



Physical Activity Guidelines for Persons with Disabilities

Children with Disabilities



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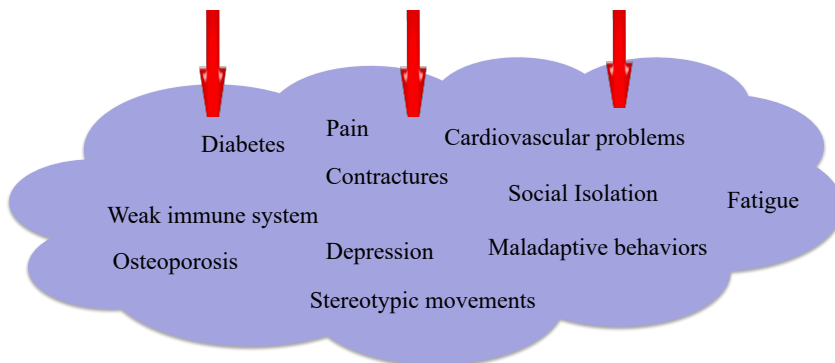


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WHO recommends 60 min daily physical activities for children

however

•50 – 70 % of children with disabilities do not meet guidelines of the World Health Organization



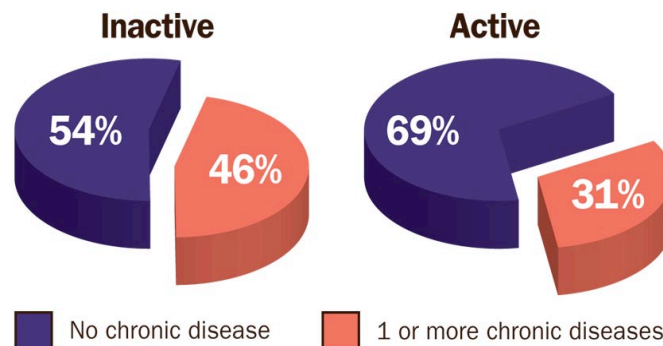
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..... **HOWEVER**

- Most of children with intellectual disability do not meet PA guidelines (Frey et al., 2008; Gatt, 2015; Barr & Shields., 2011)
- Children with Cerebral Palsy are known to be 50% less physically active and have lower levels of physical fitness relative to their peers without disabilities (Carlton et al., 2015; Palisano et al. 2009)
- Visually impaired children consistently exhibited lower levels of fitness than their sighted peers (Aslan et al, 2012., Lieberman et al., 2001, 2006; Ponchilla et al, 2002, 2005).
- Hearing impaired children have the highest level of physical activity in relation to other people with disabilities, however, only 50% are regularly active (Longmur et al, 2000)
- *In Latvia about 18,0 % of adolescents spend at least 4 hours at the screen during the week, while during weekend the percentage of the screen-based time increases to about 36,4 % .*

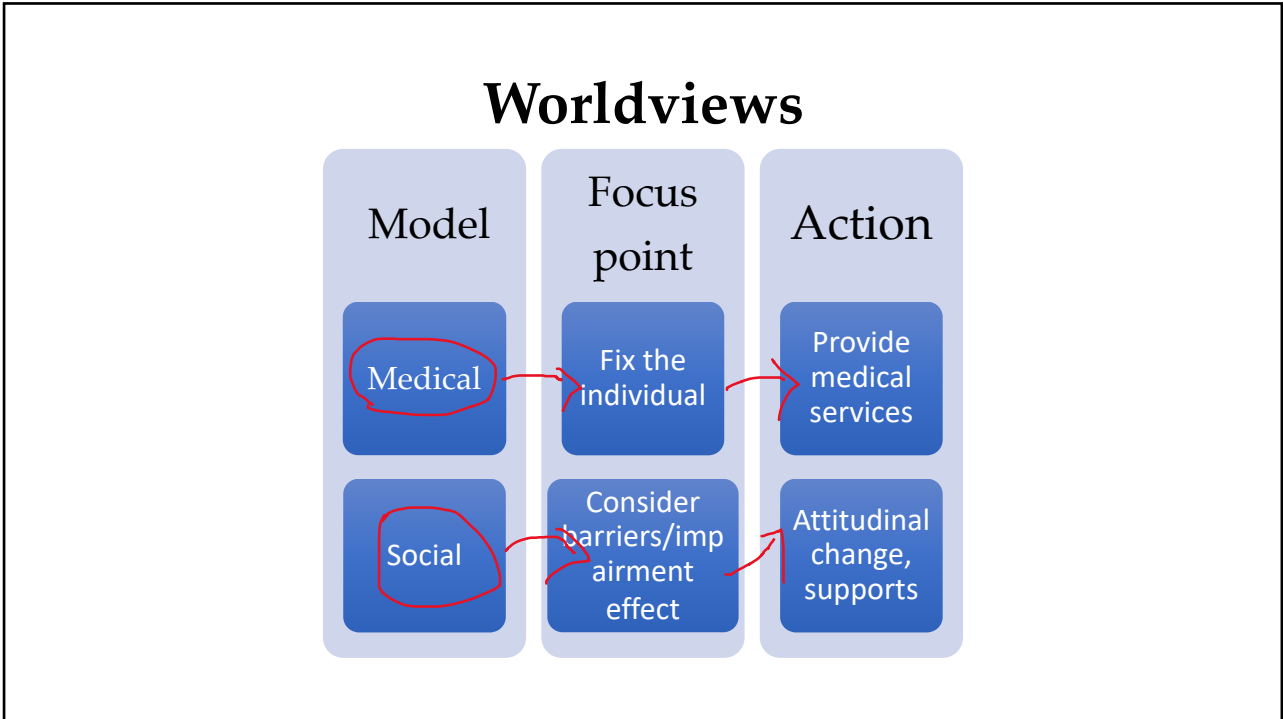
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Percentage of adults ages 18–64 with disabilities who have 1 or more chronic diseases, by aerobic physical activity level

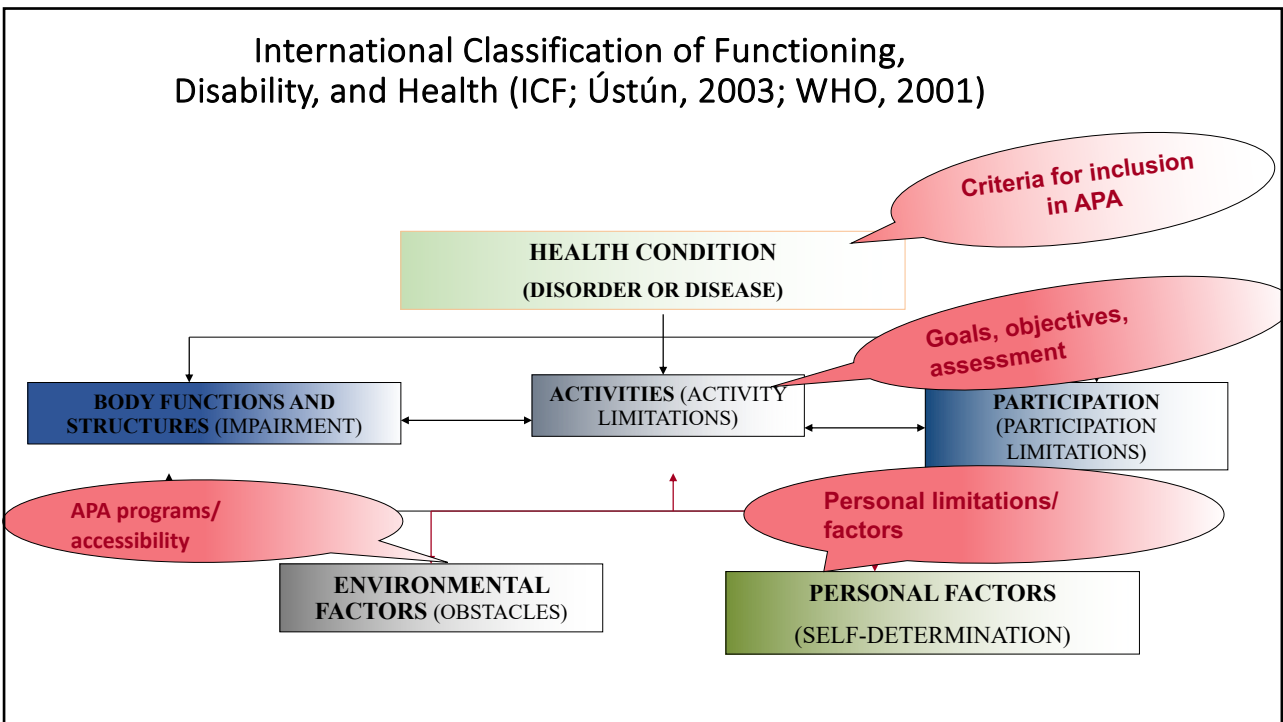


SOURCE: CDC National Center for Health Statistics, National Health Interview Survey, 2009-2012.

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- Engagement in moderate to high intensity physical activity (PA) during childhood is advocated for promotion of optimal health outcomes and may offset predisposed risk for the development of secondary health conditions experienced by disabled children (WHO, 2011)



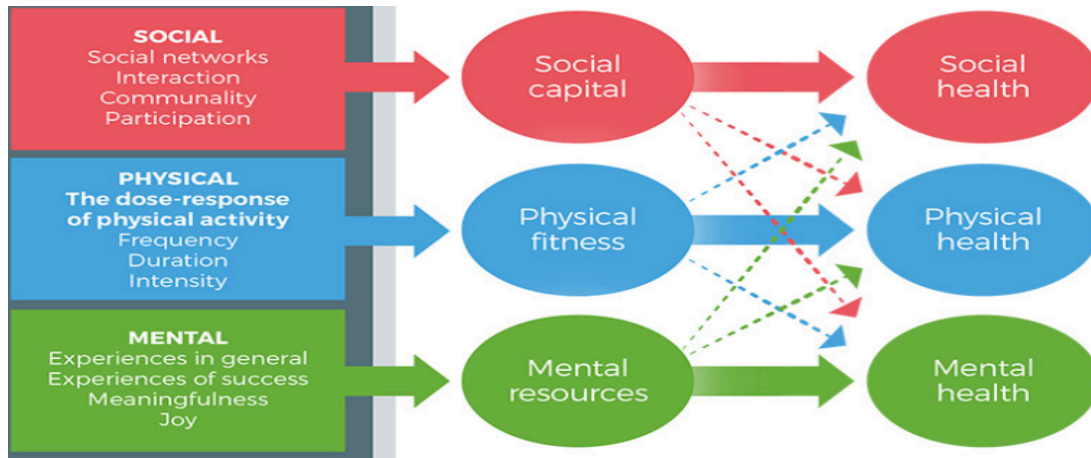
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- **Participation** is broadly conceptualized as “involvement in life situations” within psychology and disability related literature, but ambiguity surrounds the intended meaning of the term as a measurable index of health relative to being physically active (Ross et al., 2016)



8

Physical Activities and Health Dimensions in Sport Clubs



(Adapted from Kokko & Vuori, 2007)

9

Questions?

- How participation as a health construct is integrated into PA research?
- Ross et al. (2016) systematic review of contemporary literature (published between 2000 and 2016)



10





MINI REVIEW
published: 05 September 2016
doi: 10.3389/fpubh.2016.00187



Physical Activity Participation of Disabled Children: A Systematic Review of Conceptual and Methodological Approaches in Health Research

What is the amount and type of physical activity needed to bring beneficial effects?

Communication and Education, Chico State Autism Clinic, California State University, Chico, CA, USA




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graph TD
    A[Participation level] <--> B[Adherence]
    A <--> C[Competence/performance]
    B <--> D[Capacity]
    C <--> E[Psychosocial experience]
    D <--> E
            
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11

Disability and Rehabilitation >
Latest Articles



Original Article

The coolest I know – a qualitative study exploring the participation experiences of children with disabilities in an adapted physical activities program

Astrid Nyquist, Reidun Birgitta Jahnsen, Thomas Moser & Anna Ullenhag
Received 30 Oct 2017, Accepted 10 Dec 2018, Published online: 20 Apr 2019

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Abstract

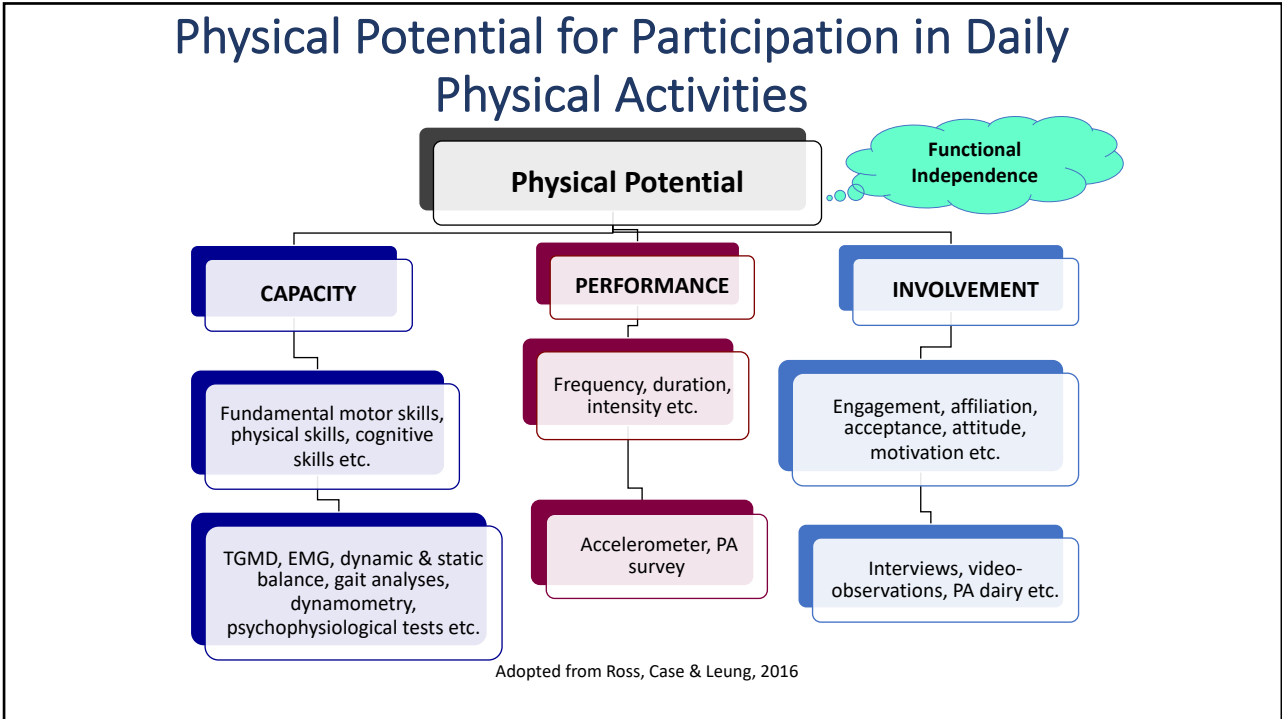
Purpose: The first aim of the study was to obtain a broader understanding of how children 10–13 years old with disabilities experience participation in self-selected physical activities during an intensive group rehabilitation program. A second aim was to explore how new skills and experiences gained from intensive group rehabilitation can be transferred to meaningful participation in local environments.

Material and methods: Individual in-depth interviews obtained the perspectives on participation purposive sample of eleven children with disabilities. The study applied inductive thematic coding content associated with participation followed by deductive analysis.

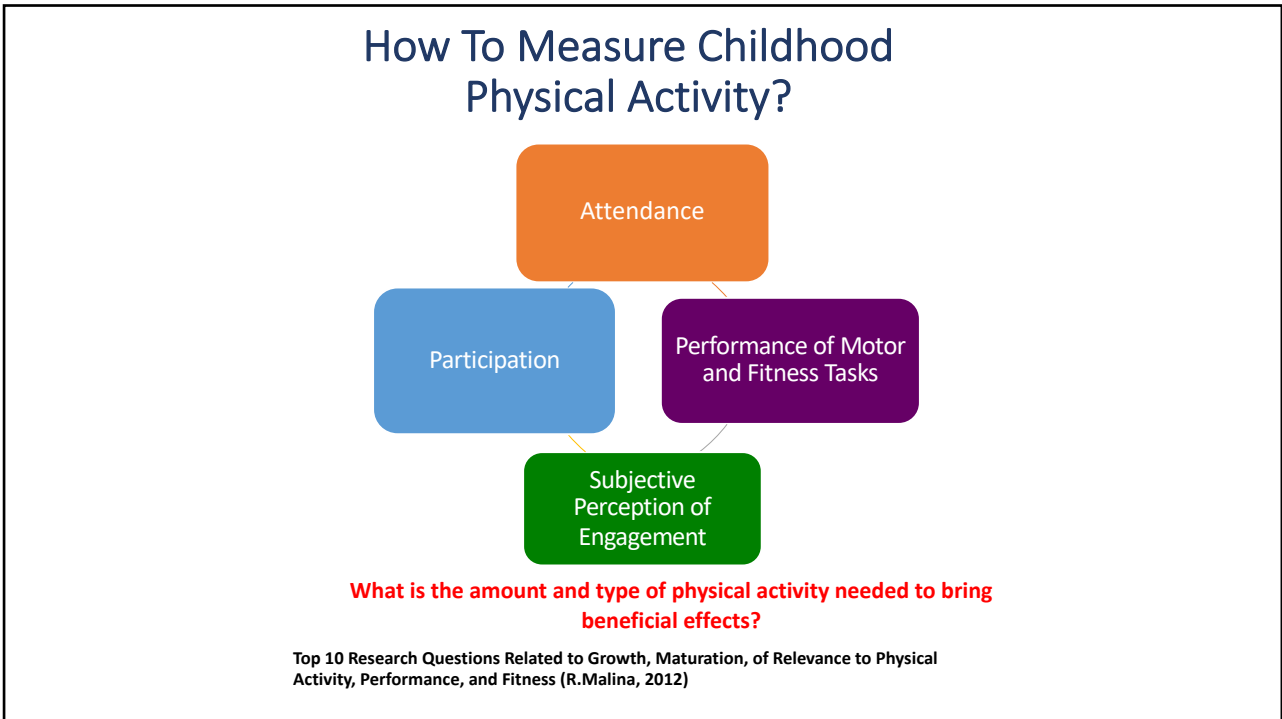
- “to learn and to show others new activities”
- “belonging, solidarity and friendship”
- “activity and participation enjoyment”
- “participation on my own terms”
- “transfer to the local environment at home”

12

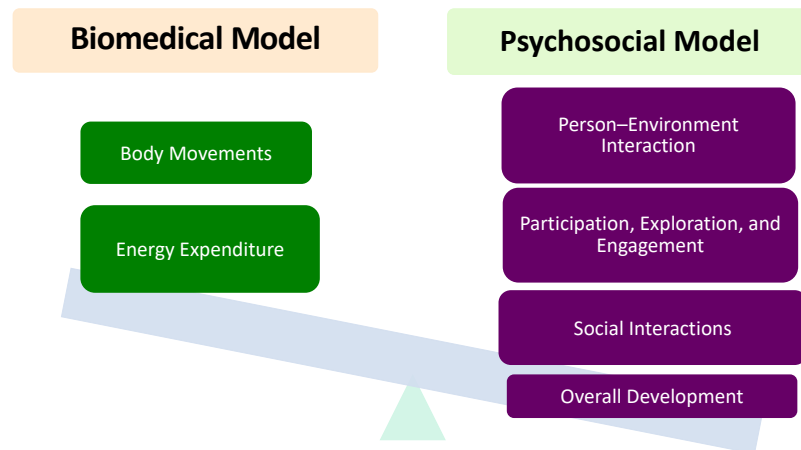


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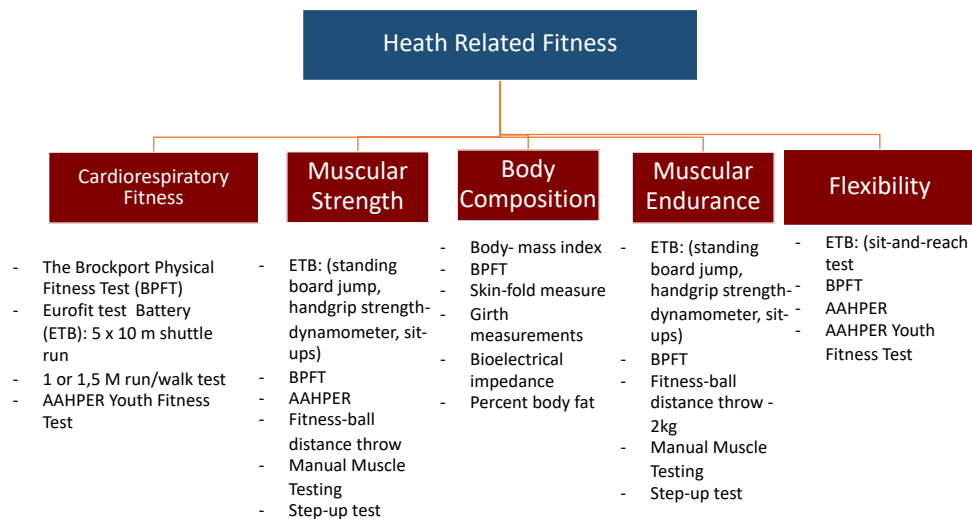
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How to Measure Childhood Physical Activity?



15

Most of APA/APE Research Focuses on Components of Biomedical Model

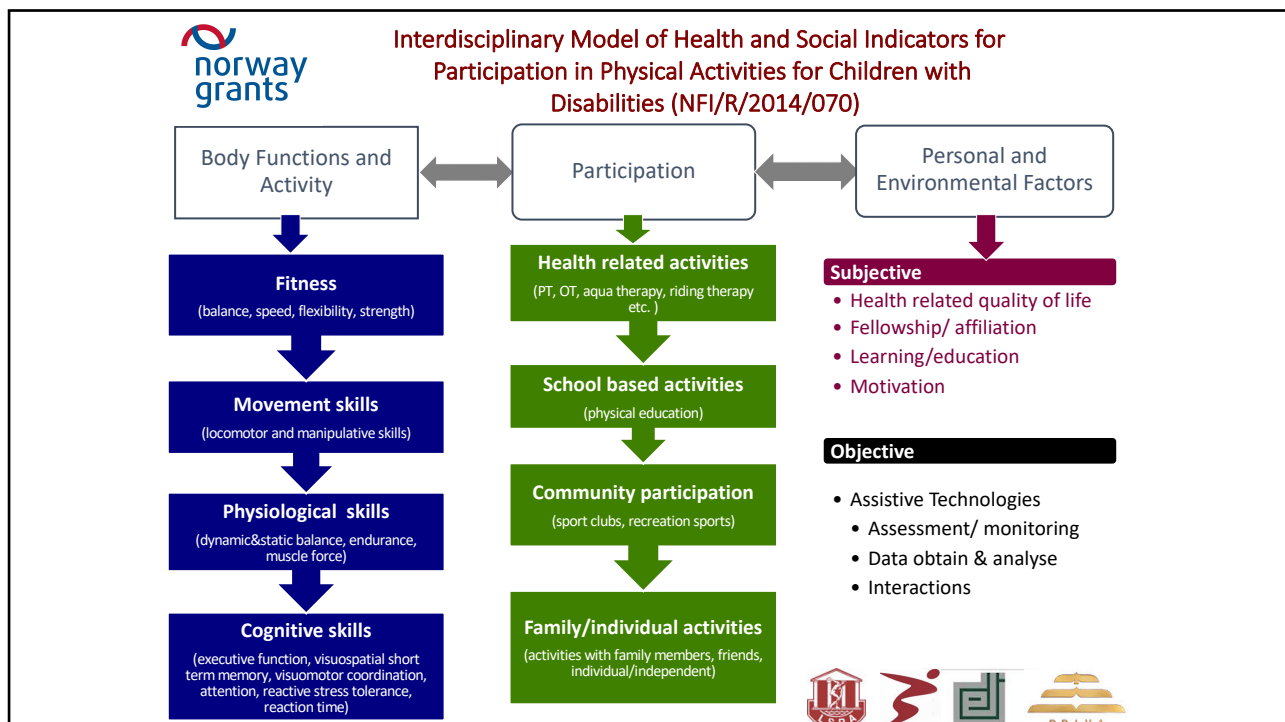


16

Participants

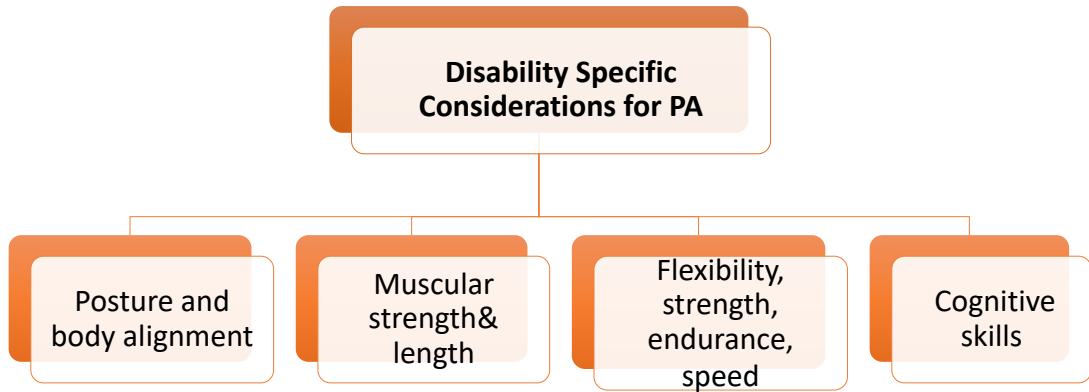
- Elementary school age children with **physical, visual, hearing and intellectual** disabilities (age, 7-11 years)
- Ability to perform manipulative and locomotor skills (TGMD)
- Permission of school administration and parents
- Results obtained and analyzed by now:
 - 20 with physical impairment (PI)
 - 32 with visual impairment (VI)
 - 22 with hearing impairment (HI)
 - 31 with intellectual disability (ID)

17



18

What Measures are Applicable Across All Groups?



19

Fundamental Motor Skills



Object Control Skills (OC)

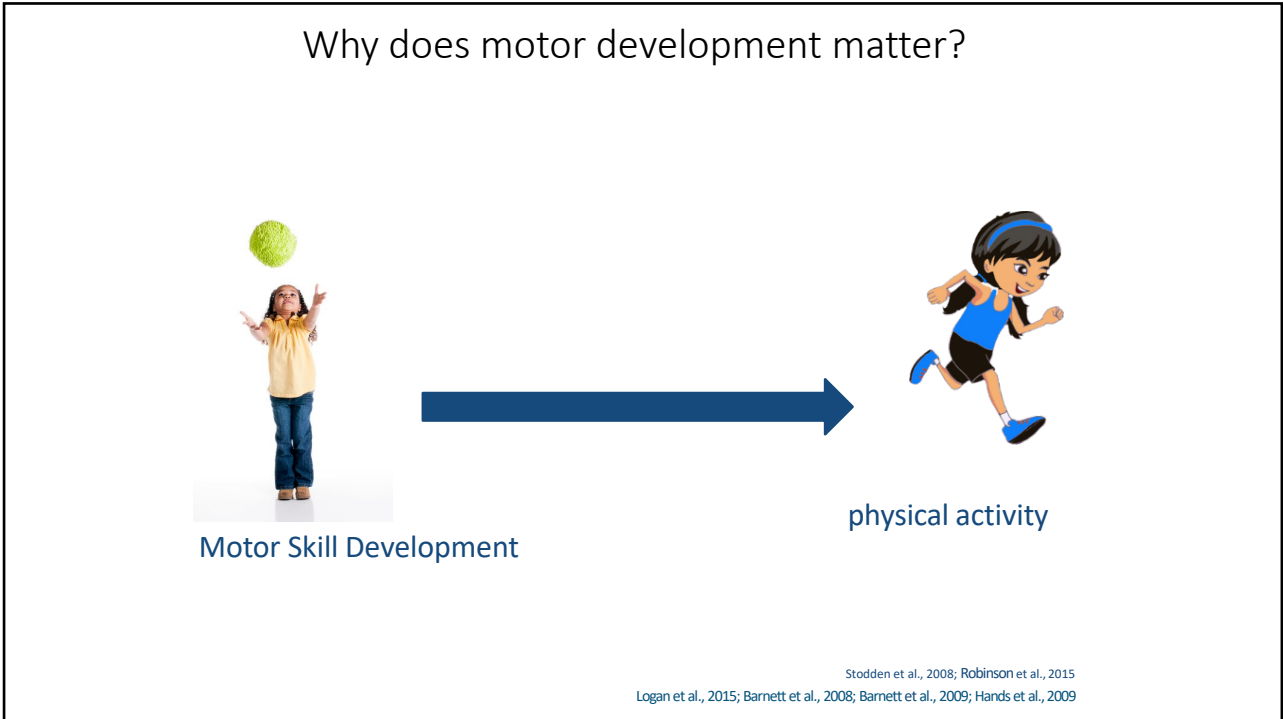


Locomotor Skills (Loc)

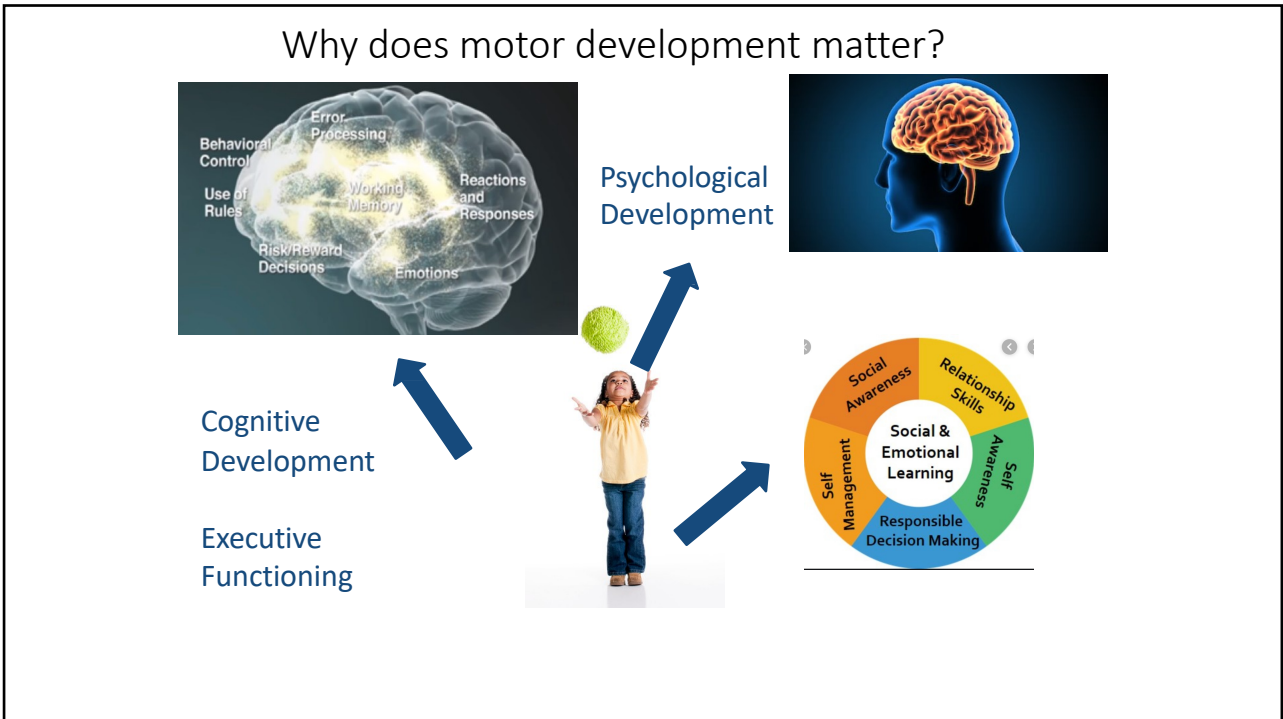


Stability Skills

20



21



22

How to get benefits of psychological and cognitive development with motor???

- Cross the midline
- Step with opposition and multi-limb coordination
- Tracking objects in space
- How do you know? We assess!!!

23

How do I measure???

Gross Motor Developmental Sequences (Gallahue et al., 2013)

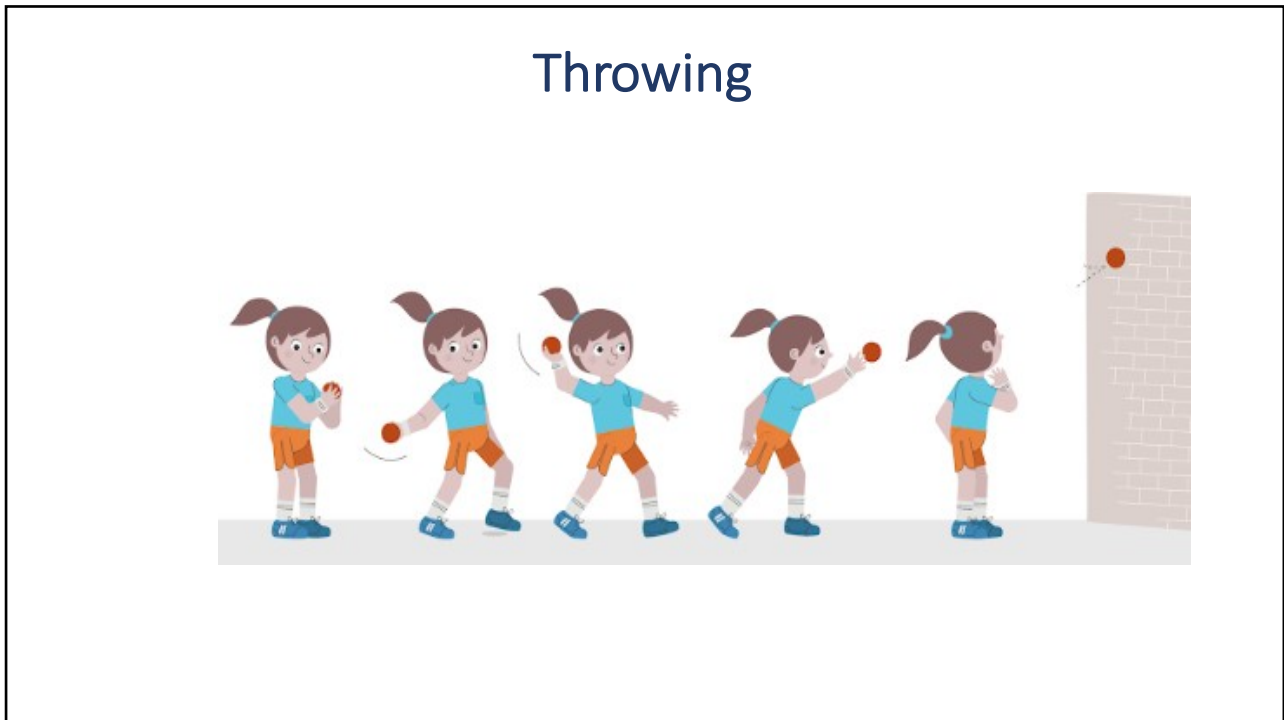
3-5 stages for 8 skills

Throw, kick, run, jump, hop, skip, catch, striking

Age-based “norms” for children ages 18 months – 10 years

Helps me also identify developmental delay

24



25

Five stages of throwing

- Chop
- Door Slam
- Step with same side leg of throwing arm
- Step with opposition (no trunk rotation)
- Step with opposition and trunk rotation

26

Hopping

- Four stages
- Karate Kid
- Heel even with quad
- Foot behind body
- Foot behind body, uses arms and legs to propel

27

Stationary Dribble

- Contact ball with one hand about belt level
- Pushes ball with fingertips (not a slap)
- Ball contacts surface in front of or to the outside of foot on the proffered side
- Maintains control of ball for four consecutive bounces without having to move feet retrieve

28

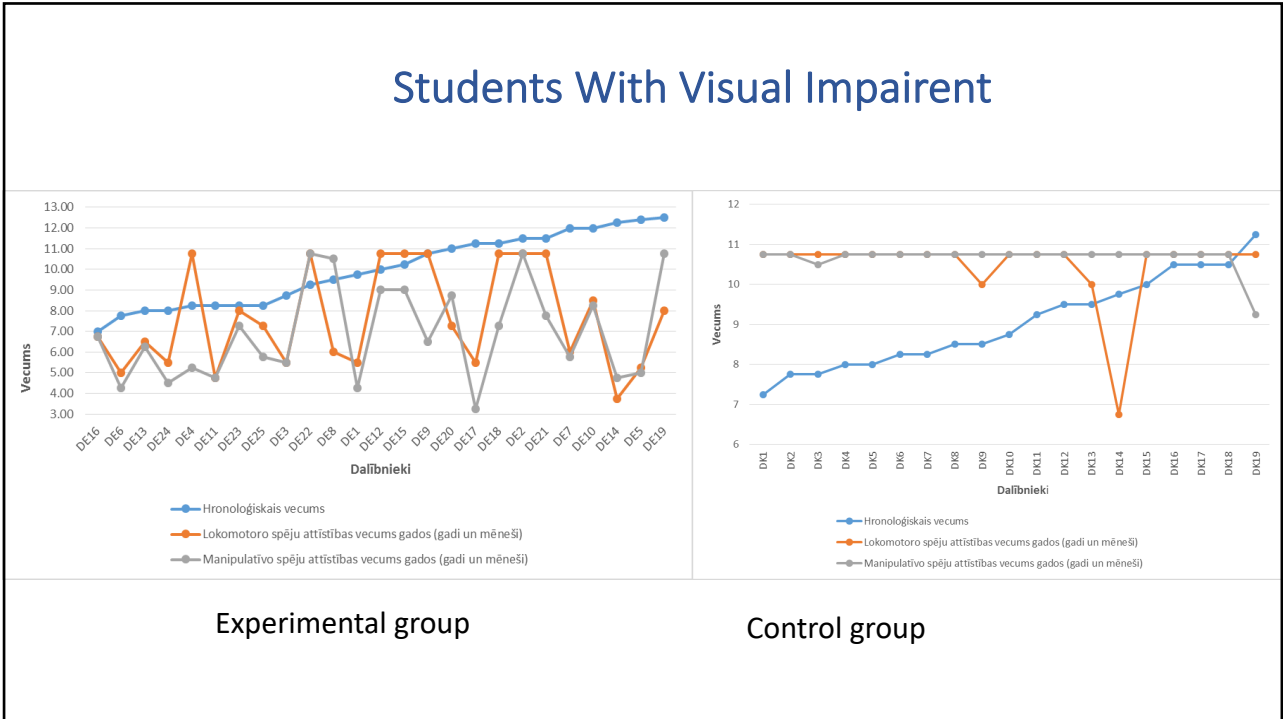
How to get benefits of psychological and cognitive development with motor???

- Cross the midline
 - Physical prompts, manual manipulation
- Step with opposition and multi-limb coordination
 - Visual prompts
- Tracking objects in space
 - verbal prompts, bright colored objects, sensory stimuli

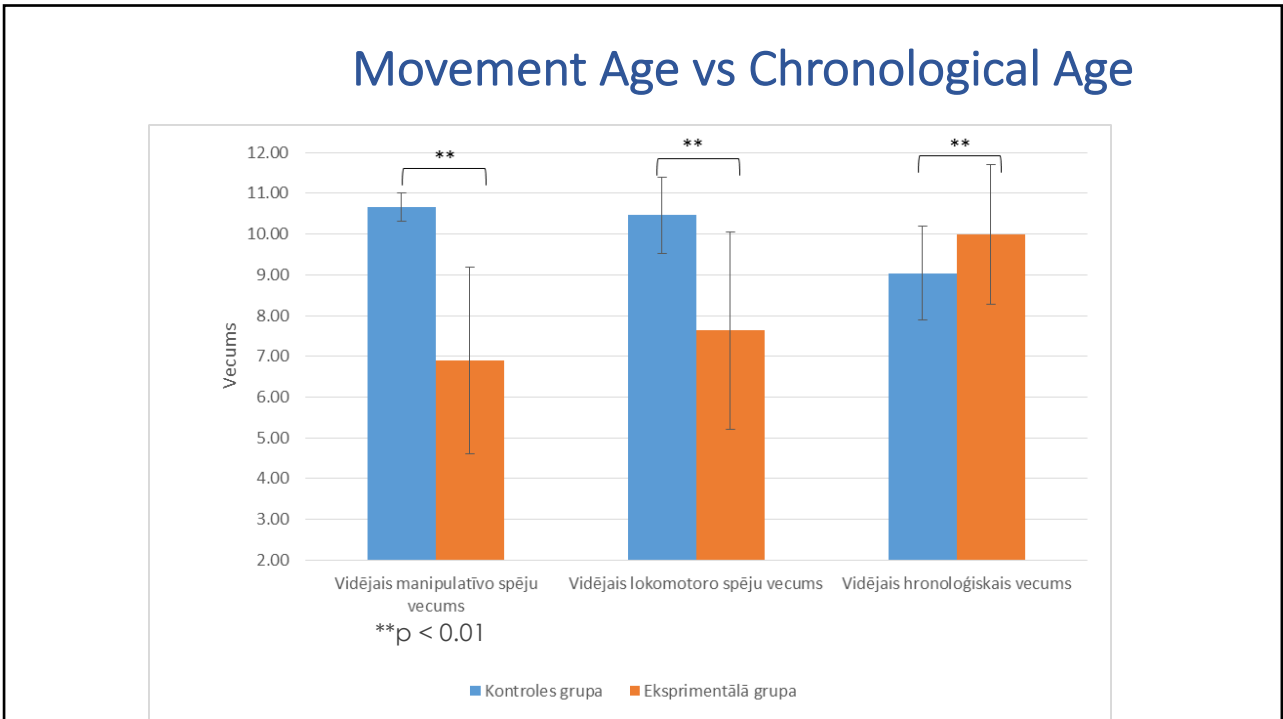
29

Examples from Students' Research

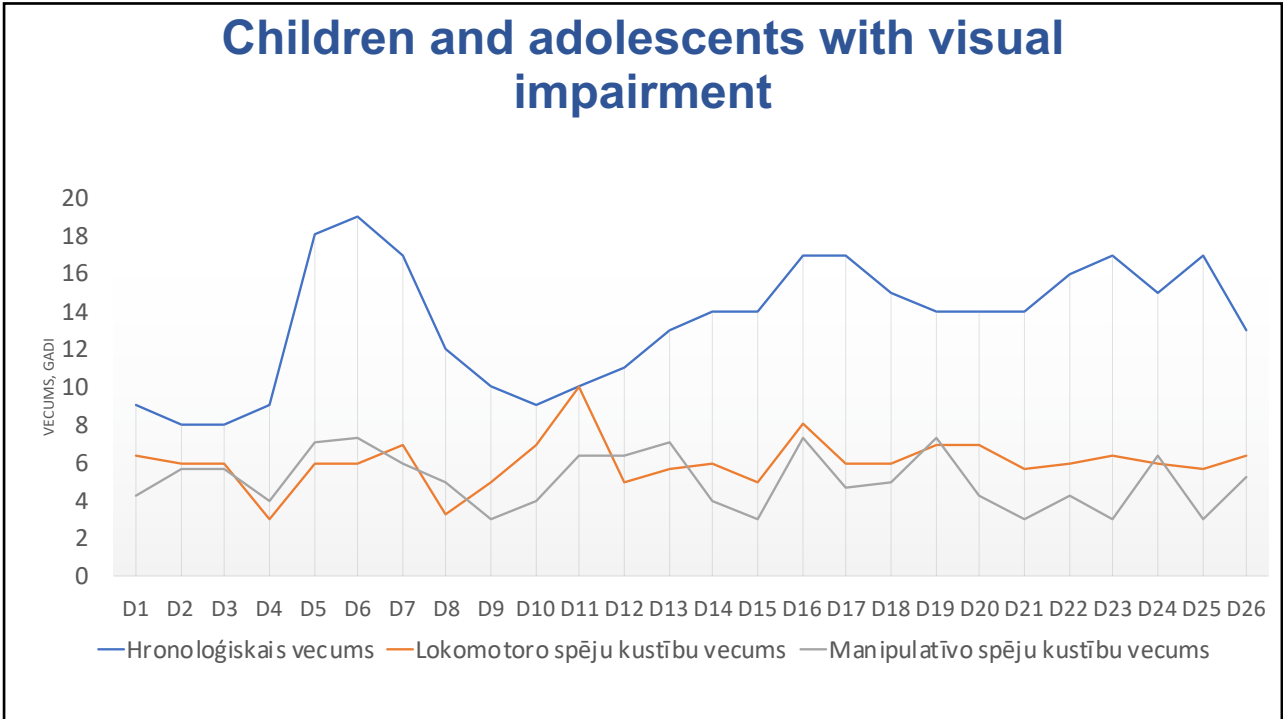
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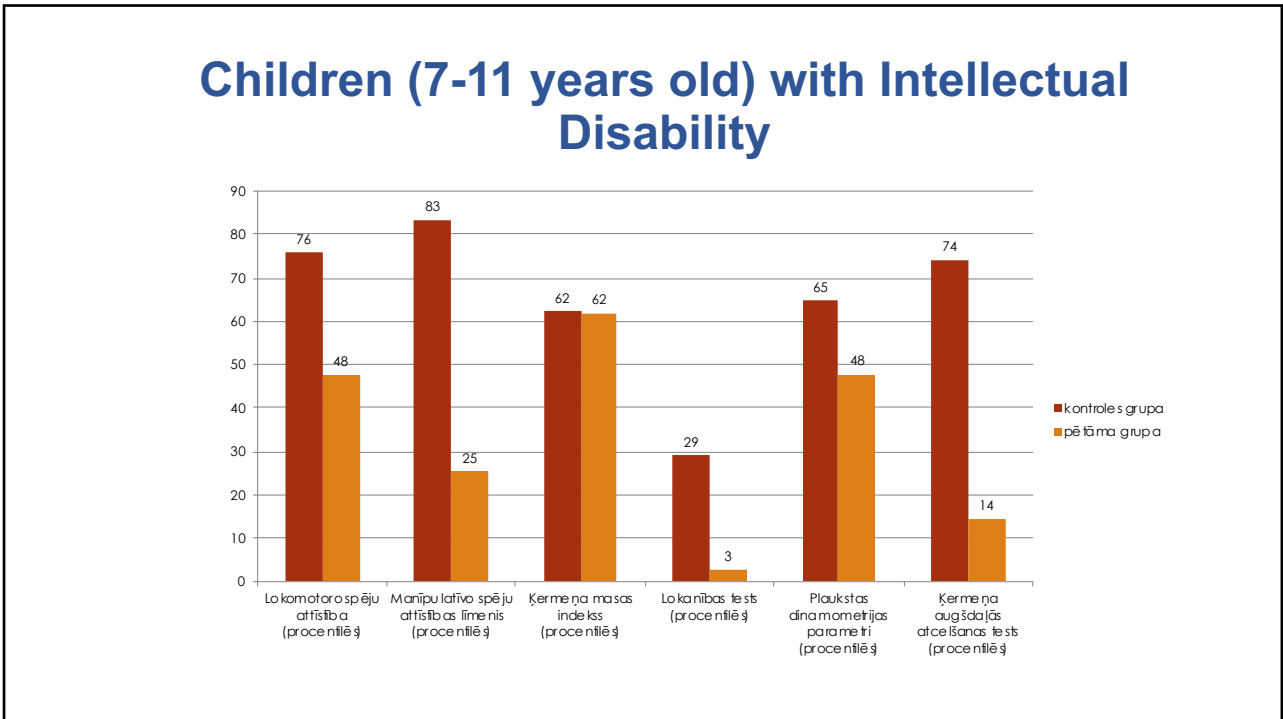
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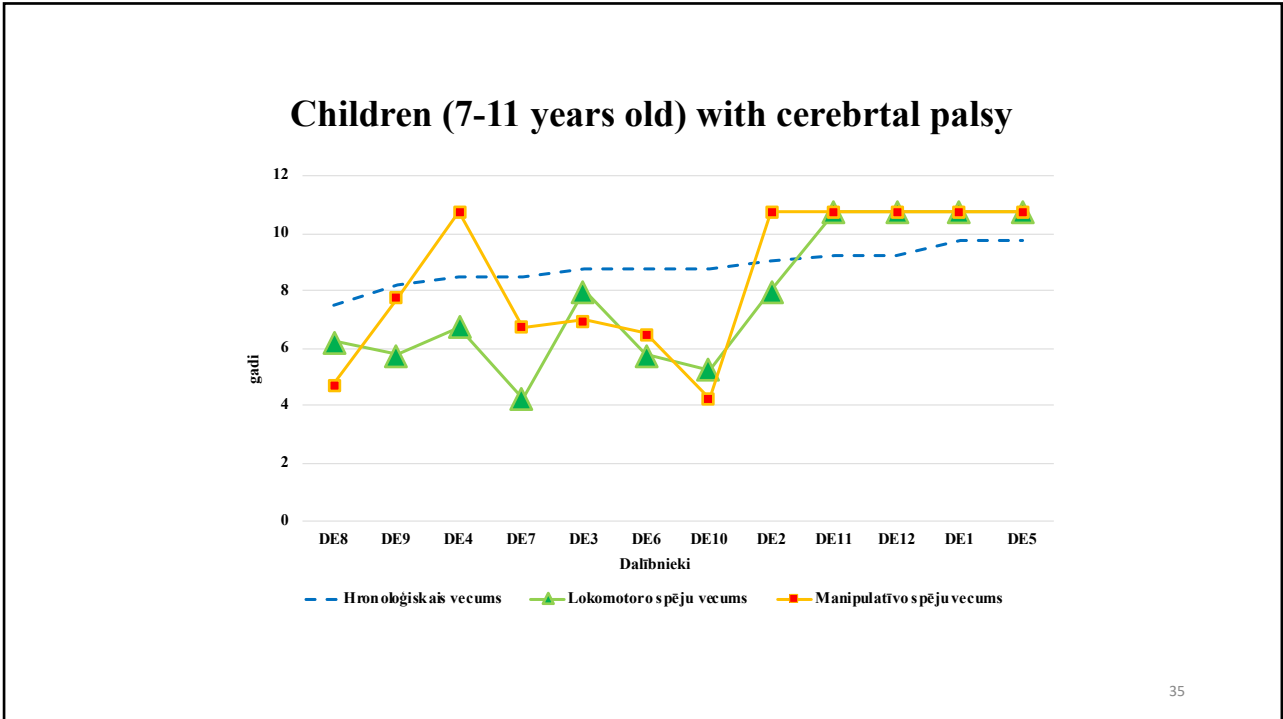
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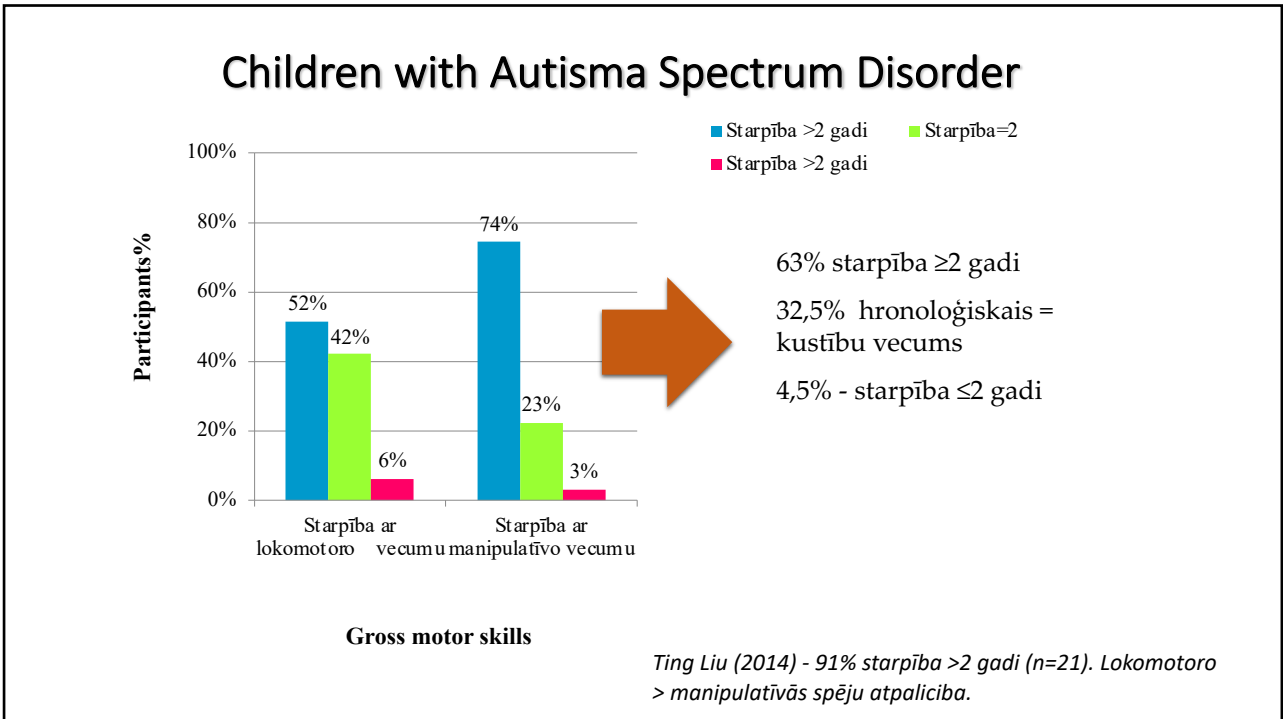
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34



35



36

Questions!



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