

RESEARCH METHODS AND STATISTICS

UNIT CODE: MED/CU/PM/CC/06/6/A

Relationship to Occupational Standards

This unit addresses the unit of competency: conduct research project

Duration of Unit: 30 hours

UNIT DESCRIPTION

This unit specifies the competencies required to conduct research in nutrition pharmacy. It involves proposal writing: identifying a research problem upon literature review, formulating objectives, hypothesis and or research questions, conducting literature review, developing research methodology, conducting data collection, conducting data analysis and presentation and preparing research report. Statistical methods: types of data, descriptive statistics, inferential statistics, confidence intervals

Summary of Learning Outcomes

1. Identify terminologies in research methods and statistics
2. Develop a research proposal
3. Conduct data collection
4. Conduct data analysis and presentation
5. Preparation of reports and dissemination

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Identify terminologies in research methods and statistics	<ul style="list-style-type: none">• Meaning of terms in research methods and statistics• Importance of research• Types of research• Sources of data for research	<ul style="list-style-type: none">• Written .• Observation• Third party report

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • Statistical methods; data types, sampling formulars, sources of error in research and how to control them, statistical analysis of data and statistical tests; descriptive statistics, inferential statistics, confidence interval, point estimates, 	<ul style="list-style-type: none"> • Oral questioning • Interviews
<p>2. Develop a research proposal</p>	<ul style="list-style-type: none"> • Identification of research problem/title • Components of research proposal: front matter; title pagr, declaration, dedication, acknowledgement, table of content, acronyms, tables and figures and abstract. • Chapter One; background information/introduction, problem statement and justification, objectives, hypothesis/research questions, significance of the study, scope of the study, limitations, delimitations, conceptual frame work and operational definition of terms. • Chapter Two; literature review based on objectives. • Chapter Three; research methodology; study desing, study area, study variables, sample size determination, Sampling procedures, data collection tools and proceduers, Validity and reliability of data tools ethical issues in research, referece, Formulate questionnaire and other data collection tools 	<ul style="list-style-type: none"> • Written . • Observation • Third party report • Oral questioning • Interviews

Learning Outcome	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • Back matter; Appendices; questionnaire, consent forms, budget, time frame 	
3. Conduct data collection	<ul style="list-style-type: none"> • Pre-testing of data collection tools • Sampling/ identification of respondents • Administering questionnaires and other data collection tools • Data management and data quality checks 	<ul style="list-style-type: none"> • Written . • Observation • Third party report • Oral questioning • Interviews
4. Conduct data analysis and presentation	<ul style="list-style-type: none"> • Identification of data analysis softwarwes • Data presentation; tables, figures cahrts 	<ul style="list-style-type: none"> • Written . • Observation • Third party report • Oral questioning • Interviews
5. Preparration of reports and desermination	<ul style="list-style-type: none"> • Scientific writing of research document; to include content in proposal changed to past tense and including chapter Four; research findings and discussions, chapter five; conclusions and recommendations • Preparation of Power point presentations and peer reviewed publications 	<ul style="list-style-type: none"> • Written . • Observation • Third party report • Oral questioning • Interviews

Suggested Methods of Delivery

- Projects
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction

Recommended Resources

- Stationary
- Cameras

- Mode of transport
- Human and financial resources
- Research permits
- Projectors
- Computers
- Laboratory
- PPE
- Experimental sites
- Pharmaceutical firms
- Pharmacopoea
- Survey maps of the site

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CORE UNITS