

Ollscoil na hÉireann, Gaillimh
National University of Ireland, Galway

GX 2329

Semester II Examinations, 2003/2004

Exam Code(s)	4NU6
Exam(s)	Bachelor of Nursing
Module Code(s)	NU418
Module(s)	Research Methods (March 2004)
Paper No.	
Repeat Paper	Yes
External Examiner(s)	Prof. Peter Bradshaw
Internal Examiner(s)	Ms. Kathleen Murphy Ms. Dympna Casey Ms. Adeline Cooney Ms. Gloria Avalos Ms. Sinéad Haheesy Ms. Frances Farrelly Mr. Bernard McCarthy Ms. Miriam Brennan

Instructions:

You are expected to answer a total of Three (3) questions
Use a separate answer book for each question.
You are allowed to use a calculator.

Please note you are expected to support your answers by
referring to relevant literature and examples from research
studies where appropriate.

Duration	3
	Hours
No. of Answer books	3

Requirements:

Handout	
MCQ	
Statistical Tables	
Graph Paper	
Log Graph Paper	
Other Material	Calculator

No. of Pages	6
Department(s)	Centre for Nursing Studies

1. Identify the key barriers to research utilisation and suggest ways to overcome the barriers you identified. (100%)

2. Write short notes on 2 (**two**) of the following:
 - a) Research ethics (50%)
 - b) Searching the literature (50%)
 - c) Critiquing the literature (50%)

3. Describe the key assumptions underpinning **both** qualitative and quantitative research. Use examples to support your answer. (100%)

4. (i) Explain the following terms:
 - a) Target population (10%)
 - b) Sample (10%)
 - c) Probability sampling (10%)
 - d) Non-probability sampling (10%)
 (ii) Discuss the different sampling strategies that can be employed to select either probability **OR** non probability samples. (60%)

5.
 - a) Give **one** example of a qualitative and **one** example of a quantitative methodology. (20%)
 - b) Describe the key characteristics of the methodologies you choose (60%)
 - c) Comment on their potential for developing nursing/midwifery practice or knowledge. (20%)

6. (i) A survey questionnaire was applied to secondary school students to investigate the use of mobile phones. Respondents were asked how many Euros do you spend per month on phone calls.
 What type of data is represented by Euros?
 - a) Nominal
 - b) Ordinal
 - c) Categorical
 - d) Ratio
 - e) Binomial
 (5%)

P.T.O.

- (ii) The following central tendency pattern was obtained from a study examining how many cigarettes students smoked per day.

Mean: 4.00 cig. Median: 4.01 cig. Mode: 4.00 cig. Std. Dev = 1.2

What is the distribution of this data?

- a) Skewed to the right
- b) Skewed to the left
- c) Normally distributed
- d) Negatively skewed
- e) None of the above

(5%)

7. Data on male life expectancy were analysed and descriptive statistics were used the following results were obtained: Average male life expectancy = 64.9, Median = 67, Mode = 72, Std. Dev = 9.27

- (i) Given the pattern of these results which of the following reports is the most representative of the data distribution

- a) Mean and Standard deviation
- b) Median
- c) Mean
- d) Mode

(5%)

- (ii) The product moment correlation coefficient r

- a) Must lie between -1 and $+1$
- b) Is 0.5 when there is no relationship
- c) Should use nominal data
- d) Measures the strength of the means of two variables

(5%)

P.T.O.

8. Write a brief interpretation of the results from the following table. When writing the interpretation, please include *frequencies and percentages* from the highest to the lowest value.

Pathological Tumor Size (Categories)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<= 2 cm	826	68.4	73.7	73.7
	2-5 cm	283	23.4	25.2	98.9
	> 5 cm	12	1.0	1.1	100.0
	Total	1121	92.9	100.0	
Missing	99	86	7.1		
Total		1207	100.0		

(15%)

9. The following data was taken from patients in the pathology department; the measures correspond to the pathologic tumour size in cm.

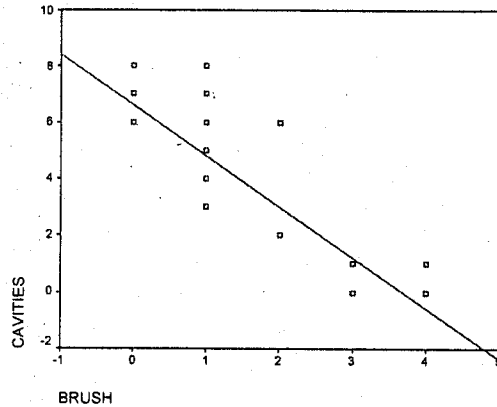
Pathologic tumour size (cm)	.10	.35	.15	.26	.25	.20	.50	.40	.90	.30	.40	.30

- Calculate the mean, median and mode (7%)
- Write the minimum and maximum values (1%)
- With the central tendency results draw a curve and indicate the distribution of the data (7%)

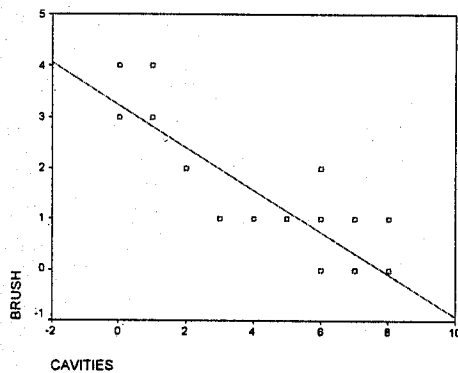
P.T.O.

10. Data was collected from schoolchildren to find out if a relationship exists between the number of times children brush their teeth and the number of cavities that they have. The results of the analysis are shown below. Please answer the following questions in your answer booklet.

Scatter plot 1



Scatter plot 2



Questions	
(a)	Which scatterplot is correct
(8%)	Scatterplot 1, 2 or both?
(b)	Write the name of the dependent variable
(9%)	Cavities or Brush?
(c)	Estimate the number of times that children brush their teeth if they have eight cavities.
(8%)	

P.T.O.

Correlations

		BRUSH	CAVITIES
BRUSH	Correlation	1	-.864
	Sig. (2-tailed)	.	.000
	N	29	29
CAVITIES	Correlation	-.864	1
	Sig. (2-tailed)	.000	.
	N	29	29

	Questions
(d) (5%)	Write the null hypothesis
(e) (5%)	Is the correlation weak, moderate or strong? Yes / No Please write the value
(f) (5%)	Is the correlation significant? Please explain.
(g) (5%)	What is the full name of the statistical test used to analyse these data?
(h) (5%)	Please write your conclusions

END