Exercise Physiology 3rd edition Kraemer Test Bank

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Test Bank Questions, Chapter 1, Applying Research to Everyday Exercise Physiology

1. A consultant tells a team that he or she has seen great results with a pyramid program based on extensive research. The strength and conditioning coach has also seen results with pyramid programs but is skeptical and asks to see the research. The consultant says his or her research is not published yet. Should the strength and conditioning coach implement the program?
   A) Yes. The strength and conditioning coach has also seen progress with pyramid programs.
   B) No. The strength and conditioning coach has a bias against pyramid programs.
   C) No. The results the consultant has seen have not been thoroughly peer reviewed or validated.
   D) Yes. The strength and conditioning coach should keep an open mind to different approaches.
   Ans: C

2. A coach is in a disagreement with a strength and conditioning coach. He or she believes that all players should shower before practice (as he or she always does) to be "fresh" on the field. The strength and conditioning coach thinks players shouldn't be forced to shower twice (once before and once after practice). Which argument makes the most sense?
   A) Tradition—the team has always showered before and after practice.
   B) Intuition—the coach believes the players will be "fresh" and perform better with a shower.
   C) Authority—the coach is an expert at coaching, so he or she must know the best way to shower.
   D) Applied research—the coach can perform an experiment to test his or her theory.
   Ans: D

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3. The use of the best available research to make decisions is referred to as:
   A) the scientific method.
   B) original investigation.
   C) evidence-based practice.
   D) single-blind review.
   Ans: C

4. A famous cellular biologist is interested in testing the impact of resistance exercise on cellular signaling. He or she receives an NIH grant and uses a training program from a famous personal trainer with a good certification that he or she got online. The biologist finds no impact from the training. What could be the possible reason(s) that no differences are seen?
   A) The results are correct; the training program used has no influence on signaling.
   B) The results are incorrect; he or she did not properly perform the biological tests.
   C) The interpretations are incorrect; although there would have been an impact with a better training protocol, the personal trainer may not have been well educated in the science of resistance training.
   D) All of the above.
   Ans: D

5. Which of these examples illustrates basic research?
   A) Physiological responses to fatigue during a game
   B) Success of different types of training programs on game play
   C) Use of supplementation for a particular type of athlete
   D) Factors influencing the role and mechanisms of calcium during fatigue
   Ans: D

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6. Which of the following are upstream regulatory elements?
   A) Cell signaling, environment, and organs
   B) Tissues, nutrition, and protein synthesis
   C) Gene interactions, gene expression, and protein synthesis
   D) Environment, nutrition, and exercise stimuli
   Ans: D

7. Which of these is the most appropriate reason for a scientist to pay attention to the upstream regulatory elements?
   A) When receptors are acted upon by a hormone, dramatic actions can occur in the body.
   B) If a scientist wants to study the effect of training on cell signaling, he or she must first make sure that he or she has identified proper exercise stimuli or he or she may misinterpret results.
   C) If one of the subjects has gene mutations, it may change how that person thinks or eats.
   D) The immune system has strong effects on other physiological systems of the body.
   Ans: B

8. A study recently demonstrated that a certain supplement improves energy. A middle-aged husband and wife want to know if it will work for them. Which of the following shows a problem with *authority* for the couple?
   A) The energy improvement was shown in male college athletes.
   B) The study was funded by the supplement manufacturer.
   C) The husband tried the supplement in the past and liked it.
   D) The wife's doctor recommended the supplement to her.
   Ans: D

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9. A middle-aged husband and wife recently heard about a supplement while at work. The subjects in the study showed improved energy. The couple wants to know if it will work for them. Which of the following shows a problem with *context* for the couple?

   A) The energy improvement was shown in male college athletes.

   B) The study was funded by the supplement manufacturer.

   C) The husband tried the supplement in the past and liked it.

   D) The wife's doctor recommended the supplement to her.

   Ans: A

10. While running routine analysis, you discover a new hormone that increases during exercise. You don't know what it does or why. When you publish the paper, what type of research would this be?

    A) Trial and error

    B) Experimental

    C) Descriptive

    D) Field

    Ans: C

11. A student looks at the influence of a 20-g protein shake on time to complete a mile run in 18- to 20-year-old women. Which of the following is an example of a dependent variable?

    A) Age

    B) Time

    C) Distance

    D) Grams of protein

    Ans: B

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12. Your friend tells you that he recently heard about a study showing that high-fiber diets lead to weight loss in heart patients. He is healthy and has never cared about fiber before, but now he wants you to go on a high-fiber diet with him. You are both overweight, but you are not convinced. What is your friend missing?

    A) He is forgetting the context of the study.

    B) He is forgetting about evidence-based practice.

    C) He is forgetting about bias.

    D) He is forgetting about myth.

    Ans: A

13. What is the name of the most prominent manuscript found in scientific literature?

    A) Literature review

    B) Original investigation

    C) Applied research

    D) Tradition method

    Ans: B

14. Your advisor explains that you will need to wait for your thesis to be published, which can take over a year. Your friend tells you that he has found an online journal that will publish his thesis without any extended waiting. The journal only asks that he pay a certain fee and your friend will be able to put the paper on his resume. What would be your concern about this method of publication?

    A) Lack of tradition

    B) Lack of authority

    C) Lack of peer review

    D) Lack of bias

    Ans: C

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15. “Double blind” means that:

A) the editor-in-chief and the author submitting a scientific paper do not know who the reviewers are.

B) The reviewers do not know which journal they are reviewing for and the journal does not know who the reviewers are.

C) Neither reviewer knows who the author is.

D) The authors do not know who is reviewing their paper and the reviewers do not know whose paper it is.

Ans: D

16. A review paper that uses statistical analysis of the literature is called:

A) symposium publication.

B) case study.

C) meta-analysis.

D) original research.

Ans: C

17. The *primary* purpose of an introduction is:

A) to review all the literature in any way related to the subject.

B) to discuss the importance of the paper in relation to previous investigations.

C) to logically develop a hypothesis to be tested.

D) to describe how the author plans to conduct the study.

Ans: C

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18. A methods section should include:
    A) information to replicate the results.
    B) IRB or ethics approval for procedures.
    C) statistical analysis and significance level.
    D) equipment used to perform the study.
    Ans: E

19. The results section should *not* include:
    A) outcomes from dependent variables.
    B) data about context/independent variables, such as subject attributes.
    C) comparisons to previous investigations.
    D) both B and C.
    Ans: D

20. The discussion section of a paper should:
    A) interpret results.
    B) address questions from the introduction.
    C) relate the study to existing literature.
    D) all of the above.
    Ans: D

21. The sections of a scientific paper include:
    A) Introduction, Methods, Results, Discussion.
    B) Introduction, Procedures, Results, Conclusion.
    C) Introduction, Methods, Analysis, Interpretation.
    D) Introduction, Design, Results, Conclusion.
    Ans: A

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22. The ability of a test to produce consistent measurements is referred to as:

A) accuracy.

B) reliability.

C) validity.

D) fact.

Ans: B

23. True or False? A scientist looking at how a protein shake affects 5K run time constitutes *applied research*.

A) True

B) False

Ans: A

24. The type of research that deals with narrative data, such as attitude or interviews, and that is not directly numerical in nature is referred to as ethnographic or _____.

Ans: qualitative

25. The type of research that generally does not occur in a laboratory and attempts to incorporate natural environmental conditions as much as possible is referred to as _____ research.

Ans: field

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