

1. The following components have NOT been integrated in Evidence Based Practice (EBP)?
 - A. Clinical expertise
 - B. Patient's individual values
 - C. Best research evidence
 - D. Clinical reasoning
2. The first step of evidence-based practice process is?
 - A. Acquiring an article through searching the databases
 - B. Applying an articles conclusion to practice
 - C. Asking a clinical question
 - D. Appraising an article
3. Which of the following are NOT challenges for Evidence Based Practice (EBP)?
 - A. The volume of evidence, especially the clinical guidelines has become unmanageable
 - B. Statistically significant benefits may be marginal in clinical practice
 - C. Limited access to high-quality research
 - D. Technology driven prompts may produce care that is management driven rather than patient centred.
4. Which of the following is NOT part of the 5As steps of Evidence Based Practice?
 - A. Appraise
 - B. Analyze
 - C. Apply
 - D. Assess
5. Which of the following is NOT a source of Evidence for the EBP?
 - A. Feedback from the organization and customers
 - B. Practitioner experience and expertise
 - C. Cultural and traditional practices
 - D. Work-based research
6. What is the purpose(s) of a Clinical Practice Guideline (CPG)?
 - A. Integrate research evidence with knowledge from clinical experts
 - B. Make the best available research evidence directly applicable to clinical practice
 - C. Consider research evidence with consideration for patient perspectives

- D. All the above are purposes of CPG
7. Identify resources commonly used to assess the quality of study intervention?
- A. PEDro Scale and Cochrane risk of bias tool
 - B. Pubmed and Embase
 - C. PEDro Scale and Pubmed
 - D. Cochrane risk of bias and tool and Embase
8. Why are patients blinded in a randomized clinical trial?
- A. Minimize dropouts from the study
 - B. Minimize bias in the sample size calculation
 - C. Minimize the influence of clinicians treating patients
 - D. Minimize bias in the group formation
9. The process of Evidence based practice follows some steps. Which is the next steps after the relevant literature has been identified?
- A. To elaborate a clinical question
 - B. To appraise the research evidence available
 - C. To apply the evidence
 - D. To evaluate the effectiveness and efficacy of the interventions used.
10. Which of the following is NOT part of the PICO framework used in Evidence Based Framework?
- A. Patient/population problem
 - B. Intervention
 - C. Common
 - D. Outcome
11. Which step of the EBP process involves converting clinical information into a focused question?
- A. Appraisal of evidence.
 - B. Application of evidence.
 - C. Formulating a clinical question.
 - D. Evaluation of outcomes.
12. What does the "PICO" framework help with in EBP?
- A. Analyzing statistical data.
 - B. Developing clinical expertise.
 - C. Formulating focused clinical questions.
 - D. Reporting research findings.

13. What is the purpose of a systematic review in EBP?
 - A. To summarize individual patient cases.
 - B. To present expert opinions.
 - C. To provide a comprehensive overview of research on a specific topic.
 - D. To compare different treatment techniques.
14. Which type of study design is considered the gold standard for assessing treatment effectiveness?
 - A. Case series.
 - B. Cross-sectional study.
 - C. Randomized controlled trial (RCT).
 - D. Cohort study.
15. What is the role of a control group in an RCT?
 - A. To receive the experimental treatment.
 - B. To provide a baseline for comparison with the treatment group.
 - C. To conduct preliminary data analysis.
 - D. To serve as the placebo group.
16. Which level of evidence indicates evidence obtained from a single high-quality RCT?
 - A. Level I.
 - B. Level II.
 - C. Level III.
 - D. Level IV.
17. In EBP, what does "blinding" refer to in a research study?
 - A. Hiding research findings.
 - B. Concealing the study's purpose.
 - C. Keeping the participants unaware of their group assignment.
 - D. Avoiding data collection.
18. Which of the following statements defines "bias" in research?
 - A. A neutral perspective in data analysis.
 - B. The presence of random variation in results.
 - C. A systematic error that distorts study findings.
 - D. The use of qualitative research methods.
19. What is the purpose of a forest plot in a systematic review?
 - A. To illustrate the distribution of participant demographics.
 - B. To display the study's funding sources.

- C. To visualize the effect sizes of individual studies and the overall effect.
 - D. To present qualitative data.
20. Which type of research design is best suited for exploring cause-and-effect relationships?
- A. Cross-sectional study.
 - B. Case report.
 - C. Qualitative study.
 - D. Cohort study.
21. Which type of evidence is considered the least reliable in the hierarchy of evidence?
- A. Expert opinion.
 - B. Systematic reviews.
 - C. Randomized controlled trials.
 - D. Cohort studies.
22. What does the term "effect size" indicate in research?
- A. The statistical significance of the findings.
 - B. The probability of type II error.
 - C. The magnitude of the observed effect.
 - D. The validity of the research design.
23. Which database is often used to search for physiotherapy-related literature?
- A. PubMed.
 - B. Google Scholar.
 - C. Web of Science.
 - D. JSTOR.
24. What is the primary purpose of a case-control study?
- A. To identify risk factors for a specific condition.
 - B. To establish causality between variables.
 - C. To explore the prevalence of a disease in a population.
 - D. To compare treatment outcomes in different groups.
25. Which statement accurately describes a cross-over study design?
- A. Participants are randomly assigned to different treatment groups.
 - B. The study is conducted in multiple centers.
 - C. Participants receive all treatments in a random sequence.
 - D. The study examines long-term treatment outcomes.
26. Which factor is critical for ensuring the generalizability of research findings?

- A. Using a convenience sample.
 - B. Conducting a single-case study.
 - C. Enrolling only healthy participants.
 - D. Including diverse and representative participants.
27. What is the purpose of the "Introduction" section in a research article?
- A. To present the statistical analysis plan.
 - B. To describe the study's findings.
 - C. To provide an overview of the study's rationale and objectives.
 - D. To list the references used in the study.
28. Which of the following is a key characteristic of qualitative research?
- A. Emphasis on statistical significance.
 - B. Use of numerical data.
 - C. Focus on exploring subjective experiences.
 - D. Relying solely on expert opinions.
29. What is the primary goal of the "Discussion" section in a research article?
- A. To summarize the methodology.
 - B. To list potential limitations of the study.
 - C. To present the study's raw data.
 - D. To interpret the study's findings and their implications.
30. What does the term "heterogeneity" refer to in the context of meta-analysis?
- A. The presence of bias in individual studies.
 - B. The use of diverse statistical methods.
 - C. Variation in study characteristics or results across studies.
 - D. The inclusion of both qualitative and quantitative data.
31. Which statistical measure indicates the spread of data around the mean?
- A. Mean.
 - B. Median.
 - C. Range.
 - D. Standard deviation.
32. In EBP, what is the primary purpose of critically appraising evidence?
- A. To find the most recent research articles.
 - B. To identify the strongest available evidence.
 - C. To collect data for meta-analysis.
 - D. To perform qualitative data analysis.

33. Where do cross-sectional studies rank in the hierarchy of evidence in EBP?
- A. Level 1
 - B. Level 2
 - C. Level 3
 - D. Level 4
34. In a study to determine the effect of manual therapy combined with exercise on pain, disability, and quality of life in individuals with nonspecific neck pain; reported that With a low certainty of evidence, 16 studies demonstrated that manual therapy plus exercise is significantly better than exercise alone for reducing pain (-0.95 (95%CI: -1.38, -0.51)). Similarly, with low certainty of evidence, 13 studies demonstrated that manual therapy plus exercise is significantly better than exercise alone for reducing disability (-0.59 (95% CI: -0.90, -0.28)). Four studies demonstrated that manual therapy plus exercise is significantly better than a control intervention for reducing pain (moderate certainty) (-2.15 (95%CI: -3.58, -0.73)) and disability (low certainty) (-2.39 (95% CI: -3.80, -0.98)). With a high certainty of evidence, four studies demonstrated no significant difference between manual therapy plus exercise and exercise alone in quality of life (SMD of -0.02 (95% CI: -0.21, 0.18)). Above is an extract from an article's abstract. Determine the study design of the above abstract
- A. Systemic review
 - B. Meta-analysis
 - C. Both systemic review and meta-analysis
 - D. Randomized clinical trial
35. Which of the following is NOT classified as an observational study?
- A. Randomized clinical trial
 - B. Prospective cohort study
 - C. Cross sectional study
 - D. Case control study
36. The following question is formulated using the PICO framework. Which type of question has been formulated below; "Do women adults with low back pain have more associated risk factors as compared to their male counterparts?"
- A. Prognosis
 - B. Etiology
 - C. Prevention
 - D. Prognosis
37. Mwangi a physiotherapist has been treating Sarah for a few weeks now, primarily focusing on manual therapy techniques like trigger point release and relaxation massage for her severe tension headaches. While Sarah has reported some improvement, the headaches persist and significantly impact her daily life. Mr. Mwangi decides to delve deeper into the latest research to find the most effective management strategies for severe tension headaches. He performs a meticulous search in a physiotherapy database using keywords like "severe tension headache," "physiotherapy management," and "clinical trials." However, the search yields fewer relevant articles than she anticipated. Which of the following Boolean operators can Mr. Mwangi use to broaden his searches?

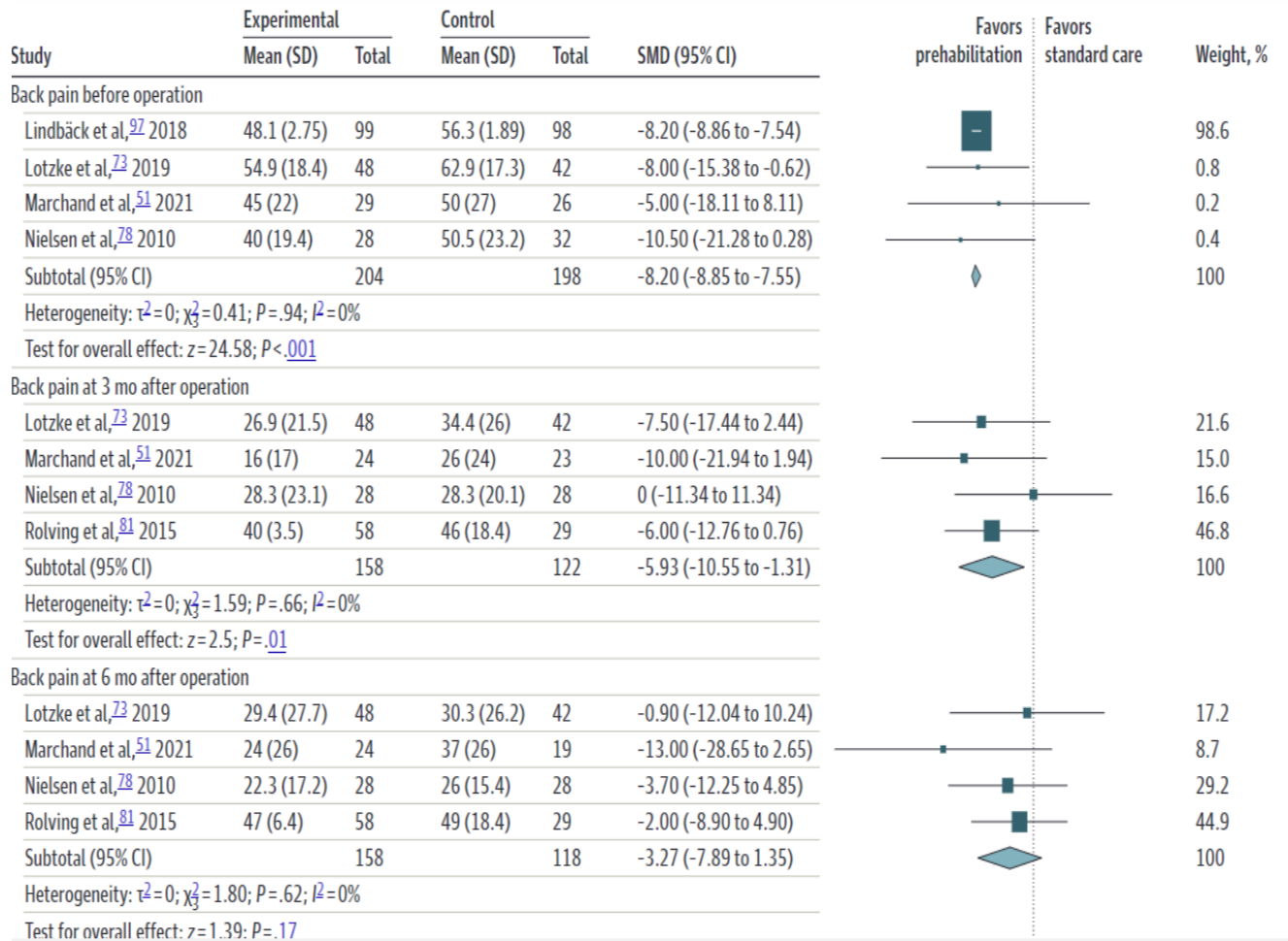
- A. OR
- B. AND
- C. NOT
- D. XOR

38. Which of the following is NOT a primary function of the peer review process in evaluating research literature for evidence-based practice?
- A. To assess the methodological soundness of the research design
 - B. To evaluate the accuracy and relevance of the research findings
 - C. To ensure the research aligns with the author's personal opinions
 - D. To determine if the research contributes to the existing body of knowledge in the field
39. A researcher is evaluating studies on the effectiveness of a new medication for treating migraines. They prioritize studies published in high-impact medical journals, disregarding research published in less prestigious journals with smaller sample sizes. This bias is most likely:
- A. Publication bias
 - B. Anchoring bias
 - C. Confirmation bias
 - D. Availability bias
40. Sarah, a physiotherapist with 10 years of experience, is treating a new patient, John, who has knee osteoarthritis. John experiences pain and stiffness in his knee, making it difficult to climb stairs and walk long distances. Sarah wants to design the most effective treatment plan for John, incorporating both pain management and strength training. After collecting a pool of literature from various data bases, which of the following factors should she not consider when evaluating the research literature, she has pooled?
- A. Authority
 - B. Currency
 - C. Writing style
 - D. Coverage
41. Which of the following is NOT a part of the appraisal process?
- A. Research topic
 - B. Clinical bottom line
 - C. Applicability
 - D. Results
42. When using a meta-analysis to inform EBP decisions, it's important to consider:
- A. Only the most recent studies included in the analysis.
 - B. The quality and methodological rigor of the studies included.
 - C. Only studies with statistically significant results.
 - D. Only studies that directly support the desired outcome.
43. When appraising the relevance of a study to your research question, which of the following aspects is LEAST important to consider?

- A. The methodology used in the study
 - B. The publication date of the article
 - C. The funding source for the research
 - D. The specific population studied in the research
44. When appraising the quality of an EBP study, the absence of blinding can:
- A. Automatically invalidate the entire study.
 - B. Increase the risk of bias in the results.
 - C. Have no impact on the study's overall credibility.
 - D. Guarantee the study is more ethical than blinded studies.
45. While RCTs are considered the gold standard for EBP, there are situations where randomization might not be feasible. In which of the following scenarios would randomization be LEAST likely to be implemented?
- A. Testing the effectiveness of a new surgical technique.
 - B. Comparing two different educational approaches for children.
 - C. Evaluating the impact of a public health campaign on smoking cessation rates.
 - D. Studying the long-term effects of a chronic disease on patient outcomes.
46. To assess the clinical effectiveness and cost-effectiveness of exercise-based CR (exercise training alone or in combination with psychosocial or educational interventions) compared with 'no exercise' control, on mortality, morbidity and health-related quality of life (HRQoL) in people with CHD. Part of the findings reported Exercise-based CR likely results in little to no difference in risk of cardiovascular mortality (RR 0.88, 95% CI 0.68 to 1.14). Which of the following statements on CI is TRUE?
- A. The 95% confidence interval (CI) of 0.68 to 1.14 suggests we are 95% confident that the true effect of exercise-based calorie restriction (CR) on cardiovascular mortality risk
 - B. A confidence interval (CI) tells us the exact value of the effect being studied.
 - C. A narrower confidence interval always indicates a stronger effect.
 - D. If the confidence interval includes 0 (no effect), the exercise program is ineffective.
47. Based on 26 trials that used a non-exercise control, we found a significant effect on fatigue in favour of exercise therapy (standardized mean difference (SMD) -0.53, 95% confidence interval (CI) -0.73 to -0.33; P value < 0.01). The results are from a RCT study whose aim was to determine the effectiveness and safety of exercise therapy compared to a no-exercise control condition or another intervention on fatigue, measured with self-reported questionnaires, of people with Multiple Sclerosis. Which of the statements below fully represents the true interpretation of the P value < 0.01?
- A. The results are statistically significant.
 - B. There is a less than 1% chance that the observed difference in fatigue levels between the exercise and control groups occurred by random chance alone
 - C. There is a more than 1% chance that the observed difference in fatigue levels between the exercise and control groups occurred by random chance alone

D. There is a 1% chance that exercise therapy has no effect on fatigue.

48. In a systematic review and meta-analysis study whose aim was to evaluate whether prehabilitation is associated with improved preoperative and postoperative outcomes compared with usual care for patients undergoing orthopedic surgery. A sample of 48 unique trials was selected. Below is a figure that shows Forest Plot of Mean Differences in Back Pain Before and After Lumbar Surgery from that study. Answer the questions below.



Which studies in this forest plots shown did not statistically significantly favor the standard care compared to the prehabilitation?

- A. Marchand et al, 2021
- B. Rolving et al, 2015
- C. Nielsen et al, 2010
- D. Lotzke et al,⁷³ 2019

49. The following is NOT true of the diamond under the pool of randomized clinical trial of studies on back pain at 6 months after operation?

- A. The study pooled together showed no effect on the outcomes of both preoperative and postoperative when compared with usual care for patients undergoing orthopedic surgery
 - B. The studies pooled in this group showed no or poor reliability
 - C. The studies pooled together showed significant effect on the outcomes of both preoperative and postoperative when compared with usual care for patients undergoing orthopedic surgery
 - D. The studies pooled together at 6 months after operation cannot be generalized to the larger population
50. Blinding is an important aspect of randomized clinical trial to check on biasness. Which of the following blinding strategy is commonly used in physiotherapy RCT? A.

- A. Single blinding
- B. Double blinding
- C. Triple blinding
- D. No blinding

AMMU