

2.2.1: Measuring the physiological, psychological and technical factors affecting sporting performance



Physiological

Fitness tests: Descriptions of fitness tests, along with explanations of validity and reliability, are included in the Knowledge Organiser for Unit 1, 1.2.2. The athlete or coach will be able to compare test results to normative tables.

Health tests / screening: Procedures can be carried out to gather health data. These include using a heart rate monitor or a blood pressure monitor. The results can then be used to judge the athlete's health level. Skinfold callipers can also be used to measure body composition.

Lifestyle questionnaires: These questionnaires are used to ascertain how healthy an athlete's lifestyle is by asking questions covering areas such as pre-existing health conditions and consumption of alcohol. A common example used is the PAR-Q questionnaire.

Nutrition and hydration: Food diaries can be used to collect data regarding an athlete's diet, nutrition and hydration. The athlete might record their intake of calories as the energy balance equation is a key concept.



Psychological

Observations: Visual or video observations can be carried out and will focus on the extrinsic or external responses to anxiety, stress or motivation that are shown by the athlete. As these observations focus on extrinsic evidence, the data is likely to be quantitative or objective.

Interviews: Interviews can be used to gather data directly from athletes. The data would relate to the athlete's levels of anxiety and motivation before and during their sporting performance. The data gathered from these interviews will be qualitative or subjective, as it will centre on how the athlete thinks they are feeling at these times.

Diaries: Diaries can be used as a means of gathering data from athletes regarding their levels of anxiety and motivation. These diaries could be in written or video form and could be completed by the athlete before and after their sporting performances.

Questionnaires: A popular method used to collect data regarding intrinsic measures such as how the athlete is feeling before and during training sessions and their sporting performance. The athlete might be asked to score how anxious, stressed or motivated they feel.



Technical

Observations: A common procedure used to gather technical data is notational analysis. This involves observers watching a sporting performance and recording key pieces of information. This information could be gathered either visually or by video. These pieces of information could focus on the following areas:

- i. The techniques being carried out.
- ii. The collection of statistics covering specific parts of the performance, such as how many times a netball player catches and passes the ball.
- iii. The identification of, and examples of the execution of, the strategy or game plan and associated tactics used.

Interviews: Interviews could take place between coaches and athletes prior to their sporting performance to assess the athlete's knowledge and understanding of the strategy or game plan drawn up for this particular performance. Further interviews could then take place after the performance to assess the level of success of the strategy or game plan carried out and the tactics employed by the athlete. The interview could include the use of video or other data collected during the performance.

