

The Wheelchair School – A description of the Drivkraft method and its evidence

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A training moment at the wheelchair school with Åke Norsten, the developer of the method on the left.

The literature supports the Drivkraft method of the Wheelchair school

The wheelchair school, with the Drivkraft method, was found to be based on an evident ground with the following main components for knowledge translation;

- peer mentor lead – role modelling
- group activities – learn from others in the same situation
- heterogeneous groups
- components of training
- wheelchair adjustments
- patient education

This comprehensive pedagogical method is unique in the combination of all these components, which strengthens the concept.

Introduction

At the Wheelchair School a wheelchair skills training method called 'Drivkraft' is used. It is a method which includes wheelchair adjustments, skills training and patient education. Drivkraft is developed, and is still developing, by Åke Norsten, a Physical Education teacher and experienced wheelchair user. He teaches his method at Rehab Station in Stockholm, in co-operation with a physiotherapist and a wheelchair mechanic.

Objective

To describe and substantiate the method of the wheelchair skills training called Drivkraft.

Method

Methodological triangulation was done by having three persons observe two wheelchair classes over a period of eight days. Based on these experiences, two semi-structured interviews were held with the developer of the method. Interviews were transcribed, coded and analysed. Literature studies were conducted to find out what evidence could be found on the components of the method.

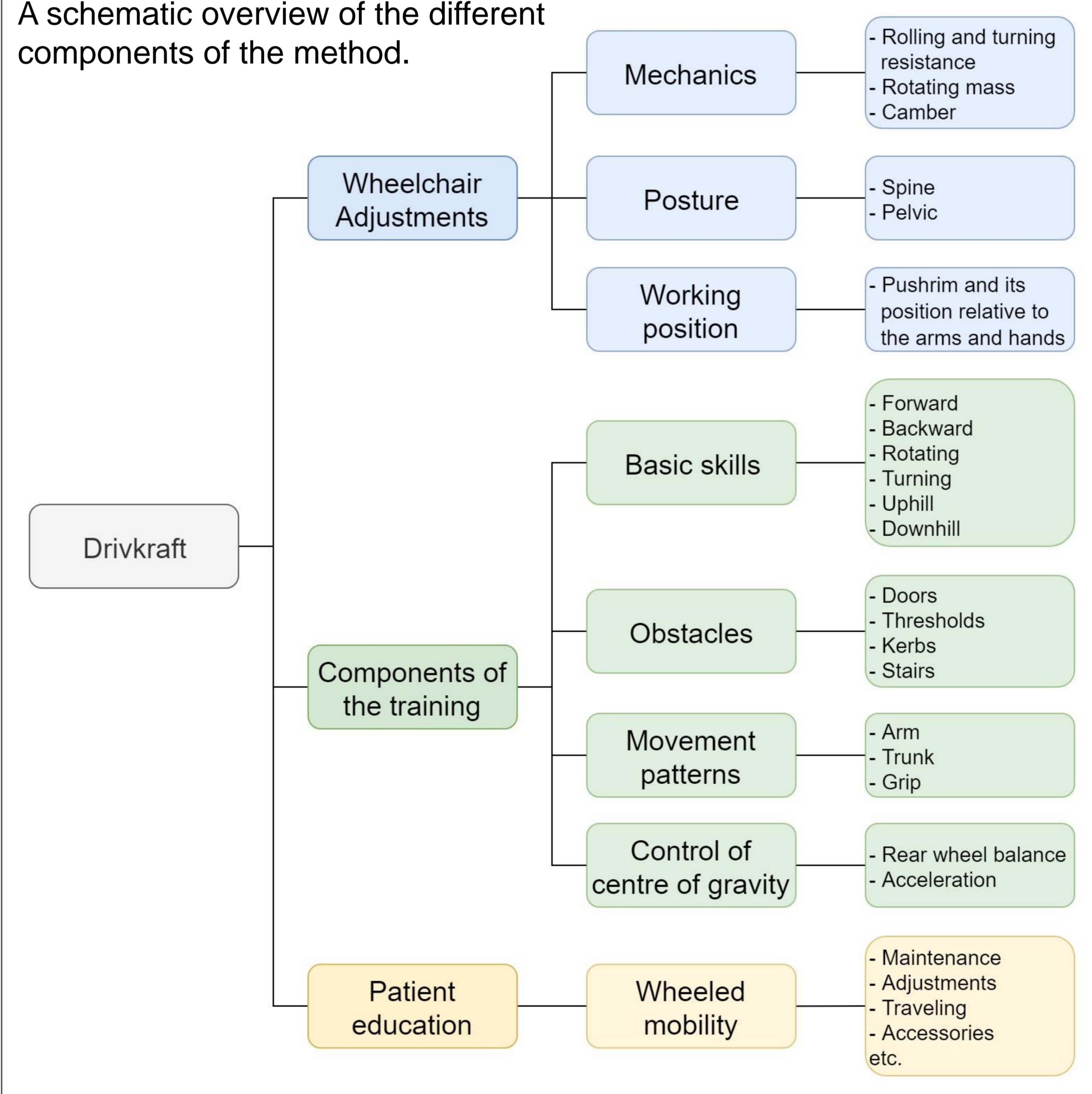
Results

The findings showed that the method was based on three components that can be further divided into subcomponents. These are:

- 1) wheelchair adjustments (mechanics, posture & working position);
- 2) components of training (basic skills, obstacles, movement patterns & control of centre of gravity);
- 3) patient education (wheeled mobility).

Literature supports all of the components, using the peer mentor and giving the training in heterogeneous groups for transferring the knowledge.

A schematic overview of the different components of the method.



Ongoing research

A test was developed for measuring the wheelchair skills at the wheelchair school.

The reliability study was recently finished, and the next step is to determine the effectiveness of the training method.

The reporting form of the developed Drivkraft Wheelchair Manoeuvre Test

Protocol DWMT- Reporting form

Drivkraft Wheelchair Manoeuvre Test
Reporting form

Name: _____
Date: _____
Assessor: _____

Task 1: Fundamental manoeuvring – Precision

Stalom _____ seconds
Time: _____
Mistakes: _____ (amount)

Task 2: Fundamental manoeuvring – Slope of 1/10,3

Ascending a slope	Descending a slope with stalom
Successfully completed _____	Successfully completed _____
Yes/No	Yes/No

Task 3: Control of centre of gravity – Rear wheel balancing, push and sliding/breaking

Push	Sliding/breaking
<input type="checkbox"/> Rear wheel balance for 30 seconds <input type="checkbox"/> Turn 360 degrees (in both directions) <input type="checkbox"/> High / Low balance position 10 cm Successfully completed _____/3	<input type="checkbox"/> Slope on the rear wheels <input type="checkbox"/> Slope on the rear wheels with stalom <input type="checkbox"/> Flat surface distance of 2 meters on rear wheels Successfully completed _____/3

Task 4: Obstacle technique – Going up and down a kerb

Ascending a kerb	Descending a kerb
<input type="checkbox"/> 1.0 cm <input type="checkbox"/> 2.5 cm <input type="checkbox"/> 5.0 cm <input type="checkbox"/> 7.5 cm <input type="checkbox"/> 10.0 cm <input type="checkbox"/> 12.5 cm <input type="checkbox"/> 15.0 cm Maximum height: _____ cm	<input type="checkbox"/> 1.0 cm <input type="checkbox"/> 2.5 cm <input type="checkbox"/> 5.0 cm <input type="checkbox"/> 7.5 cm <input type="checkbox"/> 10.0 cm <input type="checkbox"/> 12.5 cm <input type="checkbox"/> 15.0 cm Maximum height in control: _____ cm

From 5.0 cm land on four wheels or on the rear-wheels.

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