

UNIVERSITY OF SWAZILAND

FACULTY OF HEALTH SCIENCES

FINAL EXAM

DECEMBER 2014

COURSE : HSC 403

TITLE OF PAPER : HEALTH SYSTEMS RESEARCH

DURATION : 2 HOURS

MARKS: 75

INSTRUCTIONS:

- 1. DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR**
- 2. ANSWER ALL THREE (3) QUESTIONS**
- 3. EACH QUESTION IS TO BE ANSWERED ON A SEPARATE SHEET OF PAPER**

MULTIPLE CHOICE QUESTIONS

1. Weight in kilograms is:

- A. Nominal variable
- B. Discrete variable
- C. Confounding variable
- D. Continuous variable

2. The criteria for determining validity of a screening test is:

- A. Accuracy
- B. Predictability
- C. Sensitivity and specificity
- D. Cost effectiveness

3. An essential feature of grounded theory research is:

- A. Analyzing data using statistical packages like SPSS.
- B. Continuous cycle of collecting and analyzing data.
- C. Testing hypothesis using experimental design.
- D. Phenomenological investigation of facts.

4. Randomization is useful to eliminate:

- A. Observer bias
- B. Confounding factors
- C. Patient bias
- D. Sampling bias

5. A careful appraisal of the strengths and weaknesses of the study is:

- A. Research proposal
- B. Action Research
- C. Research critique
- D. Evidence-based practice

6. All the following are discrete variables EXCEPT:

- A. Colour of skin
- B. Number of boys in a classroom
- C. Weight of girls in a classroom
- D. Leukocyte count

7. A sampling method which involves random sampling of selection of every k th element from a sampling frame of the population is:

- A. Simple random sampling
- B. Stratified random sampling
- C. Systematic sampling
- D. Snowball sampling

8. What is TRUE about a research hypothesis?

- A. States that there is no relationship between the variables.
- B. States that there is an expected relationship of the variables
- C. States a negative relationship between the variables
- D. A research hypothesis should always be directional.

9. Which of the following phrases would be found in a qualitative study?

- A. The hypothesis of this study is?
- B. Pain was measured using Abbott pain scale?
- C. Subjects were asked to relate their experiences and perceptions of pain?
- D. The control group received no instructions

10. In a study that seeks to determine prevalence of HIV among women, the researcher decided to put age as a cut off point for the study participants when narrowing her research problem. This could be referred to:

- A. Consistency
- B. Delimitation
- C. Reliability
- D. Limitation

11. When sub - groups within the overall population vary according to characteristics, the best sampling method is:

- A. Simple random sampling
- B. Stratified random sampling
- C. Cluster sampling
- D. Purposive sampling

12. A type of developmental study in which data are collected from the same people at two or more points in time:

- A. Case control study
- B. Panel study
- C. Longitudinal study
- D. Cross - sectional study

13. Unstructured – in depth interviewing includes all EXCEPT:

- A. Uses pre-categorised questions
- B. Used for focus group discussion
- C. Requires more skill
- D. Questions may change as interview proceeds

14. The variable which is influenced by the intervention of the researcher and result to an outcome is:

- A. Independent
- B. Dependent
- C. Discrete
- D. Extraneous

15. Which is a characteristic of qualitative research methods?

- A. Naturalistic inquiry
- B. Random sampling
- C. Introduction of a treatment
- D. Use of a control group

FOR THE FOLLOWING QUESTIONS WRITE "T" IF THE STATEMENT IS TRUE OR "F" IF THE STATEMENT IS FALSE

TRUE AND FALSE

1. The average age of male students is higher than that of female students. This hypothesis is non - directional T.F.
2. Empirical literature is mainly sourced from secondary sources T.F.
3. Ethical considerations for research include justice T.F.
4. When one determines feasibility of a study he/she needs to look at how widespread is the problem T.F.
5. Participant's biasness is always a threat when using an interview technique T.F.
6. Correlation studies determine associations but not cause and effect. T.F.
7. The first rule of thumb in writing a research problem or topic is to write an active statement T.F.
8. The purpose of a longitudinal study is to examine trends or development at the same time T.F.
9. Triangulation is approaching a research problem from different angles T. F.
10. A research question that requires individuals' opinions is a non – researchable question T. F.

(10 marks)

(25 MARKS)

QUESTION 2

2. 1. Why should research objectives be developed? (3 marks)

2.2. Differentiate between the following concepts

- a) Validity versus reliability (2 marks)
- b) Conceptual phase versus empirical phase of a study (2 marks)
- c) Objectives versus hypothesis (2 marks)
- d) Significance versus problem statement (2 marks)
- e) Research methods versus research design (2 marks)
- f) Nominal and ordinal variable (2 marks)

2.3. State the research terminology that best describes the following statements

- a. A hypothesis that is stated in a research study.....
- b. An experimental study design where one of the procedures is omitted is referred to.....
- c. Participants of a study change their behavior, because they are being studied.-----
- d. A variable that has an unintentional effect on the dependent variable----
- e. Type of study which deliberately manipulates the independent variable ---

(5 marks)

2.4. Explain five (5) reasons of pre – testing a research questionnaire

(5 marks)

(25 marks)

QUESTION 3

3.1. A researcher conducts a study to determine whether food causes weight gain

Determine which concept represents the independent (1) and dependant (1) variables respectively

(2 marks)

3.2. Student X seeks to conduct a study in Shiselweni region which aims at determining the influence of males in infant feeding of their own babies

- a. Operationalize the term males to be researchable (2 marks)
- b. Re – write the purpose of the study into researchable form (2 marks)
- c. Determine the possible reason for student X to use interviews for this study (2 marks)
- d. State the challenges the student might face in conducting the interviews (2 marks)

3.3.Explain two (2) characteristics of the study population you should consider when developing a research tool and why? (2 marks)

3.4 Following an outbreak of retroviral diarrhea in the country a survey is proposed to be conducted in both Mangwaneni and Thembelihle communities. The population of Mangwaneni is estimated to be 600 while that of Thembelihle is 400. The statistician advised that a total of 200 participants need to be sampled. You are a lead researcher tasked with determining the sample size for each constituency to be representative.

- a. Mention the sampling method to be used (1 mark)
- b. Explain why the researcher should choose this method (2 marks)
- c. Explain and illustrate how you would calculate the sample such that there is good representation from both communities (4 marks)

3.5. Determine whether qualitative or quantitative methods are most appropriate for each of the following research questions and state your reasons

- a. What is the meaning of "health" among women farm-workers? (2 marks)
- b. How does frequency of medication administration impact the degree of pain experienced following knee replacement surgery? (2 marks)
- c. Write a non-directional hypothesis for the following null hypothesis;

There is no relationship between the level of education of women and number of children (2 marks)

(25 marks)

TOTAL = 75 MARKS