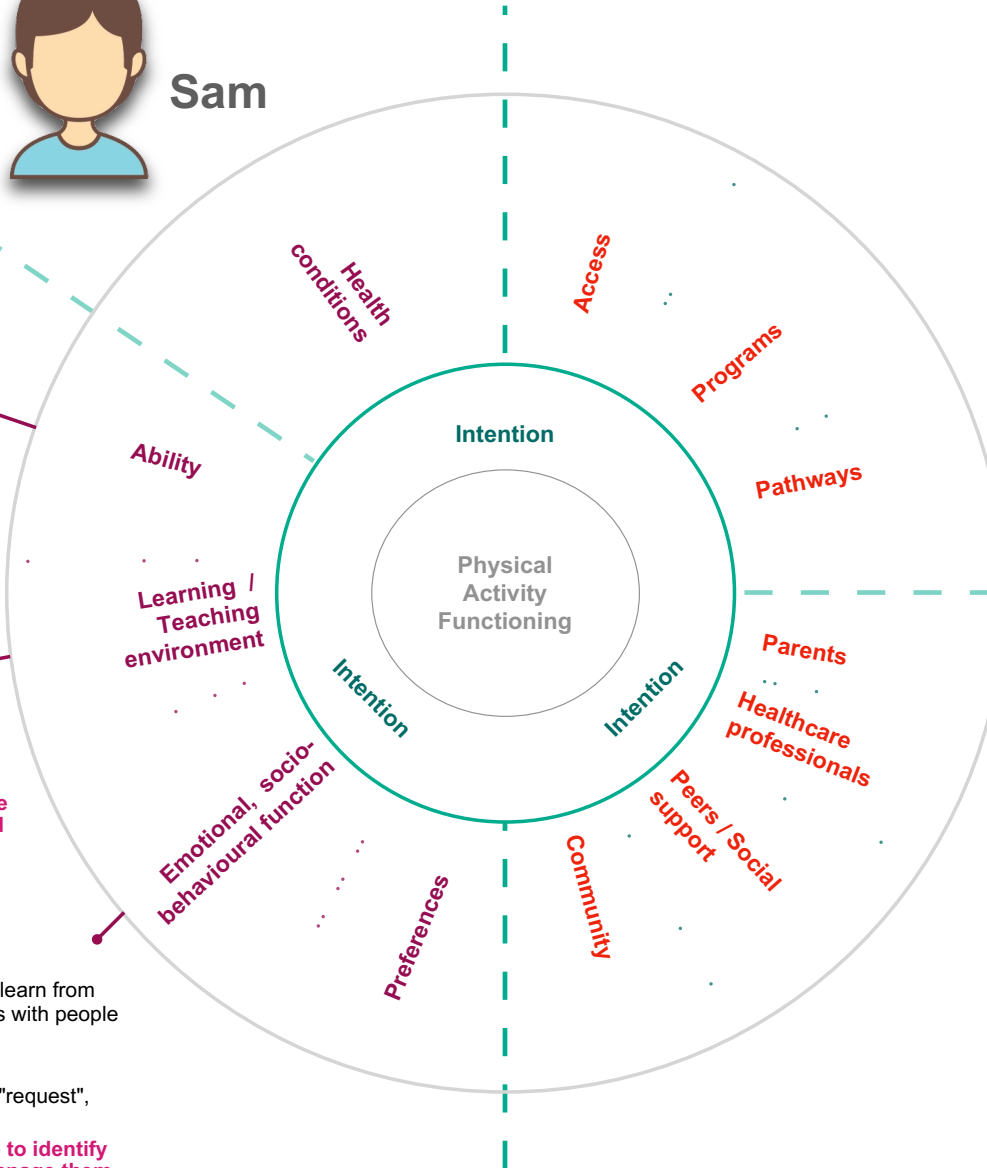
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## Child's ability to cope is vital

- Social Function
  - Giving him space for social behaviour and to learn from his mistakes (facilitated). Strike conversations with people exercising around him etc
- Emotional management
  - Identify the emotional state of "demand" and "request", then calibrate them.

**\*Understand the boundaries of social skills, able to identify reasons of his emotions and use strategies to manage them**



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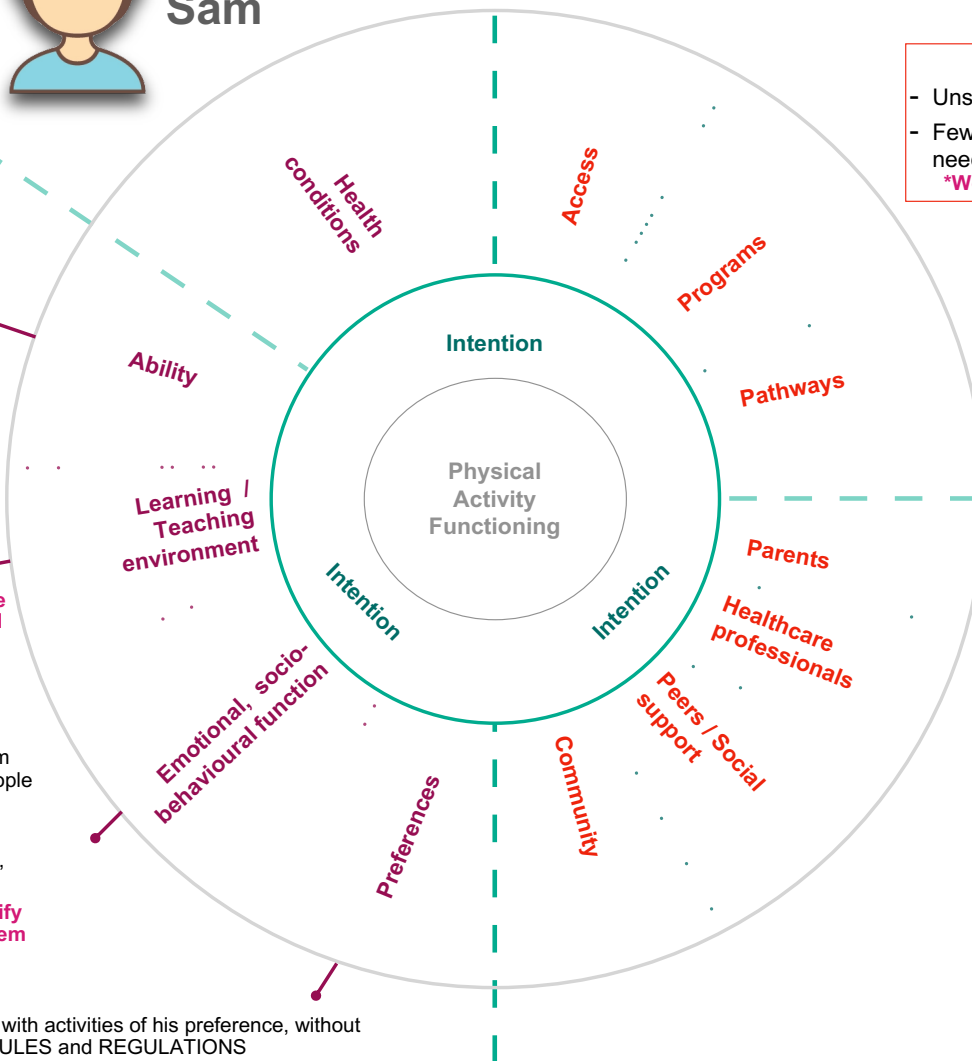
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### Choice matters

- Provided choice with activities of his preference, without compromising RULES and REGULATIONS

*\*Lightens up and works harder when preferences are considered.*



### ACCESS / OPPORTUNITIES

- Unstable for exercise in public gym
  - Few programmes that can cater for his high support needs
- \*Work with community partners to plan transition*

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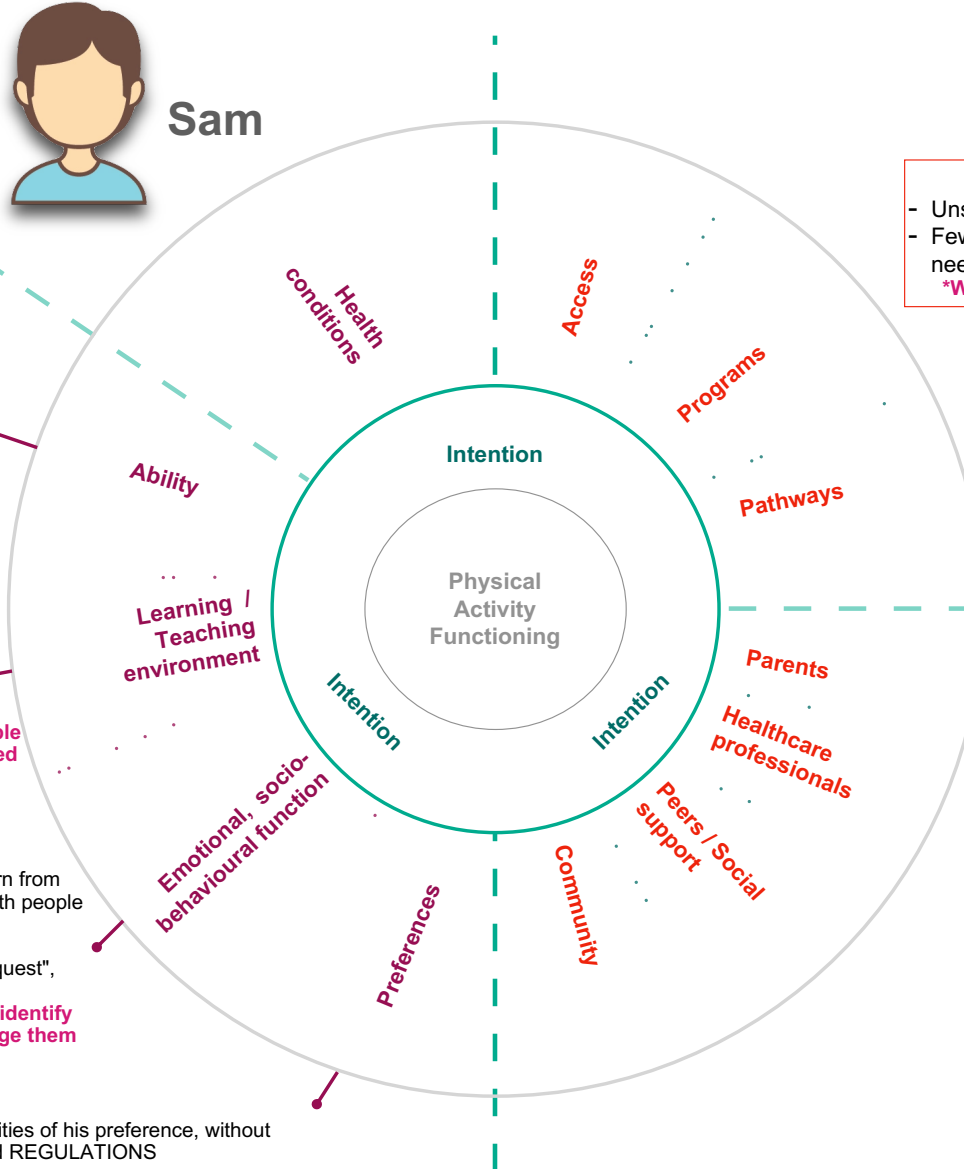
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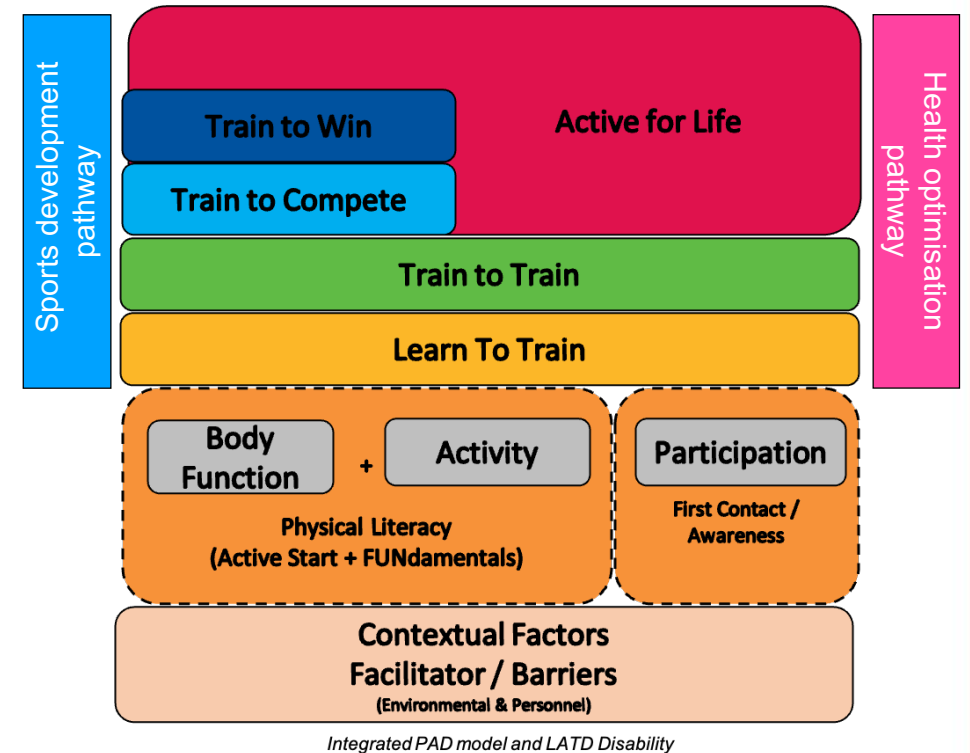
### SOCIAL INFLUENCERS

- Parents believe and commit to time for PA
  - Fitness corners and self made equipments
  - Actively finding for programmes to participate and try out.
  - Participating in community events, like runs or walks
- Bad experience with past programmes  
Inexperienced programme delivery, caused distressed for the child.



# Summary

- Children with disabilities are not immune to the secular trends of inactivity
- Inactivity can have impact on health and function
- Strategies to facilitate activity engagement needs to consider for both **personal and environmental factors**
- **Invest in their health early!**
- Build their physical literacy from a young age. Develop this mentality of *“I can, I believe and I want to be active”* - for health or as part of sports development in future



# Thank you!

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