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# Acceptance and Commitment Training (ACT) for athletes

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## Acknowledgements

- MODO hockey, Stockholm University and Karolinska Institutet
- Markus Näslund, Ulf Samuelsson, Peter Andersson, Peter Forsberg, Per Svartvadet, MoDo hockey youth coaches, players and my students Gustaf Reinebo, Emil Jäder, Olle Lööf, Maria Larsen and Oscar Anderblad
- Steve Hayes, Joanna Dahl, Clara Hellner
- Thanks to the AASP organization for having me.

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## Agenda

- Introduce ACT and my journey with ACT
- Introduce ACT for ice hockey players
- Exercises (?)
- Present overview of some research
- Where do we go from here...

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## My journey in ACT

- Part in arranging the first world conference in ACT/RFT
- ACT for self destructive female adolescents
- ACT for Epilepsy in India and South Africa
- ACT for Pain (Living Beyond your Pain)
- ACT for AST (Youth and adults)
- ACT for psychosis, in patient
- ACT for BDD/Shame/self compassion
- ACT for ADD
- ACT for Depression
- ACT for elite athletes
- Psychometric evaluations
  - Bull's-Eye Values Survey, SAAQ, NAAQ, AAEPQ



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## Background to my engagement in Sports

- Always loved sports
- Consultant contract at MODO hockey 2011-2015
  - Vision agreed with Markus: adapting a scientific approach to the development of MODO hockey, at an organisation, team and individual level to increase performance
  - Research was weak (and still is) so important for me not to try to play a role and act as if I, from a science perspective knew what to do.
  - Negative experiences from mental health coaches promising a lot but delivering nothing.
  - We needed to test, adjust, test again etc.
  - Opportunity to develop interventions in a highly competitive environment, from theory to practice with a scientific approach



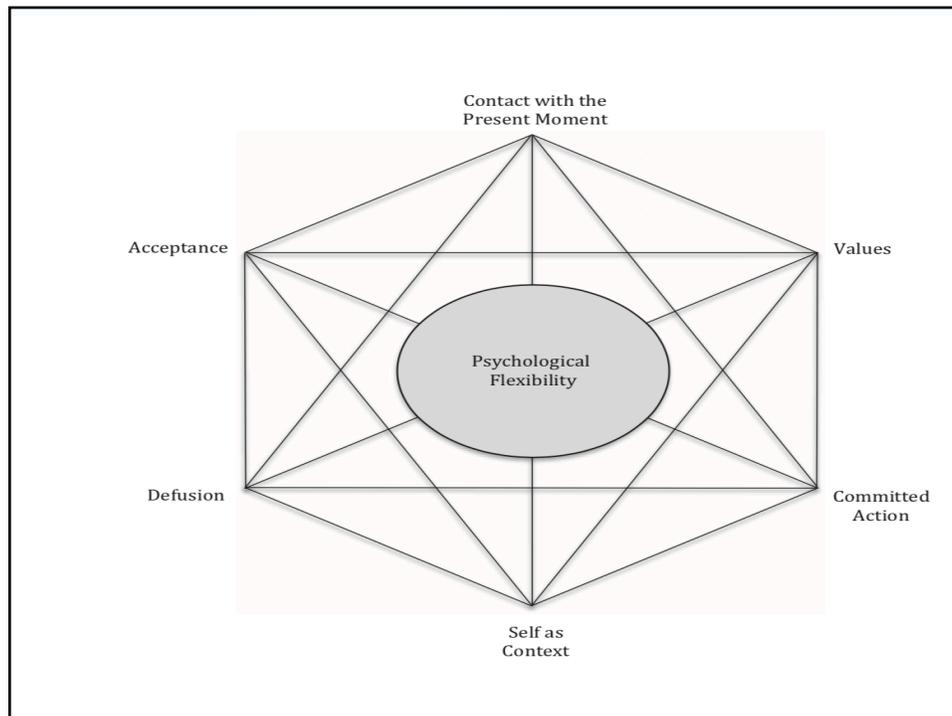
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## ACT introduction

- Hayes and colleagues wanted to change psychology and build a model that expand on the level of philosophy (functional contextualism), theory (Relational Frame Theory), and intervention/treatment (Acceptance and Commitment Therapy, ACT).
- First ACT study 86, Zettle and Hayes (Comprehensive distancing)
- After that study, focused on theoretical development (RFT) in 15 years
- Since the first ACT book 2001 around 350 RCT studies



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## Psychological flexibility

- Open up to experiences
- Aware make yourself aware of what is going on at the inside and outside context and direct attention
- Engaged in actions in line with your values as a conscious human being

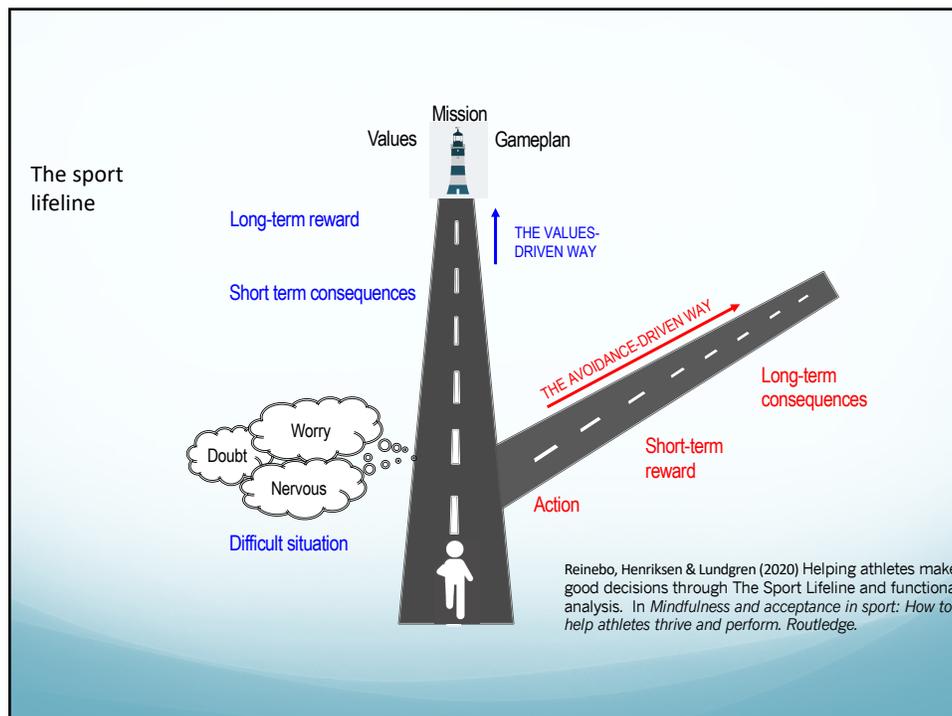
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## ACT In Ice hockey

- Develop flexible players who are better prepared to perform to what situations demands.
- Flexible ice hockey players: Increase ability to embrace all different emotions and thoughts, be present on the ice and react to what happens on the ice and their values as players, moment to moment.
- Inflexible players: Restricted by their private events, self focused, controlled by fear and their attention is not on the ice but on private events and those private events decrease effective valued consistent behaviors.  
Rigid/narrow behavior repertoire

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## Bull's-Eye Exercise

Defensive  
What to do  
more/less off

Bullseye  
Close  
In vicinity  
Far from

- Define hockey values
- Measure how well players have been acting in line with their values
- Describe obstacles of acting in line with their values
- Bold actions that challenge their obstacles and takes them in valued direction
- Practice acceptance, mindfulness skills in order to increase bull's-eye living

Offensive  
What to do  
more/less off

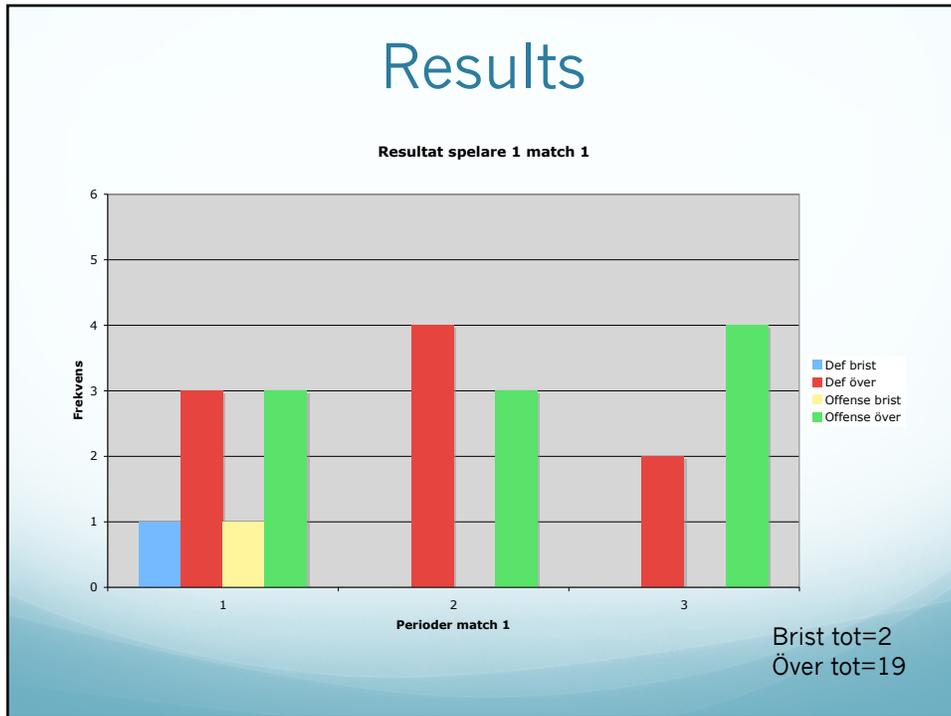
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## Case study ABA design

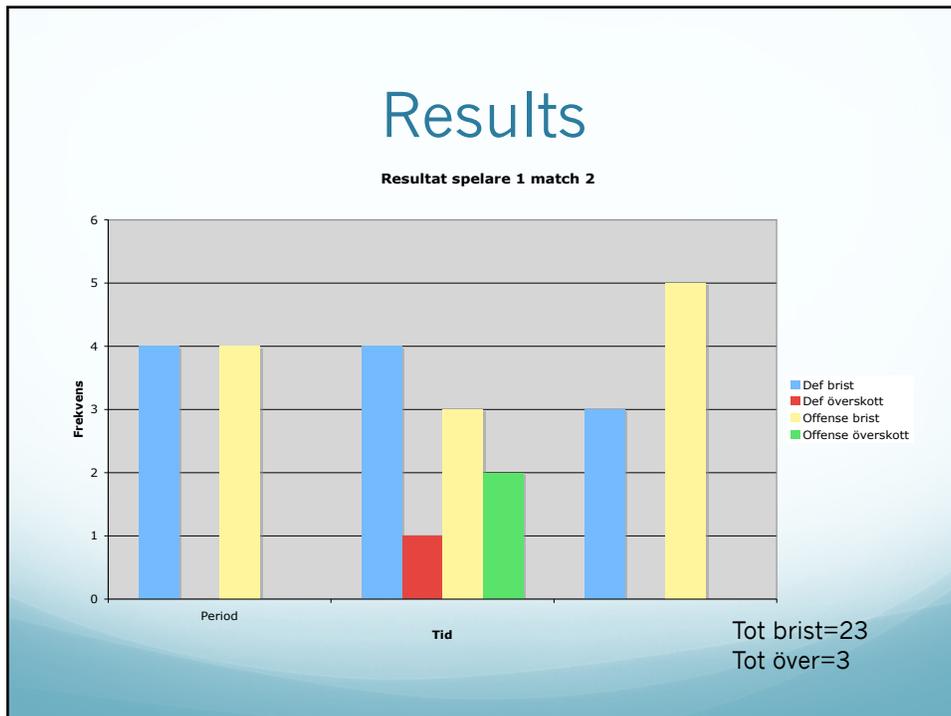
Lundgren, T & Kenttä, G. Tredje vågens KBT = ACT, Mindfulness och Self Compassion. In Kenttä, G., Lundqvist, C., & Bjurner, P. (2015). *Bättre prestation & hälsa med KBT – fakta inspiration fallbeskrivningar*. Stockholm: SISU Idrottsböcker, Sweden.

- Aim: Test the adjusted ACT exercises influence on ice hockey behavior
- Two games. 3 measure points/game
- Measure: Frequency of behaviors to do more of/less of
- Exercises:
  - Hockey life line (Functional analysis on the floor with values as a reference)
  - Definition of hockey behaviors to do more and less of (Check with coach)
  - Feedback on bull's-eye dartboard between periods and refocus on important behaviors
  - Juggling exercise
  - Feedback directly post game
  - Use video the day after to get more feedback on hockey behaviors.

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## VAMS

Lundgren, T., Reinebo, G., Löf, O., Svartvadet, P., Näslund, M., Parling, P. (2018) The Values, Acceptance, and Mindfulness Scale (VAMS) for ice hockey: A psychometric evaluation. *Frontier in psychology*  
<https://doi.org/10.3389/fpsyg.2018.01794>

- We needed to be able to measure the psychological processes we wanted to influence with our interventions.
- Aim: To develop and evaluate a psychometrically sound measure that captures ACT processes for Ice hockey players.
- Measure Values, Acceptance and Mindfulness skills in elite Ice hockey players (N=93)
- Shows satisfying validity and homogeneity
- Correlates significantly with on-ice performance, AAQ, SWLS

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## Controlled group trial

Lundgren, T., Reinebo, G., Näslund, M., Parling, P. (2019) Acceptance and Commitment Training to promote psychological flexibility in ice hockey performance: a controlled group feasibility study. *Journal of Clinical Sport Psychology* 0 0:0, 1-22 DOI: <https://doi.org/10.1123/jcsp.2018-0081>

- Will the ACT training influence mindfulness, acceptance and values as measured with VAMS?
- Will the players like and find the content meaningful when the intervention is given in group?
- N=21, Control = 8, expgroup = 13, 4\*30-40 minutes group training, Measurements pre and post: Credibility scale, VAMSS
- Result shows that the intervention influenced the processes we hypothesized significantly in the group we trained ( $p=.015$ , *Cohens d=1.04*)
- Also, 46% of the players rated that the intervention helped them to become much better players and 64% a little bit better
- 100% would recommend other players to take the course (yes/no)
- 93% of the players rated on a 4 point scale that much of what we did in the training was important for them as Ice hockey players.

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## RCT

Lundgren, T., Reinebo, G., Jader, M., Jansson-Fröjmark, M., Näslund, M., Svartvadet, P., Parling, T. ACT for Ice Hockey: A Randomized Controlled Trial, manuscript in preparation.

- Will the ACT training influence on ice performance compared to a waiting list, will the players like it and consider it helpful, and will it show in blind coach ratings?
- Design: Randomized Controlled Trial, N=40
  - Pre, post and 3 month follow up
  - Measurement: Goals, assists, total points, blinded coach ratings and players self rating.
- ACT vs Waitlist control
  - Matched groups:
    - Skill (national team players), age, and position on the ice (defenders, forwards and goalies) were accounted for.

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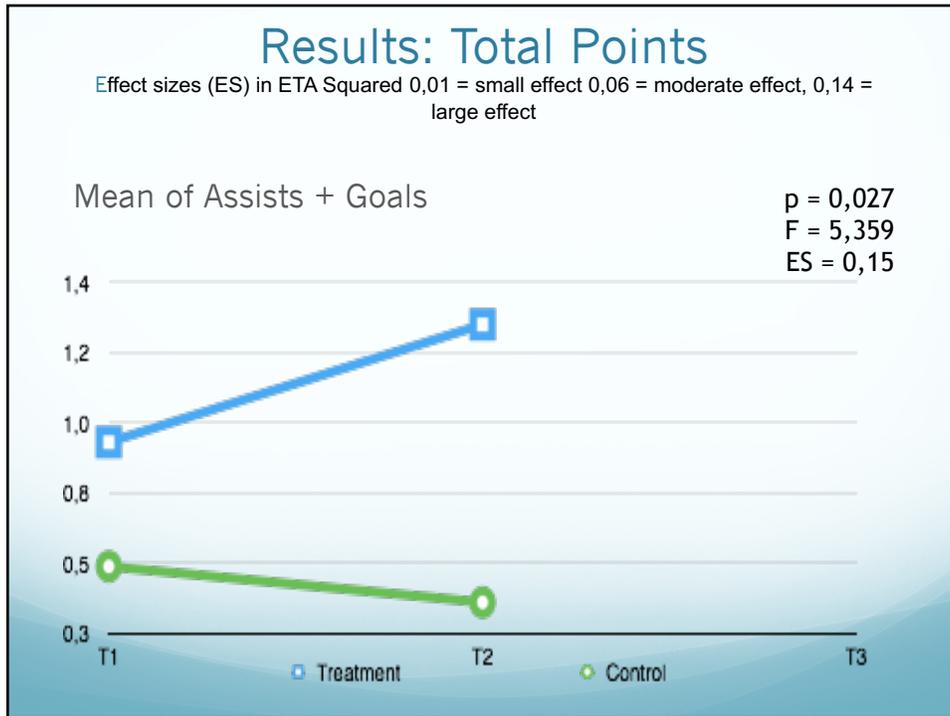


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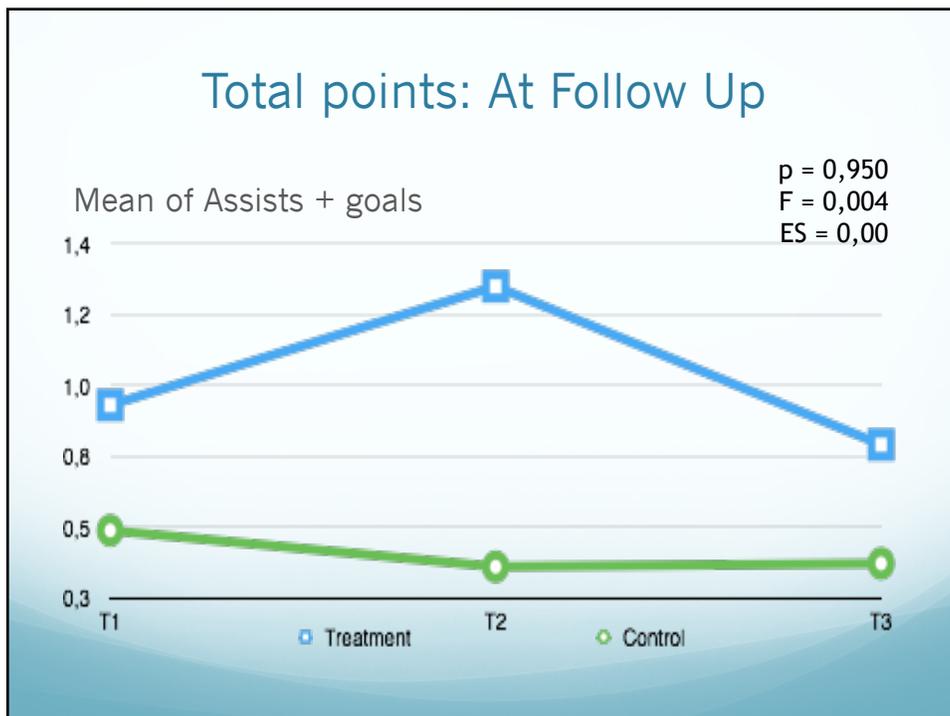
## Intervention structure

- Total of 4 training sessions (45-60 minutes) with homework between sessions
  - Same structure of each session
    - Session Purpose
    - Summary of last session
    - Experiential exercise
    - Homework assignment

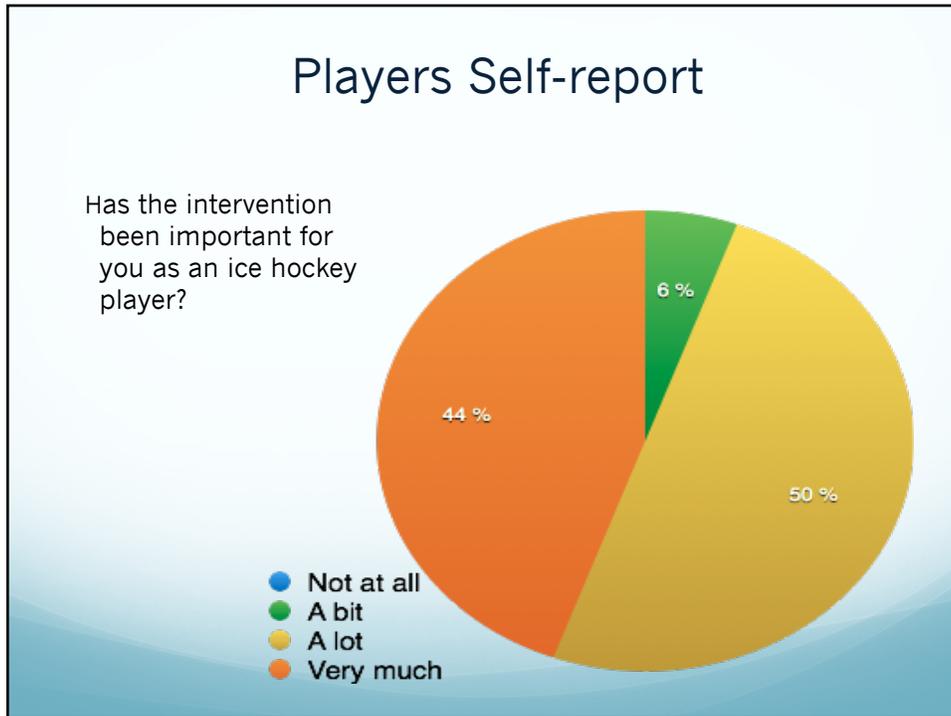
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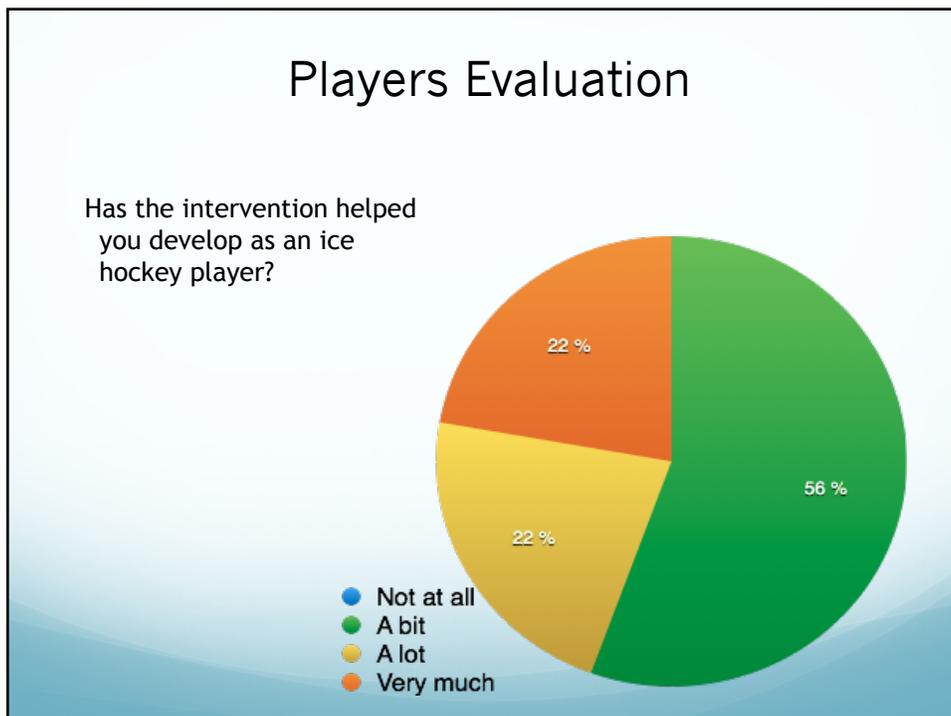
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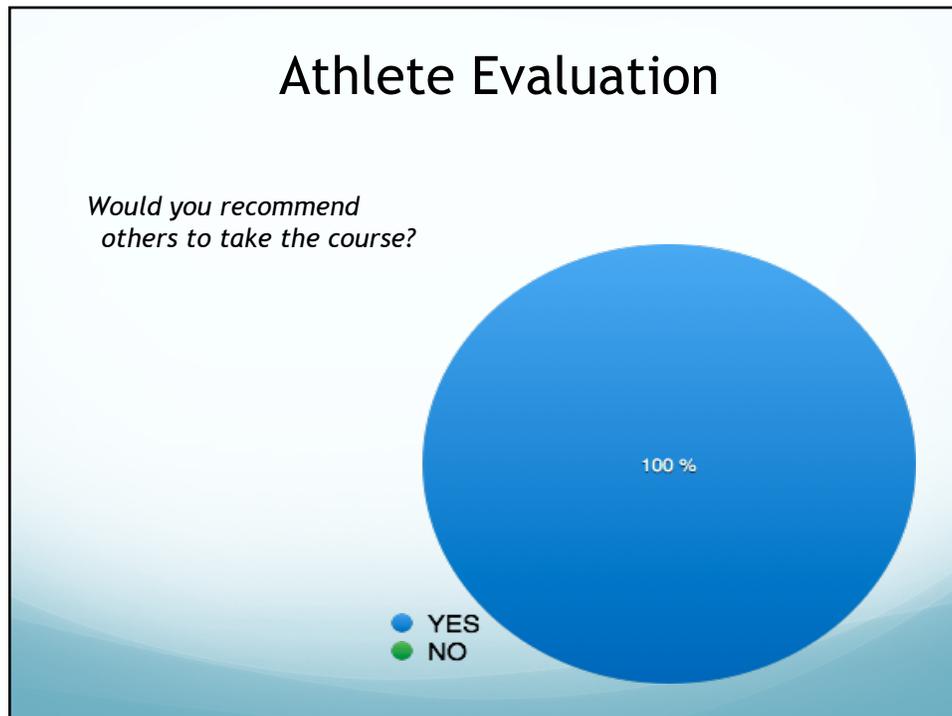
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## Result summary

- Approximately 50 % increase in total points in the ACT group at post. However no long term effects was established.
- Coaching staff report a significant improvement in focus, on ice skills for those who trained ACT
  - Effects maintained over the three months period.

The logo of Karolinska Institutet, featuring a circular emblem with a caduceus and the text 'KAROLINSKA INSTITUTET' and 'ANNO 1810'. To the right of the emblem, the text 'Karolinska Institutet' is written in a bold, sans-serif font.

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## Studies ongoing

- Sports Bull's-Eye: A psychometric evaluation
  - (Reinebo, Parling, Andersson, Jansson-Fröjmark, Lundgren, manuscript under preparation)
- I-ACT for ice hockey players: A Feasibility study
  - (Reinebo, Parling, Andersson, Jansson-Fröjmark, Lundgren manuscript under preparation)
- I-ACT for ice hockey players: An open pilot trial
  - Reinebo, Parling, Andersson, Jansson-Fröjmark, Lundgren ongoing
- Metaanalysis Psychological interventions to influence objective performance
  - Reinebo, Alfonssonson, Andersson, Rozenhal, Jansson-Fröjmark, Lundgren
- Psychological Flexibility in Sport Scale (PFSS)
  - Johles, Gustafsson, Jansson-Fröjmark, Classon, Lundgren
- Negative effects of psychological training for Elite Athletes
  - Reinebo, Rozenhal, Salomonsson, Lundgren
- Loneliness, openness and connection in team sports and its relation to health and performance
  - Study under development

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## Summary

- There is a need to develop and evaluate ACT work for athletes
- Research is weak which means that there is a huge opportunity for all of you to fly and contribute and be leaders in the field.
- Develop not only interventions but also measurements
- Share your work, be humble of what we actually know.
- We know what we know lets test it out.

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## Thanks for your time

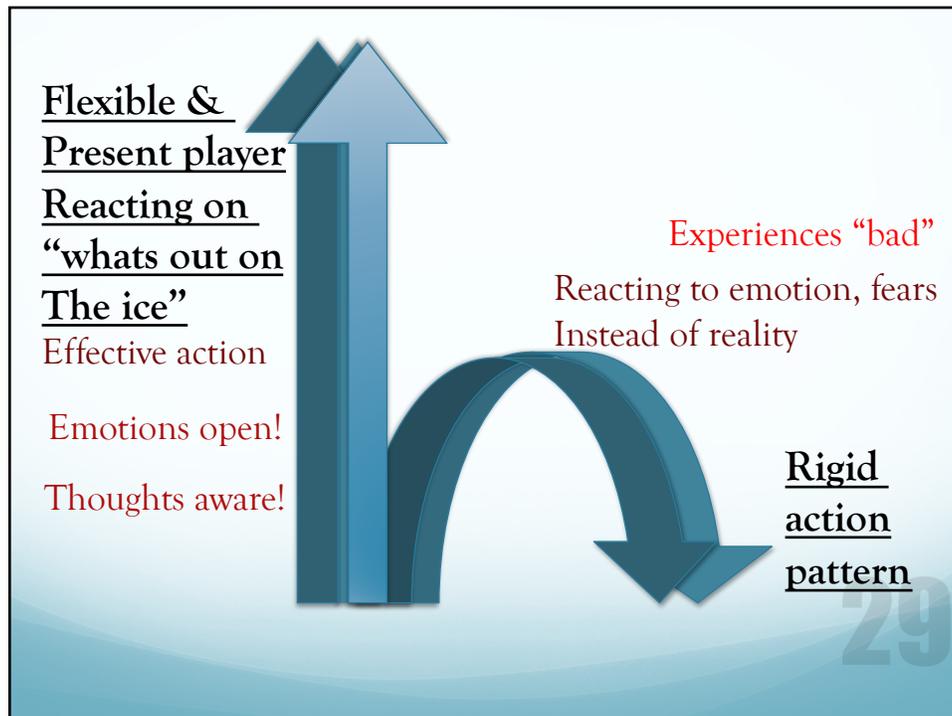
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## Post game exercise to save mental energy

- Three step model for post game work:
  - Aim: systematic approach to mental work, develop your skills as a player, and shorten the time for rumination
- 1) Set a time, say 1 hour. During that hour you are happy, angry or disappointed. Be with what ever is present.
- 2) Think about your game, is there anything you want to change or do differently? What did you do good? (write it down in your post game sheet)
- 3) Close the books (bokslut) for the game and use the skills we practiced on to do other things (engage in other areas in life, family, friends, girlfriends etc

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## In my consultant work

- Trained coaches
  - Weekly letters about concepts in learning psychology and ACT with exercises for coaches
  - Continuous conversations about learning psychology and ACT
  - Material for them to use and have them to work and develop
- Group
  - Introduce concepts and training material through didactic teaching and experiential exercises
- Individual
  - Work with skills
  - Self confidence = Good player.. (Common idea)
  - Do right things in valued directions = See what happens
  - Let go of the struggle with private events and use the energy to engage in behaviors that increases the likelihood of good performances

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## Main processes

- Acceptance
  - We practice the ability to carry and embrace emotions whatever face they show us. Emotions are not causes for actions but part of being human.
- Defusion
  - We practice to let our thoughts be thoughts and not necessarily causes for actions. The aim of this process is to increase a sense of choice and ultimately increase behaviors in line with what the players do when they are really effective as players
- Value vs goals
  - Goals are often traps. Before defining goals define values of being a player. Score more goals could be a goal BUT to increase the likelihood of scoring more goals you need to 1) break down the process leading to more opportunities for goals scoring and 2) start doing those behaviors more.

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## Controlled group trial

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- Aim: Will the ACT training influence mindfulness, acceptance and values as measured with VAMS?
- N=21
- Control = 8, expgroup = 13
- Independent variable: 4\*30-40 minutes ACT program
- Dependent variable: psychological flexibility related to hockey and clinical significance
- Measurements pre and post: Credibility scale, ADAQ-Hockey

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## Results on VAMS

	Participants	Pre ACT	Post ACT	Cohen's d	T-value	P-value
		M (SD) VAMS	M (SD) VAMS			
<b>ACT-training</b>	13	54 (9,4)	45,8 (6,1)	1.04	2.83	.015
<b>Control group</b>	8	50,25 (10,4)	50,5 (10,8)	.02	.05	.96

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## Results

- 46% rated that they became much better players due to the training and 64% a little better due to the training. (1-4)
- 100% would recommend other players to take the course (yes/no)
- 7 % rated that all of what we did was important for them as hockey players and 93% rated that much of what we did was important for them as hockey players on a scale between 1 = not important at all to 4 = everything was important

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## ACT introduction

- Aim of ACT is to influence behavior by increasing Psychological Flexibility and build a broader behavior repertoire.
- Open: refers to the active psychological process of opening up for and willingly embrace private experiences whilst pursuing values
- Aware: refers to the processes of making yourself aware of what is going on in your inner and outer context, creating a psychological space between “you” and your experiences and direct your attention as a conscious, connecting, present human being
- Active: refers to the processes of defining and connecting with meaningfulness in your life and take steps in those directions.

# The Power of Mindfulness

1

## What is mindfulness?

- A mental state - degree of breadth vs a narrow focus, a panoramic view that helps the mind make necessary connections in the present moment between information received & information remembered (memory) from past.
- Mindfulness enhances memory.

2

## What is mindfulness?

- Presence of mind of what one is doing, and why.
- Attending to essentials, to what is important.
- The intention is to know the object as it is, to let the object speak for itself.

3

## What is mindfulness?

“Try to be mindful, and let things take their natural course. Then your mind will become still in any surroundings, like a clear forest pool. All kinds of wonderful rare animals will come to drink at the pool, and you will clearly see the nature of all things. You will see many strange and wonderful things come and go, but you will be still. This is the happiness of the wise ones.”

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## Mindfulness as Mirror Mind

- Presence of mind.
- Attending to essentials.
- Remembering.
- Not forgetting.
- Breadth of focus.



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## Mindfulness as Bare Awareness

“We shall not cease from exploration, and the end of all our exploration will be to arrive where we started and know the place for the first time.”  
(T.S.Eliot)



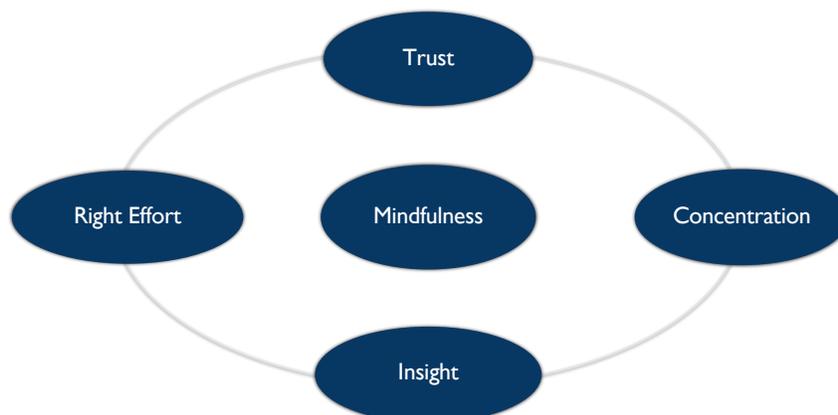
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## The Perceptual Process

- Receptive phase is very short.
- Active phase involves: self-reference, associative thinking, abstract thinking, and more details.
- The Power of Mindfulness elongates receptive phase, creates space between stimulus and response.

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## The Practice of Mindfulness



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## The Power of Mindfulness

- Mindfulness cultivates and balances.
- Trust/Insight.
- Right Effort/Concentration.

9

## What is Trust?

- The Proverbial Glass being half-full.
- The results of practice brings the desired result, a lessening and/or end of suffering.

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## What is Insight?

- Information.
- Intelligence.
- Insight/Direct Knowledge.

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## What is Insight?



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## What is Right Effort?

- A continuous application of enthusiastic, balanced energy.
- Skillfulness.
- Diligence.
- Ardency.

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## What is Concentration?

- Steadiness of mind.
- Beyond likes and dislikes.
- Stillness, centeredness.

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# What is Concentration?

