

UNIVERSITY OF THE GAMBIA
SCHOOL OF MEDICINE & ALLIED HEALTH SCIENCES
DEPARTMENT OF NURSING & REPRODUCTIVE HEALTH

BSTATS 200: BIOSTATISTICS

INDIVIDUAL ASSIGNMENT 1

November 17, 2021

INSTRUCTIONS TO FOLLOW:

- *Answer all questions.*
- *Type your answers in word document (handwritten work will not be accepted).*
- *Create a cover page containing course code and title, semester/academic year, student's name, matriculation number and date of submission.*
- *Submit a printed (hard) copy of your final assignment to your Lecturer in class.*
- *Deadline for submission of assignment is **Wednesday, November 24, 2021 at 9:00 am.***
- *No student will be allowed to submit on behalf of another student.*

- 1) For each of the variables listed below, indicate the type of variable and measurement scale.
 - a) Reaction time in seconds.
 - b) Highest educational degree obtained.
 - c) Blood type of military personnel.
 - d) Number of babies born in given period.
- 2) The weight (gram) of babies born in a particular hospital are as follows:
3277, 3509, 3149, 3525, 3770, 3881, 3386, 3012, 3070, 3661 and 3534.
 - a) Calculate the sample standard deviation.
 - b) Calculate the first, second and third quartiles, and interpret each result.
 - c) What scale of measurement can be applied on the weight variable?
- 3) The mean weight (kg) and its associated standard deviation (kg) among hypertensive patients were 68kg and 10kg respectively. Also, the mean height (cm) and its associated standard deviation (cm) were 158cm and 8cm respectively. Compare the variability between the two measurements and interpret the results.
- 4) Serum ferritin is used as a diagnostic test for iron deficiency anaemia. A total of 2579 patients were studied, of which 731 had both anaemia and positive test results, 1700 patients were diagnosed without anaemia and 1578 had negative test results.
 - a) Construct a contingency table to answer the following questions.
 - b) What is the probability of anaemia among the study population?
 - c) Calculate the sensitivity and specificity of the test and interpret the results.