

# Flipturns of Adolescent Swimmers Psychological (in)Flexibility: An Idiographic Study with DNA-V

Matteo Chies<sup>1,2</sup>,  
Stefano Mastino<sup>1,2</sup>,  
Giovanna Pignatelli<sup>2</sup>,  
Claudio Mulatti<sup>2</sup>  
<sup>1</sup>University of Verona, <sup>2</sup>University of Trento

contact: matteo.chies@unitn.it



## INTRODUCTION

**Psychological flexibility** is a key factor in athletic **performance** and **well-being** [1]. This study investigates the effects of a DNA-V training [2] on all DNA-V competences and **motivation**, based on psychological flexibility, both in training and competition.

## METHODS

- Design: **idiographic** longitudinal study.
- Psychological training: 12-session **DNA-V program** (60-minute sessions over six months), including in-water practice.
- Assessment: weekly self-report open-ended questionnaires, both after training sessions and competitions, aimed to evaluate DNAV-related skills.

4 Athletes: 1 - 16yo 2 - 13yo 3 - 16yo 4 - 14yo

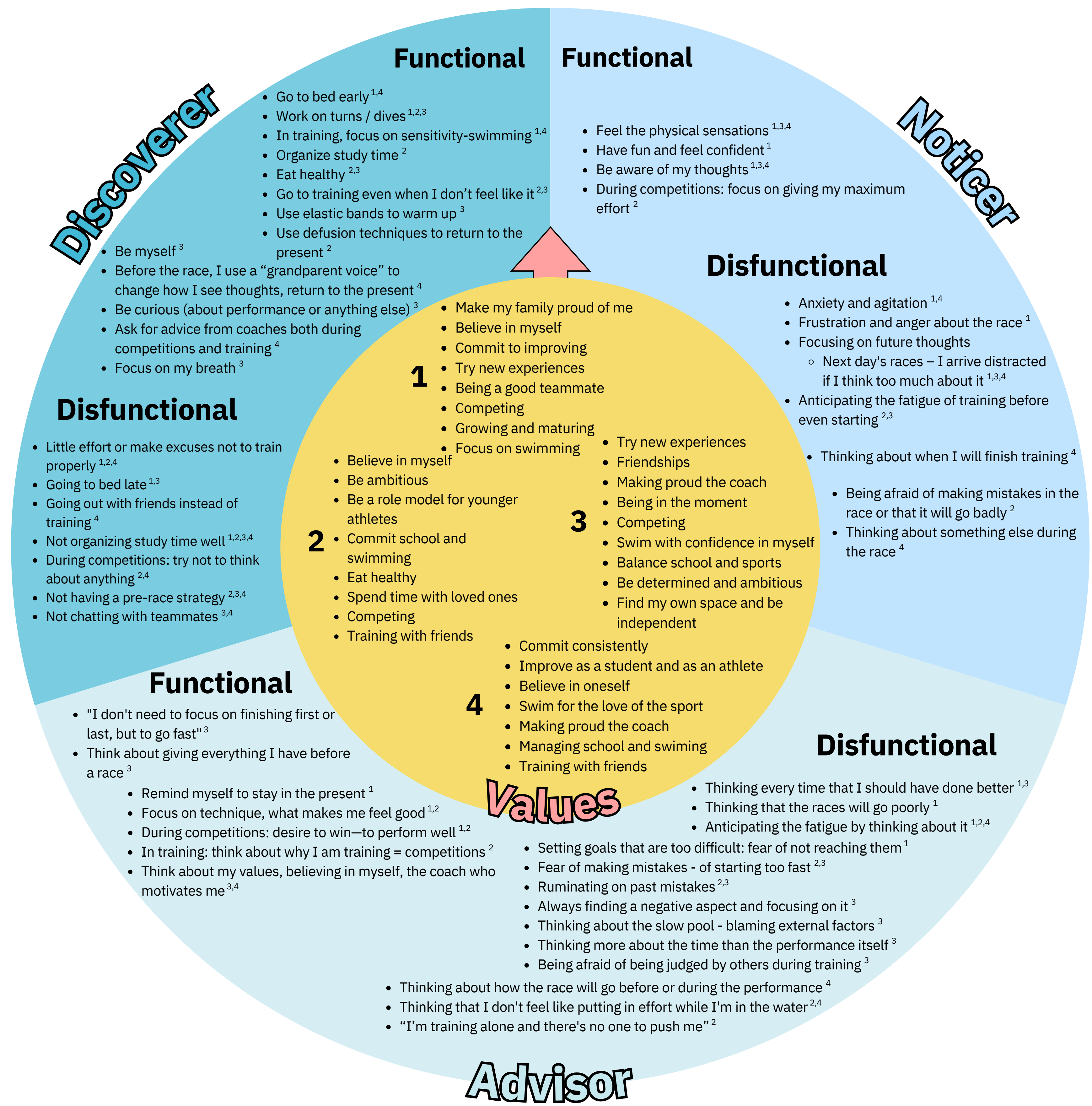
## RESULTS

- There are many **differences between participants**, showing the importance of developing individualized trainings.
- 3** - strong negative Vision of Self negatively influences all other competences;
  - 2,3,4** - improvement in both Values and Discoverer, while **1** remains too focused on goals rather than values;
  - 2** and **4** connected early to their Values and applied committed actions;
  - 1,2,3** - small improvement in A (not the aim of the training);
  - No athlete showed improvement in Noticer.
  - Many thoughts are recurrent among all athletes.

## DISCUSSION

DNAV-based training is be an effective approach to enhance psychological flexibility in adolescent competitive swimmers.

**Take-home message:** Although the training resulted in positive outcomes for the team, individual differences should be taken into account to address each athlete's need.



**DNA-V disk:** all four athletes' thoughts, actions and values emerged through the questionnaires and during the training sessions.

A color-coding scheme based on Thematic Analysis was developed to illustrate psychological flexibility changes. Each DNA-V competence was coded according to its defining characteristics. Below, the colors represent the questionnaires responses:

- Inflexible answer
- Partially flexible answer
- Flexible answer

Training Sessions		1V	2V	3V	4D	5D	6D	7N	8N	9A	10A	11D	12V												
Athlete 1	D																								
	N																								
	A																								
	V																								
	Self																								
	Social																								
Athlete 2	D																								
	N																								
	A																								
	V																								
	Self																								
	Social																								
Athlete 3	D																								
	N																								
	A																								
	V																								
	Self																								
	Social																								
Athlete 4	D																								
	N																								
	A																								
	V																								
	Self																								
	Social																								

## REFERENCES

- Wood, S., & Turner, M. J. (2025). Integrating Psychology Skills Training (PST) with Acceptance and Commitment Therapy (ACT). *Journal of Sport Psychology in Action*, 1-12.
- Hayes, L. L., & Ciarrochi, J. V. (2015). *The thriving adolescent: Using acceptance and commitment therapy and positive psychology to help teens manage emotions, achieve goals, and build connection*. New Harbinger Publications.