

Individual differences

International Baccalaureate · IB Diploma · Sports, Exercise and Health Science · HL

Scope and prerequisites

This handout covers selected HL topics for the course first assessed in 2026; it is not the whole syllabus.

Prerequisites: read the stated quantities and units, and use arithmetic and the model conditions below.

The examples are original and fictional: they are not real measurements or real student investigations.

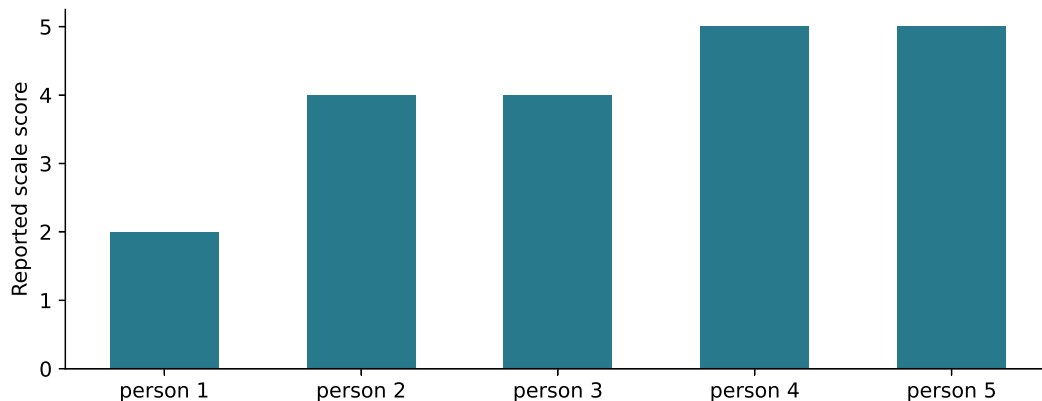
Motivation, stress and evidence in sport

■ What would explain this observation?

- Two athletes can react differently to the same competition. Their appraisal, experience and **coping** strategies affect the response.

■ Build the model

- Motivation** concerns initiation, direction and persistence of behaviour.
- Stress depends partly on the relationship between perceived demands and perceived resources.
- Arousal and anxiety are related but distinct constructs.
- motivation: Processes influencing initiation and persistence.
- coping: Strategies used to manage demands.



$$\text{Mean} = 20 \div 5 = 4; \text{range} = 5 - 2 = 3$$

■ Choose evidence that can test it

- A self-report scale measures reported experience under its design.
- It does not diagnose a disorder or establish a universal relationship between arousal and performance.
- Analyse within-person and between-person variation separately.

In the lab: Use anonymous voluntary questionnaires approved by the school, avoid sensitive personal disclosure, and allow withdrawal. Compare the same task and time point, define the scale and explain its limitations.

■ Work from known quantities

- Known: reported scores are 2, 4, 4, 5 and 5.
- Mean = sum/count = $20/5 = 4$.
- Range = maximum-minimum = $5-2 = 3$.
- The mean summarizes this sample and scale, without proving why the participants differ.

Your turn: Scores are 3, 5, 5 and 7. Find the mean.

■ Check the conclusion and its limits

- Correlation does not prove that stress caused a performance result.
- Students should not induce distress to investigate coping.

Not true: A self-report stress score is a medical diagnosis. A self-report score is a subjective indication on one scale on one day. A medical diagnosis requires qualified clinical assessment; a questionnaire cannot provide it.

Key:

- Motivation concerns initiation, direction and persistence of behaviour.
- A self-report scale measures reported experience under its design.
- Watch for: correlation does not prove that stress caused a performance result.

■ Write from a mean of 6

- Reported scores are 3, 3, 4, 8 and 12.
- Find the mean and the range. A self-report score is not a medical diagnosis.