



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCE
DEPARTMENT OF REHABILITATION MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF MAY-AUGUST 2024 TRIMESTER EXAMINATIONS**

UNIT CODE: PHT 324

**UNIT NAME: EVIDENCED BASED PRACTICE
(FRESH ENTRY MAIN PAPER)**

DATE: THURSDAY/ 8TH / AUGUST

TIME: TWO HOURS

START: 11: 15AM

STOP : 1:15PM

INSTRUCTIONS (physical exams)

- 1. Do not write on this question paper**

(Marks and questions distribution as per program curriculum.)

INSTRUCTIONS (Online examinations)

1. This exam is marked out of 70 marks
2. This Examination comprises 3 Sections
3. This online exam shall take 2 Hours
4. Late submission of the answers will not be accepted
5. Ensure your web-camera is on at all times during the examination period
6. No movement is allowed during the examination
7. Idling of your machine for 5 min or more will lead to lock out from the exam
8. The Learning Management System (LMS) has inbuilt integrity checks to detect cheating
9. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
10. In case you have any questions call the invigilator for this exam on Tel. 0705833434 and or the Head of Department on Tel 0720491032
11. For adverse incidences please write an email to: amiu.examinations@amref.ac.ke

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. A well-done meta-analysis and systematic review on Randomized Clinical Trial (RCT) is considered to be at what level of evidence?
 - A. Level 1
 - B. Level 2
 - C. Level 3
 - D. Level 4
3. 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
4. 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.
5. 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. Single blinding
 - B. Double blinding
 - C. Triple blinding
 - D. No blinding

6. Which of the following search strategies would be the most effect to find an answer to a clinical question on the search engines about the effectiveness of exercise for patella tendinopathy
 - A. Exercise or patellar tendinopathy
 - B. Patella tendinopathy
 - C. Exercise NOT patella tendinopathy
 - D. Exercise AND patella tendinopathy
7. Which of the following is NOT part of the 5As steps of Evidence Based Practice?
 - A. Appraise
 - B. Analyze
 - C. Apply
 - D. Assess
8. 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
9. 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
10. 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
11. Evidence based practice is needed in healthcare because?
 - A. It is always a less expensive treatment for every patient
 - B. It can decrease over utilization of treatments that are not supported by the research
 - C. It is taught by experts
 - D. It will result in every patient receiving the same treatment
12. 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
13. 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.
14. 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
15. Which of the following is NOT a benefit of Evidence based practice in the physiotherapy profession?
- A. Leads to improved patient outcomes
 - B. Provides platform for expertise with research
 - C. Leads to cost-effective management of physiotherapy intervention
 - D. Promotes a one-size-fits-all approach to physiotherapy treatment
16. The following factors affect the hierarchies of evidence. Which does NOT?
- A. Cost
 - B. Generalizability
 - C. Reliability
 - D. Validity
17. The following is a summary of the findings of a study in physiotherapy that was published in the last 5 years which investigated work-related musculoskeletal disorders (WMSDs) in physical therapists. The study followed physical therapists for one year to identify risk factors for WMSDs in the wrist and hand. Interestingly, therapists who performed more patient transfers or repositioning had lower odds of developing these WMSDs. State the type of study?
- A. Systemic review
 - B. Randomized clinical study

- C. Prospective cohort study
- D. Cross-sectional study

18. A study, published in 2020, looked at the knowledge and practices of physical therapists regarding evidence-based practice. This study found that recent graduates demonstrated better knowledge of evidence-based practices compared to more experienced therapists, but all groups relied more on experience than research for making treatment decisions. What is the level of hierarchy of evidence of this study?
- A. Level 4
 - B. Level 1
 - C. Level 3
 - D. Level 2
19. Which of the following Boolean operators would be the MOST effective to find an answer to a clinical question on search engines about the effectiveness of PNF exercises in management of stroke?
- A. Or
 - B. And
 - C. Not
 - D. Plus
20. Which of the following Boolean operators would be most effective to find an answer to a clinical question on search engines about the prevalence of knee osteoarthritis in your local setting Busia town?
- A. And
 - B. Plus
 - C. Or
 - D. Not
21. You are a physiotherapy student on a busy hospital ward. You are walking down the hallway when you see a woman known as Mrs. Jones in a hospital gown sitting alone, looking distressed.
- Using the PICO framework identify the P based on the information provided in the following MCQs.
- A. Physiotherapy student
 - B. Mrs Jones

- C. Patients in the hospital ward
 - D. None of the above
22. Which of the following is NOT a limitation for Critically Appraised Tools (CATs)?
- A. Critically Appraised Tools have a short shelf life
 - B. Critically Appraised Tools don't provide an in-depth analysis of the study
 - C. Critically Appraised Tools are occasionally inaccurate
 - D. Critically Appraised Tools are comprehensive reviews of evidence
23. A physiotherapist formulates the following question, "in a patient with hypertension and suffers from low back pain, is the use of Acupuncture less effective than use of the TENS machine in management of the patient's pain?" In evidence-based practice, management of pain is referred to as what?
- A. Population
 - B. Intervention
 - C. Comparison
 - D. Outcome
24. Which of the following is NOT important to check when appraising the introduction section of an article?
- A. A clear statement of the research question
 - B. A clear description of the participant's characteristics
 - C. The research hypothesis
 - D. A literature review supporting the rationale of the research question
25. Which of the following is important to check when appraising the introduction section of an article?
- A. A clear statement of the research question
 - B. The researcher discusses the importance of p values for all the analysis
 - C. A clear description of the participants characteristics
 - D. A literature review supporting the rationale for the research question
26. A study was performed to establish arm-injury incidence in a male youth (9-12years-old) baseball players. The baseball players were physically assessed and the prospectively followed for 10 months. The presence of arm injury was prospectively tracked. All injuries were physically confirmed by a licensed physiotherapist. What is the research design and the level of evidence of this study?

- A. Cohort Study, Level 3
 - B. Randomized control trial Level 2
 - C. Case controlled study Level 3
 - D. Case series, Level 4
27. Which of the following is NOT an aim of meta-analysis?
- A. The results of a meta-analysis can improve precision of estimates of effect
 - B. They assist in generating new hypotheses.
 - C. It steers up controversies arising from apparently conflicting studies
 - D. Answer questions not posed by the individual studies
28. Which of the following is true about deductive reasoning in evidence-based practice?
- A. Deductive reasoning is used to develop general principles from specific observations in evidence-based practice.
 - B. Deductive reasoning allows healthcare professionals to apply research findings to specific patient cases based on established guidelines and theories.
 - C. Deductive reasoning is less reliable than inductive reasoning in evidence-based practice.
 - D. Deductive reasoning is not used in evidence-based practice because it relies on hypothetical scenarios.
29. Which of the following is NOT a benefit of being a research consumer?
- A. Empowers the consumer to play an active role on their health
 - B. Leads to informed choices about your health based on the latest research.
 - C. Guides on improved research that is more patient-centered
 - D. It is expensive being a research consumer
30. Which of the following is not a approach of qualitative research design?
- A. Phenomenology
 - B. Experimental research
 - C. Ethnography
 - D. Grounded Theory

Section B : Short Answer Questions

1. What is the difference between meta-analysis and systemic reviews (2 Marks)

2. Explain peer review in research (2 Marks)
3. Sarah, a senior physiotherapist at a busy sports clinic, notices a trend. Many of her colleagues who consistently receive positive patient feedback and achieve excellent outcomes hold degrees in kinesiology or exercise science, in addition to their physiotherapy qualifications. Previously, Sarah hadn't placed a strong emphasis on these specific degrees during the recruitment process. However, after observing the success of her colleagues with these backgrounds, she decides to adjust her approach. State the type of evidence-based practice reasoning did Sarah use to adjust her approach during recruitment process? (2 Marks)
4. Explain the role of intra-rater reliability and inter-rater reliability in appraising results in research evidence-based practice (3 Marks)
5. Outline the difference between internal evidence and external evidence (4 Marks)
6. Evaluating research literature is an important step of finding evidence. Explain 4 factors that are considered when evaluating the research literature? (4 Marks)
7. Martina receives a letter for her 6-year-old son, Marco, to get his booster shot for the DTaP vaccine (diphtheria, tetanus, and pertussis) at school. Martina remembers a recent social media post she saw claiming the DTaP vaccine can cause severe allergic reactions and even death. Worried, she decides to search the internet databases before giving consent for her son to receive the booster vaccine. Formulate a searchable question using the PICO framework which Martina can use on the search engines? (3 Marks)

Section C Long Answer Question. Attempt one question

1. In appraising research evidence, it is essential to determine if the researchers observed the moral principles of carrying out research. Discuss the five key ethical research principles that guide proper conduct of research (20 Marks)
2. The stages of a systematic review may vary slightly depending on the discipline and study types to be included but generally they follow a series of steps. Discuss the steps of a systemic review (20 Marks)