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.

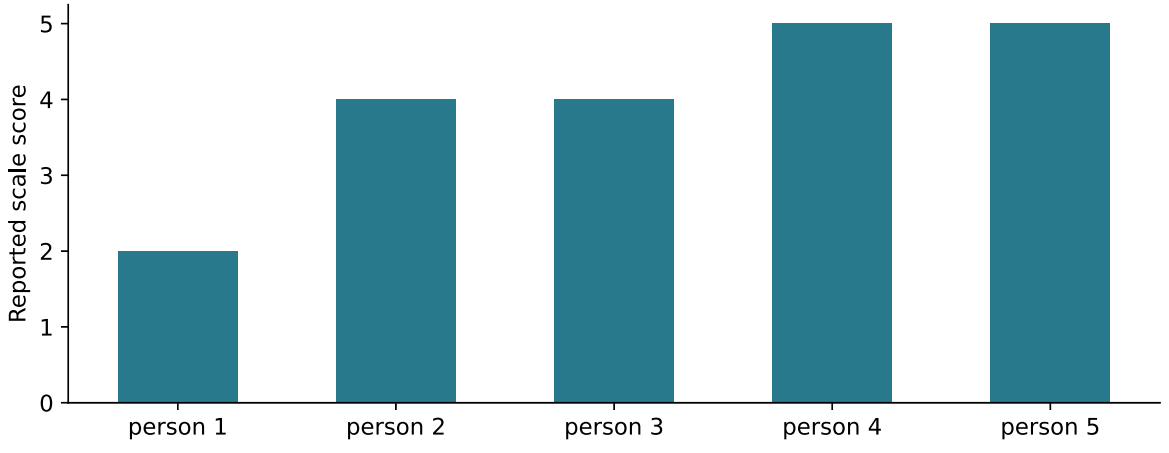
Motivation , stress and evidence in sport

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.



Mean = 20 ÷ 5 = 4; 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.