

## Chapter 1

### Evidence-Based Practice: Why Do Practitioners Need to Understand Research?

#### SAMPLE READINESS ASSURANCE QUESTIONS

1. The evidence in evidence-based practice includes information from the client/family.
  - a. True
  - b. False
  
2. Which of the following is a component in the evidence-based decision-making process?
  - a. External evidence
  - b. Practitioner experience
  - c. Client's situation and values
  - d. All of the above
  
3. Evidence-based practice is best described by which of the following?
  - a. Practitioners conducting research to answer clinical questions
  - b. Applying research evidence within the context of practitioner experience and client values
  - c. Making clinical decisions based on expediency and routine
  - d. Using research evidence without including practitioner and client experience to make clinical decisions
  
4. Among the endorsers of evidence-based practice are the professional organizations that promote the rehabilitation professions.
  - a. True
  - b. False
  
5. Which of the following actions is NOT consistent with evidence-based practice?
  - a. The ability to justify your practice based on an accumulation of evidence from multiple sources
  - b. Use of clinical experience to determine how to apply the research evidence to your practice
  - c. Collaboration with the client to make decisions about whether to utilize an intervention that is supported by research evidence
  - d. Justification of a clinical practice based on the culture and habits of an institution

6. If you consistently have good outcomes with a particular intervention approach, there is little reason to examine the research evidence related to this approach.
  - a. True
  - b. False
  
7. Evidence-based practice requires that practitioners avoid any approach that is not backed by research.
  - a. True
  - b. False
  
8. The external evidence component of evidence-based practice typically provides which type of information about an intervention?
  - a. How to apply the evidence in your particular situation
  - b. Whether or not an intervention is effective in a controlled context
  - c. How the intervention relates to the client's situation and values
  - d. Whether an intervention is more effective than emerging practices
  
9. Practitioners can usually find research to answer all of their clinical questions if they just look hard enough.
  - a. True
  - b. False
  
10. A study examining the reliability of a motor function measure would answer what type of question?
  - a. Efficacy
  - b. Descriptive
  - c. Relational
  - d. Assessment
  - e. Qualitative
  
11. Which of the following is the best example of a PICO question?
  - a. What is the best treatment for post traumatic stress disorder?
  - b. For individuals with posttraumatic stress disorder, is exposure therapy more effective than cognitive behavioral therapy for reducing anxiety symptoms?

- c. Is exposure therapy effective for reducing trauma-induced anxiety?
- d. How do individuals with posttraumatic stress disorder react when exposed to stimuli that remind them of their trauma?

12. The PICO format is most consistent with which type of research question?

- a. Efficacy
- b. Descriptive
- c. Relational
- d. Assessment
- e. Qualitative

13. Which type of research design would be best for answering an efficacy question?

- a. Randomized controlled trial
- b. Correlational study
- c. Survey research
- d. Reliability study

14. Which type of research design would best answer a relational question?

- a. Randomized controlled trial
- b. Correlational study
- c. Survey research
- d. Reliability study

15. In making decisions about which intervention to select, the best type of question would be which of the following?

- a. Efficacy
- b. Descriptive
- c. Relational
- d. Assessment
- e. Qualitative

16. Identifying the factors that are most predictive of fall risk would best be done with what type of question?

- a. Efficacy
- b. Descriptive

- c. Relational
- d. Assessment
- e. Qualitative

17. Which type of research question is used to address questions related to meaning and the lived experience?

- a. Efficacy
- b. Descriptive
- c. Relational
- d. Assessment
- e. Qualitative

18. Research questions that are related to selecting an evaluation instrument best fit what category?

- a. Efficacy
- b. Descriptive
- c. Relational
- d. Assessment
- e. Qualitative

19. Levels-of-evidence hierarchies should be used to evaluate the strength of what type of studies?

- a. Efficacy
- b. Descriptive
- c. Relational
- d. Assessment
- e. All of the above

20. Studies that use correlational methods are used to answer which type of question?

- a. Efficacy
- b. Descriptive
- c. Relational
- d. Assessment
- e. Qualitative

21. Which of the following is the best illustration of a qualitative question?
- a. For people with stroke, what is the efficacy of constraint-induced therapy as compared with standard care for improving motor performance?
  - b. Which individuals with stroke are the best candidates for constraint-induced therapy?
  - c. Which motor assessments are most sensitive to changes following constraint-induced therapy?
  - d. What is the experience of constraint-induced therapy from the perspective of the individual receiving the treatment?
22. A single, well-designed randomized controlled trial with positive results proves that the intervention is effective.
- a. True
  - b. False
23. Randomized controlled trials are useful for providing which type of information?
- a. The correlation between two variables
  - b. Inter-rater reliability
  - c. Causal effects of an intervention
  - d. All of the above
24. Which of the following studies would be the highest level of evidence for efficacy of cognitive remediation?
- a. A study in which individuals are randomly assigned to cognitive remediation or usual care
  - b. A pretest/posttest of a single group that receives cognitive remediation
  - c. A systematic review of randomized controlled trials of cognitive remediation
  - d. A study in which two groups are compared; one group receives cognitive remediation, and the other group receives standard care
25. What feature of Level II studies makes them stronger than Level III studies?
- a. Random assignment
  - b. Replication
  - c. Use of a pretest and posttest
  - d. Use of a control group
26. What feature of Level I studies makes them stronger than Level II studies?

- a. Random assignment
- b. Replication
- c. Use of a pretest and posttest
- d. Use of a control group

27. What feature of Level III studies makes them stronger than Level IV studies?

- a. Random assignment
- b. Replication
- c. Use of a pretest and posttest
- d. Use of a control group

28. Studies that rank higher on the levels-of-evidence hierarchy tend to have greater internal validity than studies that are lower on the hierarchy.

- a. True
- b. False

29. A study of 50 individuals who participate in a vestibular rehabilitation program examines balance outcomes before and after the intervention. This study would be rated as what level of evidence?

- a. I
- b. II
- c. III
- d. IV
- e. V

30. A systematic review of six randomized controlled trials finds that kinesiotaping is no more effective than sham approaches for addressing musculoskeletal injuries. This represents what level of evidence?

- a. I
- b. II
- c. III
- d. IV
- e. V

31. The efficacy of yoga for reducing symptoms of schizophrenia is examined by comparing an existing group of volunteers who participate in a yoga group with an existing group of volunteers who participate in an exercise group. Symptoms are compared before and after participation in the groups. This study would be classified as what level of evidence?
- I
  - II
  - III
  - IV
  - V
32. A randomized controlled trial is considered the highest level of evidence for a single study and is ranked at what level?
- I
  - II
  - III
  - IV
  - V
33. A highly experienced therapist tells you about his success with the use of TENS for the treatments of osteoarthritic knee pain. This information would be considered what level of evidence?
- II
  - III
  - IV
  - V
  - VI
34. A randomized controlled trial is a strong design for answering questions related to cause-and-effect relationships.
- True
  - False
35. A single group pretest/posttest design finds that a computer-based intervention using cognitive behavioral therapy principles is effective in reducing trauma symptoms for veterans. Which of the following follow-up studies would be most useful in increasing the strength of the evidence for this intervention?

- a. Following up with the participants in this study to determine if their improvements were maintained
  - b. Conducting another study that replicates the same design
  - c. Using a single-subject design with a new sample
  - d. Using a randomized controlled trial to examine the efficacy of this intervention as compared with a control group
36. A single-subject design examining the efficacy of Wii activities to improve balance in children with traumatic brain injury would be ranked at what level of evidence?
- a. I
  - b. II
  - c. III
  - d. IV
  - e. V
37. The levels of evidence for efficacy research could also be applied to a study designed to describe the secondary medical conditions of individuals with spinal cord injury.
- a. True
  - b. False
38. Even when a strong study design with a high level of evidence is used in research, the study may provide strong evidence that an intervention is ineffective.
- a. True
  - b. False
39. Studies that are designed to answer descriptive questions are less valid than studies that are designed to answer efficacy questions.
- a. True
  - b. False
40. A limitation of the levels-of-evidence hierarchy is its lack of consideration for external validity (generalizability).
- a. True
  - b. False



## ANSWERS

- |     |   |     |   |
|-----|---|-----|---|
| 1.  | a | 21. | d |
| 2.  | d | 22. | b |
| 3.  | b | 23. | c |
| 4.  | a | 24. | c |
| 5.  | d | 25. | a |
| 6.  | b | 26. | b |
| 7.  | b | 27. | d |
| 8.  | b | 28. | a |
| 9.  | b | 29. | d |
| 10. | d | 30. | a |
| 11. | b | 31. | c |
| 12. | a | 32. | b |
| 13. | a | 33. | e |
| 14. | b | 34. | a |
| 15. | a | 35. | d |
| 16. | c | 36. | e |
| 17. | e | 37. | b |
| 18. | d | 38. | a |
| 19. | a | 39. | b |
| 20. | c | 40. | a |