

<p>PRINCIPLES OF HALLIWICK AND ITS APPLICATION FOR CHILDREN AND ADULTS WITH NEUROLOGICAL CONDITIONS Ann Gresswell, Jean-Pierre Maes</p>

This workshop was given at the Autumn 2000 HACP Study Day

Introduction

“The Halliwick Concept is an approach to teach all people, particularly focussing on those with physical and/or learning difficulties, to participate in water activities, to move independently in water, and to swim.” (IHA, 2000).

The Concept, based on hydrostatics, hydrodynamics and body dynamics was initially developed in 1949 by James McMillan MBE, an engineer and swimming teacher.

Since its inception the Concept has continued to develop but still maintains its original philosophy:

- to encourage participation in water activities
- to encourage independent movement
- to teach swimming.

The multiple benefits of this approach include physical, recreational, social, personal and therapeutic aspects.

Many elements of the Halliwick Concept can be learned through games and group activities, which both motivate the swimmer and also allow for social interaction whilst enhancing learning.

The Concept advocates teaching without the use of flotation aids. This is for a variety of reasons, the most important being that flotation aids do not allow swimmers to experience the control of unwanted rotations, which is vital to progress with balance and movement in water.

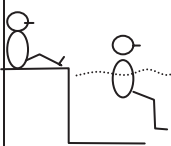
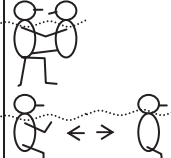
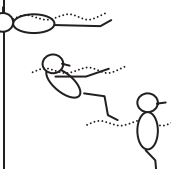
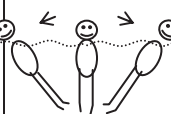
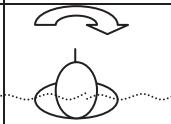

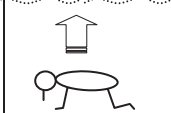
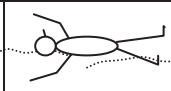

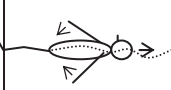
This holistic Concept, based around ‘the Ten Point Programme’, (see below) brings together knowledge about the following areas:

- | | | |
|------------------------------|-------------------------|------------------------|
| • water | • motivation | • activities and games |
| • the body | • challenge | • groups |
| • disability equality issues | • teaching and learning | • swimming strokes |

The Ten Point Programme has been designed to establish a logical progression from the initial experience in the water environment to a basic swimming stroke.

However, you do not need to completely master one stage before going on to the next stage, there can be overlapping (as found in child development). Having moved to a new point, it is important to continue working on previous points in order to refine them. All the points will need to be mastered to become competent in water.

The Ten Point Programme

Point 1	Mental Adjustment		Being able to respond appropriately to a different environment, situation or task. The learning of breath control is an important aspect of this work. (IHA, 2000) One such example is adjusting to moving in water compared to moving on the side of the pool
Point 2	Disengagement		An ongoing process throughout the learning by which the swimmer becomes physically and mentally independent. (IHA, 2000)
Point 3	Transversal Rotation Control (formally Vertical Rotation)		The ability to control any rotation made about a fronto-transversal axis. (IHA, 2000)
Point 4	Sagittal Rotation Control		The ability to control any rotation made about a sagitto-transversal (anterior/posterior) axis. (IHA, 2000)
Point 5	Longitudinal Rotation Control (formally Lateral Rotation)		The ability to control any rotation made about a sagitto-frontal (longitudinal) axis. (IHA, 2000)
Point 6	Combined Rotation Control		The ability to control any combination of rotations. (IHA, 2000)
Point 7	Upthrust		Trusting the water will support you. Sometimes called 'mental inversion' (because the swimmer must invert their thinking and realise they will float and not sink). (IHA, 2000)
Point 8	Balance in Stillness		Floating still and relaxed in the water. This is dependent on both mental and physical balance control. When balanced, other activities can be performed more easily. (IHA, 2000)
Point 9	Turbulent Gliding		A floating swimmer is moved through the water, by an instructor, without any physical contact between them. The swimmer has to control unwanted rotations but makes no propulsive movement. (IHA, 2000)
Point 10	Simple Progression and Basic Swimming Movement		The development from simple propulsive movements made by the swimmer to a stroke which may be individual to each swimmer. (IHA, 2000)

Illustrations: (Maes, 2000)

The Halliwick Concept, through the Ten Point Programme, provides the three essential components for motor learning:-

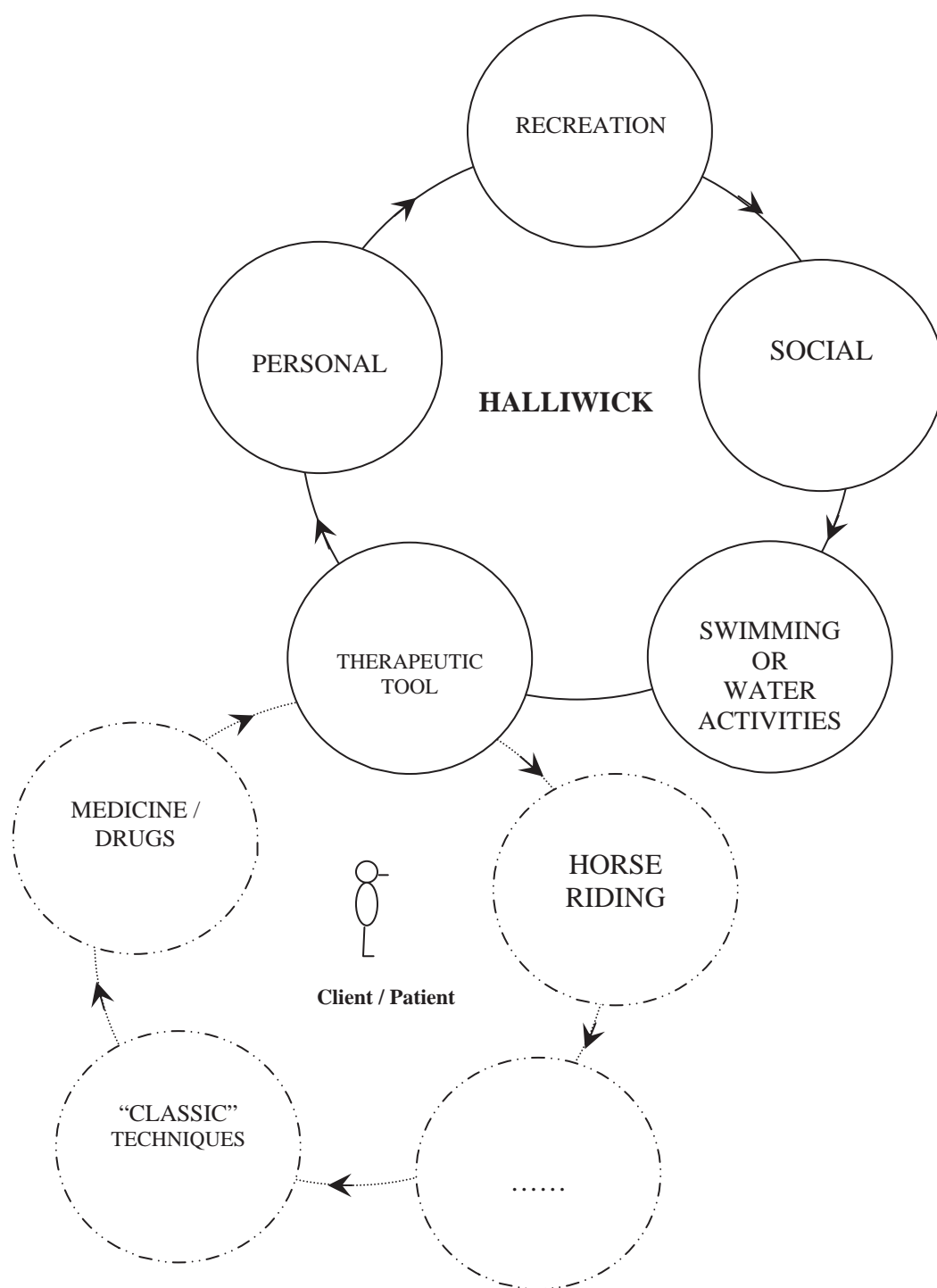
Mental Adjustment - Balance Control - Movement

Therapeutic Application of the Halliwick Concept

As mentioned, the Concept has an holistic approach. One of its dimensions is therapeutic.

The use of Halliwick as a therapeutic tool could be an essential or a secondary part of a therapy programme.

Different therapists may find various useful applications of the Halliwick Concept according to their specific area of intervention (for example physiotherapist, occupational therapist, speech and language therapist ...)



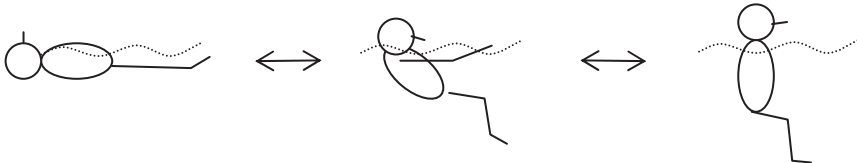
Illustrations: (Maes, 2000)

Linking the Ten Point Programme to Therapy

This section looks at the Ten Point Programme in relation to therapy. For each point to be mastered there are an infinite number of games and activities that can be practised. Here, having a lot of creativity helps!

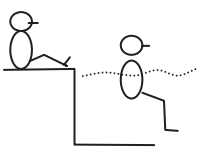
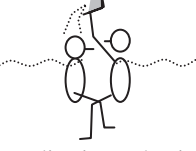
Some activities will suit your therapeutic interest more than others will; some activities can, of course, be adapted so that they fulfil the condition for your client to make progress.

Each activity for a particular point can be analysed into individual components

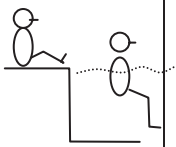
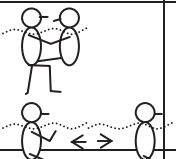
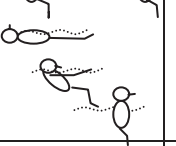
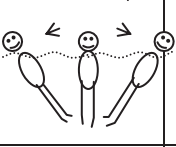
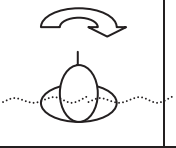

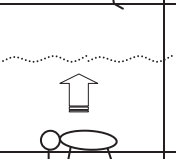
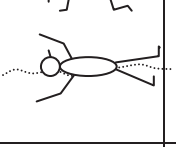
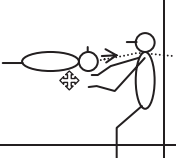
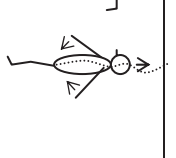
POINT 3 : Transversal Rotation			
			
This activity can be broken down in order to specifically address one of the following:			
SENSORY	MOTOR	COGNITION /PERCEPTION	OTHER
<ul style="list-style-type: none"> Visual tracking Integrate vestibular input for balance 	<ul style="list-style-type: none"> coordination for reaching out : extending arms with trunk flexion promote stability in the vertical through better abdominal activity 	<ul style="list-style-type: none"> preventing a startle when in a supine position for the client to realise that he/she has to participate in their own safety 	<ul style="list-style-type: none"> speech: blowing bubbles allowing for better control of breathing
Illustrations: (Maes, 2000)			

In the example below we look at the hypothetical case of a child with Cerebral Palsy, who has feeding difficulties due to hypersensitivity around the oral area. Within the activities chosen for Point 1, Mental Adjustment, we would place emphasis on tolerating water running over and splashing in the face within a playful and fun atmosphere.

Equally, with a child with poor concentration, this activity could be used to gain the child's attention so that he/she knows when you are going to pour water over his/her head again.

			Functional Activity	Therapeutic Interest
Point 1	Mental Adjustment	 <p>Learning to cope with the differences between dry and wet</p>	 <p>e.g. adjusting to having water running over the head and mouth while blowing bubbles...</p>	<ul style="list-style-type: none"> sensory inputs concentration communication
Illustrations: (Maes, 2000)				

You could use the grid below as a working sheet, where you will identify the ‘therapeutic interest’ for a particular client, and then from this find out which functional activities would be most appropriate for each of the 10 Points.

Client's name: Date:			Functional activity	Therapeutic interest
Point 1	Mental Adjustment			..... ..... ..... .....
Point 2	Disengagement			..... ..... ..... .....
Point 3	Transversal Rotation Control (formally Vertical Rotation)			..... ..... ..... .....
Point 4	Sagittal Rotation Control			..... ..... ..... .....
Point 5	Longitudinal Rotation Control (formally Lateral Rotation)			..... ..... ..... .....
Point 6	Combined Rotation Control			..... ..... ..... .....
Point 7	Upthrust			..... ..... ..... .....
Point 8	Balance in Stillness			..... ..... ..... .....
Point 9	Turbulent Gliding			..... ..... ..... .....
Point 10	Simple Progression and Basic Swimming Movement			..... ..... ..... .....

Illustrations: (Maes, 2000)

Specific therapeutic advantages of working in water:

- Because of the supporting effect of water, it is often possible to facilitate more distally, therefore allowing more opportunity for the client to be active proximally.
- In water, the therapist can provide specific fixed points that cannot easily be used on land. This can allow a client to organise their movement in a particular way (for example, when the client is in supine, giving resistance at the posterior and external side of the heel can be part of the process to initiate extension, abduction and external rotation of the hip).
- The client has to develop internal stability in water, as they cannot use external support to compensate.
- Because movement in water is slower, the client often has enough time to regain their balance with very little therapeutic intervention. This will contribute to the development of independence.
- Because asymmetry and associated reactions induce unwanted rotations in water, the need to move differently becomes more obvious and gives purpose to maintain a better alignment.
- Abduction, external rotation and extension of the limbs facilitate balance in supine in the water. Abduction, external rotation and extension are often patterns we try to promote in clients with typical patterns of hypertonia (for example adduction, internal rotation and flexion of the hips or shoulders)
- Hypertonia is influenced by the effort to maintain balance and to move against gravity. Working in the water where the effect of gravity is different, often reduces the hypertonia. This can be a starting point to develop appropriate sensory-motor experiences.
- Because there is less risk of hurting themselves or falling against a hard surface, fear could be reduced (as long as the client is mentally adjusted to water).
- Because the water supports you without any fixed point, every distal (limb) activity will require appropriate proximal (trunk) adjustments.
- It is often easier, once in the water, to handle/mobilise large clients.
- Newly acquired skills (on land) can be practised, repeated and integrated in water (generalisation).
- The learning of some activities can be initiated more easily in water and can then be further developed on land (for example balance in standing, or learning to blow as a preparation for oral communication).
- Working in the water can facilitate sensory/perceptual processing needed for more efficient co-ordination, spatial orientation and general understanding of the world.
- Group work in the water promotes social skills, turn taking, communication and opportunities for play and competition.
- Going to the swimming pool provides a number of activities before and after getting into the water. For example packing the swimming costume, the journey, undressing/dressing....
- Working in the water can bring variety, challenge and motivation (for the client and sometimes for the therapist!), especially in long-term rehabilitation.

Conclusion

As therapists you know what you want to achieve! Using the Halliwick Concept can give you a guide or tool to enhance/implement your therapy/management programme.

Water can be fun, exciting and calming and also allows freedom to move, to experience the body in a different way, to develop social contact... And it can be extremely motivating.

In 1997, Margaret Reid Campion wrote: “The influence of the Halliwick Method [as it was then known] on water activity is marked. It has brought about refinements in hydrotherapy techniques, developed new means of exercise and shown that combined therapeutic and recreational programmes provide continual rehabilitation for all disabilities in both paediatric and adult fields allowing the maximum potential to be reached and the physical, psychological and social benefits to accrue...”

IHA (2000) *International Halliwick Association Paper: the Halliwick Concept*

Maes J-P (2000) *Presentation for the HACP workshop Autumn 2000 - Principles of Halliwick and its application for children and adults with neurological conditions*

All illustration in this article are from Maes J-P

For further information on the Halliwick Concept contact Halliwick AST c/o ADKC Centre, Whitstable House, Silchester Road, London W10 6SB

The Halliwick AST web site is www.halliwick.org.uk

The IHA web site is www.halliwick.org

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