COVENANT UNIVERSITY
NIGERIA

TUTORIAL KIT
OMEGA SEMESTER

PROGRAMME:
DEMOGRAPHY AND SOCIAL STATISTICS

COURSE: DSS 323

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DSS323
DATA COLLECTION ANALYSIS II

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QUESTIONS

1. INFLUENCE OF MOTHER'S SOCIO-ECONOMIC STATUS ON CHILD SURVIVAL IN NIGERIA. Using the

above research title formulate;

    i.   The general objective for this research problem

    ii.   State two specific objectives for this study

    iii.   Identify the dependent and the independent variables and state the variables that can be use

        for this study

    iv.   Formulate a set of 10 questions standard questionnaire from the above topic.

2a.) What is Qualitative Research?

 b.) Briefly discuss **4 forms** of qualitative research methods that you know.

c.) Mention and explain **3 ways** of analyzing qualitative data, with clear examples.

3a) What is Sampling techniques?

 b.) Discuss the two categories of sampling techniques **extensively** with adequate examples.

4a). Define measurement and distinguish between the three concepts of measurement

 b.) Briefly and clearly explain the types of measuring scales

c.) Discuss fully the characteristics of measuring scales

 4a.) What is Qualitative Research? What are the various forms of qualitative research   methods?

4b.) Mention and explain **3** ways of analyzing qualitative data, with clear examples.

5.) Sampling techniques are divided into two major categories, name them and explain the branches under each (You can draw the sampling method tree to help your explanation).

SOLUTIONS
QUESTION 1

i.)   **The general objective is**: To examine mother's socio-economic status on child's survival.

ii.)   **Specific Objectives**
- To examine the influence of mother's socio-demographic factors on child's survival.
- To determine the relationship between mother's level of income and child survival.
- To measure the extent to which mother's environmental factors (hygiene practices, type/ source of drinkable water, type of toilet, type of housing) on child's survival.

iii.) $Y = a + b_1x_1 + b_2x_2 + … + b_kx_n + μ$ ………………………………. eqn (1)

Y –Dependent variable and this represents child's survival
a – Intercept/ Constant term
β's – Coefficient Parameters
x_1 **to** x_n – Independent variables
This represents socio-economic factors such as; place of residence, age group, income, educational attainment, religion, ethnicity, etc.

iv.)   **SAMPLE OF A STANDARD QUESTIONNAIRE**

Introduction
Good morning/ afternoon/evening. My name is …………… I am from Covenant University. We are conducting a survey research on maternal health education in this city/ town/ village and I would be grateful if you could spare few minutes to answer some questions for us. Every information supplied would be treated with utmost confidentiality and has no legal implications. Thank you.

    SECTION A: BIO-DATA
1.) How old are you? ………………….
    1) 15-19 (2) 20-24 (3) 25-29 (4) 30-34 (5) 35-39 (6) 40-44 (7) 45-50
2.) Gender ………………. (1) Female (2) Male
3.) Religion ……………… (1) Christianity (2) Muslim (3) Traditional
4.) Marital Status……………….. (1) Monogamy (2) Polygamy (3) Separated (4) Never married
5.) Highest educational attainment…………… (1) Primary (2) Secondary (3) Tertiary (4) No schooling.
6.) How much do you earn per month…? (1) 5000-15,000 (2) 20,000- 30,000 (3) 40,000- 50,000 (4) 60,000- 70,000 (5) 80,000- 90,000 (6) 100,000 and above.
7.) What is your occupation...?
    (1) Professional Farming (2) Peasant Farming (3) Trading (4) Civil Servant (5) skilled Artisan (6) Labourer/ Other Artisan (7) Full time Housewife (8) schooling/ Unemployed.

8.) What is your husband's occupation...?

(1) Professional Farming (2) Peasant Farming (3) Trading (4)Civil Servant (5) skilled Artisan (6) Labourer/ Other Artisan (7) Full time Housewife (8) schooling/ Unemployed.

SECTION B: CHILD CARE

9.) How many children do you have under-five years ………

10.)How often do they fall sick…?

    (1) Very often (2) often (3) not often (4) not at all

11.)What type of illness does your child suffer from most times…?

    (1) Cholera (2) Malaria/ fever (3) cold/cough (4) Headache (5) Diarrhea (6) Tuberculosis (7) Typhoid (8) other (specify).

12.)What is the main source of drinking water…?

    (1) Private tap (2) Public tap (3) Bore hole (4) Uncovered well (5) Covered well (6) Rain water (7) River/Stream (8) Tanker truck (9) Bottle water.

13.) Do you do anything to keep the water safe…? (1) Yes (2) No.

14.) If yes, how do you treat the water…?

    (1) Boiling (2) Chemical (3) Sterilizer

SECTION C: LIVING CONDITION

15.)What type of accommodation are you currently occupying…?

    (1) Mud/ Grass hut (2) Wood/Iron House (3) Rooming/ Room & Parlor (4) Flats (5) Detached House/ Mansion.

16.) What kind of toilet facility does your household use…?

    (1) Flush Toilet (2) Pit Latrine (3) Bucket Toilet (4) No facility/ bush/ field (5) other (specify).

17.) Do you share this toilet facility with other households…? (1) Yes (2) No

18.)Have you heard about mosquito net…? (1) Yes (2) No

19.) If yes, do you have…? (1) Yes (2) No

20.)How often do you use it…?

    (1) Very often (2) Often (3) Not often (4) Not at all.

(11 marks are allotted among the sections in the questionnaire)

QUESTION 2

2a.) Qualitative Research can be defined as the aim to gather an in-depth understanding of human   behaviour and the reasons that govern such behaviour. This is a method of inquiry employed in many different academic disciplines, traditionally in the social sciences, but also in market research and further contexts.

2b.) **Forms or types of Qualitative Research Methods**

▸ Case study

This attempts to shed light on a phenomenon by studying in-depth a single case example of the phenomena. The case can be an individual person, an event, a group, or an institution.

▶ Grounded theory

Theory is developed inductively from a corpus of data acquired by a participant-observer.

▶ Phenomenology

Describes the structures of experience as they present themselves to consciousness, without recourse to theory, deduction, or assumptions from other disciplines

▶ Ethnography

Focuses on the sociology of meaning through close field observation of sociocultural phenomena. Typically, the ethnographer focuses on a community.

▶ Historical

Systematic collection and objective evaluation of data related to past occurrences in order to test hypotheses concerning causes, effects, or trends of these events that may help to explain present events and anticipate future events (Gay, 1996).

▶ Ethical Inquiry

An intellectual analysis of ethical problems. It includes the study of ethics as related to obligation, rights, duty, right and wrong, choice.

2c) **Data Analysis in Qualitative Research**

▶ **Interpretive techniques**

The most common analysis of qualitative data is observer impression. That is, expert or bystander observers examine the data, interpret it via forming an impression and report their impression in a structured and sometimes quantitative form.

▶ **Coding**

Coding is an interpretive technique that both organizes the data and provides a means to introduce the interpretations of it into certain quantitative methods. Most coding requires the analyst to read the data and demarcate segments within it, which may be done at different times throughout the process.

Each segment is labelled with a "code" – usually a word or short phrase that suggests how the associated data segments inform the research objectives. When coding is complete, the analyst prepares reports via a mix of: summarizing the prevalence of codes, discussing similarities and differences in related codes across distinct original sources/contexts, or comparing the relationship between one or more codes.

Some qualitative data that is highly structured (e.g., close-end responses from surveys or tightly defined interview questions) is typically coded without additional segmenting of the content. In these cases, codes are often applied as a layer on top of the data. Quantitative analysis of these codes is typically the capstone analytical step for this type of qualitative data.

▶ **Recursive abstraction**

Some qualitative datasets are analyzed without coding. A common method here is recursive abstraction, where datasets are summarized; those summaries are then further summarized and so on. The end result is a more compact summary that would have been difficult to accurately discern without the preceding steps of distillation.

▶ **Mechanical techniques**

Some techniques rely on leveraging computers to scan and reduce large sets of qualitative data. At their most basic level, mechanical techniques rely on counting words, phrases, or coincidences of tokens within the data. Often referred to as content analysis, the output from these techniques is amenable to many advanced statistical analyses. Mechanical techniques are particularly well-suited for a few scenarios.

One such scenario is for datasets that are simply too large for a human to effectively analyze, or where analysis of them would be cost prohibitive relative to the value of information they contain. Another scenario is when the chief value of a dataset is the extent to which it contains "red flags" (e.g., searching for reports of certain adverse events within a lengthy journal dataset from patients in a clinical trial) or "green flags" (e.g., searching for mentions of your brand in positive reviews of marketplace products).

QUESTION 3

3a) This is defined as the process of systematically choosing a subset of the total population one is   interested in surveying. With sampling, the researcher produce findings that can be generalized to the target population of his/her area of interest.
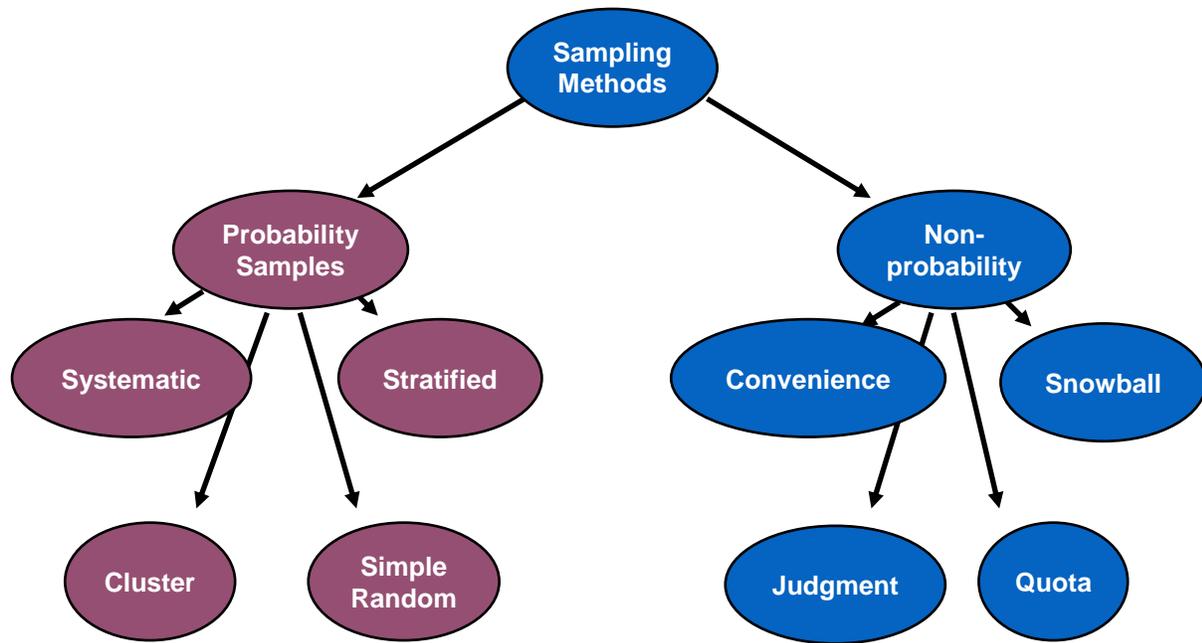
3b) SAMPLING METHODS
This is broadly divided into two, namely:
▶ Probability Sampling
    - It is based on probability theory.
▶ Non –Probability Sampling
    - It is not based on random chance.

▶ **Probability Sampling**

A mathematical concept based on accepted statistical principles that refer to the ability to predict the statistical likelihood that a random event will occur. Random chance determines which elements are chosen. Every element has a chance of being chosen (not necessarily equal).

▶ **Simple Random Sampling**

Each element has an equal chance of being included in the sample – e.g. using a table of random numbers; generated by computer; or lottery method. Selection is not biased but chance determined. It is not frequently use and it requires sampling frame. No form of expertise is needed in conducting this method.

▶ **Systematic Random Sampling**

Researcher works with a list of possible cases to determine the sampling interval necessary to reach the desired sample size. (N/n)=k where N = population, n = sample size, k = sampling interval. Every kth interval is then taken from the pre-established list beginning with at a randomly selected starting point. It requires periodic ordering and a sampling frame.

Stratified Random Sampling

Population to be sampled is divided into homogenous groups based on characteristics the researcher considered important to the indicators being measured. Selection from each group will be done by a simple random approach. Each group is important and must be represented in the selection. It therefore requires accurate information on proportions of each stratum.

▶ **Cluster Sampling**

First a simple random sampling of clusters is chosen from a sampling frame (e.g. schools, health facilities, and youth cluns). Then, a simple random sampling of individuals within each cluster is selected. Low cost/high frequency of use. Requires list of all clusters, but only of individuals within chosen clusters.

▶ **Multi- Stage Sampling**

This is Similar to cluster sampling. There are several stages of sampling and sub-sampling; usually used in large scale population surveys.

NON- PROBABILITY SAMPLING

Samples are not chosen by random chance. Sample of subjects chosen on the basis of opportunities. You use your judgment to choose what you think is representative of a larger population.

▶ **Convenience Sampling**

Not randomly determined, also called accidental sampling. Drawn on the basis of opportunity e.g. Youth attending a school activity, people attending a conference, etc.

▶ **Judgment or Purposive Sample**

The sampling procedure in which an experienced research selects the sample based on some appropriate characteristic of sample members to serve a purpose. This method is highly bias.

▶ **Quota Sampling**

A sampling frame is defined in advance. Selection from different strata is not based on random principle. Not all elements have possibility of being selected, hence may not be representative.

▶ **Snow ball Sampling**

Also known as network or chain referral sampling. Data is collected from a small group of people with special characteristics (e.g. men who have sex with men). These people are asked to identify other people like them and data collected from these referrals who are also told to identify other people like them. Process continues until a target sample size is reached.

QUESTION 4

4a.) Measurement can be defined as assignment of numerals or other symbols to empirical properties or events or objects according to specified rules.

Three concepts of measurement

1. Assignments
2. Rules and
3. Numerals

A numeral is a symbol used to identify phenomena objects or person. It can be months, houses etc. it usually help a researcher to use mathematical and statistical technique to describe, explain and predict whatever is being studied.

Assignment: means mapping of things of the same characteristics together e.g. assortment of shapes together to make to represent a particular shape.

Rules: means the specified procedures are researcher uses to assign numerals or numbers to objects or event.

(b.) **Types of measuring scale**
- i. Nominal
- ii. Ordinal
- iii. Ratio
- iv. Interval

Nominal scale: this is the lowest level of measurement. Numbers are assigning in nominal scale to clearly differentiate one from another. Example in Covenant University different numbers are assign to differentiate one hostel from the other and the numbers assigned serves as label.

Ordinal scale: this is a type of ranking scale based on certain defined characteristics. This is usually used to rank events or objects based on certain characteristics, e.g. ranking of Covenant University staff based on their salaries. This scale does not show equality or differences.

Interval scale: this poses both the characteristics of nominal and ordinal scale and is also use in determination of equality between different points. An arbitrary zero is used in interval scale because it does not have a true zero point.

Ratio scale: this is the best measuring scale because it has the three previous scale characteristics. It is mostly use in the physical science with physical variables. E.g. weight, height, length, area e.t.c.

Scale	Characteristics
Nominal	It has no origin, order or distance
Ordinal	It has order but no origin or distance
Interval	It has both order and distance but no origin
Ratio	It has order, origin and distance

(C) Ordinal Scale
- i. Ratio Scale
- ii. Nominal / Summated Rating Scale
- iii. Ordinal Scale

QUESTION 5

5a.) Primary data are first hand information collected by a researcher through administering of questionnaire, observation and manipulation of data for the purpose of conducting a study, while Secondary data are data that has been collected, classified, analyzed, interpreted and published.

PRIMARY DATA

Advantages	Disadvantages
Reliable information can be gathered	It is expensive
Target population is clearly define	It is time consuming

Low bias rate	Untrained personnel
It is flexible	
High response rate	

SECONDARY DATA

Advantages	Disadvantages
It saves time	Some variables of interest might not be included
Less expensive	Data might not be relevant to research problem
Can be compared with primary data	Data might not be accurate
	Might be somewhat out of date

(b.) **METHODS OF COLLECTING DATA**

Primary Data
  i. Observation (participatory and non-participatory observation)
  ii. Experiment (field and laboratory experiment)
  iii. Questionnaire
  iv. Interview (telephone, personal or focus group interview)
  v. Survey

Secondary data
  i. Government publications (national bureau of statistics, Nigeria demographic and health survey e.t.c.)
  ii. Non-governmental organizations
  iii. International organizations
  iv. Magazines and textbooks
  v. Journals, bulletin and newspapers