
UNIT 13 WRITING A RESEARCH REPORT

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13.0 OBJECTIVES

After going through this practical, you should be able to:

- explain the purpose of writing a research report;
- plan and prepare the research report of the study. You will conduct as an exercise to learn the steps of research; and
- examine the research findings and reports presented in literature and use these findings to improve your practices.

13.1 INTRODUCTION

As professional nurses you should possess skills to go through the reports of research in your field.

You should also remember that scientific project is never complete until a research 'report has been prepared. Research report has very little value unless that work done is known to the people practicing in the field. It is the responsibility of the researcher to let the others know about the advantages of her/his research findings. Research report is prepared for different audience and for different

purposes. Oral reports and presentations at professional conferences are other mechanisms for disseminating research results; they offer the possibility for immediate two way communication and are therefore highly useful.

In this practical we shall familiarize you with the procedure of writing a paper and/or a report. We will also discuss the purpose of writing report in following sub-section describing the purpose for writing these reports.

13.2 PURPOSE OF WRITING A RESEARCH REPORT

Three main purposes of writing a research report include following:

- i) Writing report for partial fulfillment of your degree.
- ii) Writing report for a professional journal for dissemination of information and findings to the scientific and professional community.
- iii) Writing report for newspaper to communicate to a larger population.

i) Writing Report for Partial Fulfillment of a Degree

Writing a report for partial fulfillment of your degree means it will be read by other researchers to study the whole research methodology as well as the relevance of these findings in the field of nursing.

ii) Writing Report for Professional Journals

Writing report for professional journals, articles in journals are to up-date information on research in different areas of a discipline. By reading an article on a research study in a journal you get an idea about the research design of the particular study as well as the findings of the study together with the analysis of these findings. For details you may have to directly contact the researcher/author.

iii) Writing Report to Communicate to a Larger Population

If the research report is of public interest like smoking and health or malaria or any other problem which general public is interested in, you can communicate your findings through publishing the same in newspapers or popular magazines. Here readers are not interested in the method you have used, instead, you need to communicate how reliable your findings are, using simple language and avoiding scientific terms.

Check Your Progress 1

- 1) Why is a research report written?

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- 2) Where are research findings reported?

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- 3) Who utilizes the research findings?

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Activity 1

Select a Master of nursing research report from the library or from any nursing journal and read as reported in nursing research journal. Identify the purpose for which those studies have been undertaken and evaluate.

13.3 ORGANIZATION OF THE REPORT

Once you have selected a research problem, you have to select the study designs and then decide the variables, methodology and the study population, and then actually conduct the study. As you conduct the study, you obtain data. The data are then analysed and interpreted. Now you are ready to write the report on your research study. What is the procedure now? How do you do it?

The procedure consists of outlining the contents and organizing it. You have also to decide how much a report has to be elaborated which will however, depend on the purpose of writing the report.

Outline of the contents of a research report broadly covers: i) An Introduction, ii) Literature study, iii) Methodology, iv) Data Analysis and Interpretation, and v) Summary. Let us now see the contents of each of these and their organization.

13.3.1 Introduction

i) Background of the Problem

ii) **Need and justification for the study:** Explain the need of your study, wherever possible, use available statistical data like rates, ratios and quote studies which recommend for further exploration of the problem which you have selected. This will also help you justify the need for doing the study.

iii) **Problem statement:** The problem may be stated in statement form or in the form of a question as discussed in BNS, 211 Block 3. The problem statement should indicate the nature of the study, for example it explains “to find the relationship between” or “to compare the performance of or to explore the or to answer specific questions.

- iv) **Statement of Objectives:** Objectives are written in observable and measurable terms. Each statement should state one objective for example identification of indigenous treatment procedure for diarrhoea. For the same if we say identification of the indigenous treatment of diarrhoea and evaluation of its effectiveness, it 'would be incorrect as this statement has two objectives. We can say the same in two statements for objectives e.g. (1) Identification of indigenous treatment of diarrhoea, and (2) Evaluation of the effectiveness of this indigenous treatment in diarrhoea. You should also mention the criteria against which you evaluate.
- v) **Rationale for the study:** This is usually developed into theoretical framework that supports your investigation in developing your hypothesis, in constructing data collection instruments and in analysing and interpreting results.
- vi) **Operational Definitions of terms:** All terms do not require definitions. But terms that require definitions are those which present concepts, for example perception, nursing graduates, health educators etc.
- vii) **Scope and delimitation:** The scope indicates the areas that are covered and the extent to which the study subject will be covered and where results could be applied. Delimitation indicates what you are not investigating and limitations that you have already taken into consideration. You should also justify the delimitation. If the investigator is aware of all possible limitations and restrictions of his/her research, she/he can perhaps take appropriate precautions to soften their effects. Moreover, conveying this limitation in the report of the research would put the reader in a more appropriate frame of mind to make valid interpretation of the data.
- viii) **Outline of other chapters:** A paragraph on what the reader can expect in other chapters should be included in the "Introductory" chapter. This paragraph gives an idea of what has been reported in the other chapters.

13.3.2 Literature Study

- i) **Overview of the organization:** First paragraph in this chapter contains the areas of related literature reviewed and outline of the presentation of this literature review.

Usually in the organization of the report the review of the studies from broader areas are presented first and specific areas later.

- ii) **The description of related research reviewed** includes design analysis and findings of the study in brief. Emphasis is put on what areas are already explored and what is yet to be studied. Presentation should also discuss the areas that are relevant to the present study-vis-a-vis the problem presented in the study, the research design, instruments used in the study, theory concepts, analysis and its relationship with the present study or problem.
- iii) **Acknowledge all sources of literature** using accepted form of presentation.
- iv) **Literature reviewed** mostly includes research materials and research studies. The non-research literature, if included are mostly theories and principles.

- v) **Summary of the literature** reviewed is presented in the last paragraph of the practical on Review of Literature.

13.3.3 Methodology

This sub-section on Methodology starts with overview of the sub-section and the methodology includes:

- i) **The Research approach:** In case of experimental study this section is given more prominence for designing the study. However, it is important to describe the variables; independent and dependent variables and the list of extraneous variables.
- ii) **Research technique:** Justification for the choice of techniques is given here.
- iii) **Selection and development of research instrument:** In this section discuss the rationale, norms, conditions for administration etc. If a tool is developed by the researcher, include the steps of developing the tool including pretesting, state, how you have determined the reliability and validity of the instrument.
- iv) **Description of the tool:** This includes the main features of the tool, for example if it is a questionnaire it contains three parts-Part I Background of the subject, the tool and the type of items. For example whether the questionnaire is structured or open, whether it seeks multiple responses etc.

In Practical 11 you have read that section I on background data, section II is on structured questionnaire for assessing knowledge and section III is on opinion of nurses about communication practices.

- v) **Description of Study Setting:** This section should include all the relevant information related to the background of the subjects to be studied. For example in case of the study to find out indigenous treatment of diarrhoea, you should include the description of setting, geographical background, means of communication, religion, prominent cultural patterns and beliefs, education of the subjects etc. In a way this helps the reader to understand the background of the respondents.
- vi) **Procedure of Data Collection:** During the phase of data collection, the first step is to obtain administrative permission and willingness from the subjects. This should include conditions which will be maintained during data collection. For example if we have to collect growth and development data of children below one year of age coming to a MCH clinic of a primary health centre, we have to first take permission from the administrative head of the health centre, then also take permission from the parents of the children concerned. The example of another condition is taking weight of these children without clothes on a standard weighing scale provided the study is undertaken in appropriate weather conditions with suitable precautions. There are some tests where confidentiality needs to be maintained. In such cases code numbers should be used for this purpose.

- vii) **Sampling:** Includes description of population, sample size and criteria for selection of sample. For example out of 200 mothers when you select 50F mothers, you should describe what sampling technique you have applied in selecting these 50 mothers.
- viii) **Plan of Data Analysis:** What are the expected data and what type of statistics the researcher plans to apply are described here. For example in the study of growth and development of children below one year of age, growth measures like weight and height are continuous data. Descriptive statistics of mean and/or median may be calculated like weight is in grams and height is in cms.
- ix) **Summary of Methodology:** This is the last section in this part. A summary of all the above eight items covered are given in this unit, so that the reader can have the entire gamut of methodology at a glance.

13.3.4 Data Analysis and Interpretation

This sub-section starts with the review of objectives and how the data have been organised and presented in the sub-section.

Mostly the data are presented in accordance with the objectives. Use of tables and graphs is done to present the data; descriptive statistics is used to describe the statistics.

To test the significance of results, statistical inference is done by stating null hypothesis and indicating the results by rejecting or accepting the null hypothesis, the data may be presented in tables.

Mostly interpretation is given for each table/graph and statistical analysis. Studies which have been referred to in the “literature study” chapter of the study are considered when interpreting the results. Like growth and development of infants may be compared with standard norms or studies done by other researchers on a larger sample, to be able to explain the findings in a meaningful way.

Summary of analysis chapter includes major findings of study in relation to the objectives.

13.3.5 Summary

Summary sub-section contains briefly all the research steps including the list of major findings, facts and figures which are essential.

Conclusions drawn from each of the findings expected or non expected, are to be included in the summary. Findings also can be used to explain generalization which can be made from the results.

Implications which include reflective thinking in terms of possible application of the result should also feature in the summary. For example, if from growth and development study you find children are below normal in height and weight, it indicates children are malnourished. Implications could cover what could be the possible reasons for malnutrition and what are the strategies which could be adopted to overcome the problem of malnutrition. These could be suggested strategies or strategies to be adopted by other researchers in their studies.

Limitations of the present study could be explained from the researcher's experience during the study.

Recommendations give directions to future research studies in the field of study and suggestions for improving the present study.

13.3.6 Other Contents of the Research Report

- **Acknowledgment:** It is an acknowledgment to the people who directly or indirectly have facilitated the study procedure. It is placed at the beginning pages.
- **Table of content:** Includes contents serially arranged and page numbers assigned to the pages.
- **List of figures and tables:** These lists are to facilitate the identification of tables or figures which are used for presentation of data. These are also with page numbers.
- **Bibliography:** List of books, journals, research and non-research materials used for research study for reference. A format is adopted for writing bibliography.
- **Appendices:** These are usually placed at the end for reference which include letters of permission, tools, any educational material used or extra tables or details of statistical calculation showing working of formula and other information related to the study but not given in the main text. Master sheet of data can also be included in the appendices.

Activity 2

Select a research report from a nursing library and read it carefully to see if all sections/chapters of report are included as presented above.

13.4 TYPING THE RESEARCH PAPER

There are common instructions for typing research paper or thesis which are followed by the typist. Like the draft should be typed in double space to allow corrections. A guide sheet for typist can be prepared by the researcher. Every institution has approved pattern which can be followed by the beginning researcher. Otherwise a researcher may follow the instruction or manuals which are prepared to describe the form and style of writing research paper.

13.5 EDITING AND PROOF READING

Editing and proof reading should be done by experts of professional language and or subject experts. Editing the grammatical mistakes by a professional person is a must for any written document for publication. Try reading many times to find any error or mistake before finalising it.

When you evaluate a research study, you have to critique it considering all the above steps.

13.6 LET US SUM UP

In this Practical, you have learnt about reporting of the research findings and how to write a research report. Presentation and depth of research report will depend upon what is the purpose of writing the research report. Report is organised covering a broad outline commonly used by the researchers. Mostly these are established as per the objectives of writing the report. If it is as per requirement for any educational qualification it may be prescribed by the institution or the university. In this Practical, most commonly used report outline is given and briefly described what all should be included. It is hoped you will be able to better understand a research report and utilize the findings of the research reports in improving some of the practices and bringing in some changes in programmes as per the suggestions given in the report. Reading of research report will also help you to select a topic for further research, in the field of nursing practice.

13.7 ANSWERS TO CHECK YOUR PROGRESS

- 1) — Partial fulfillment of degree requirement.
 - Reporting in professional journals for dissemination of information and findings to the professional community.
 - Writing report for newspaper or magazine for communication to a large communication.
- 2) — As articles in journals.
 - Thesis and/or dissertation.
 - Magazine or newspaper.
 - Research Project Reports.
 - Conferences.
 - Paper presentation in seminars on convention.
- 3) — Future researchers.
 - Practitioners in the field.
 - Planners.
 - Public, if the topic is of interest to the general public.

13.8 ACTIVITIES ANNEXURES

- 1) Select a Master of nursing research report from the library or any nursing research report read it as reported in nursing research journal. Identify the purpose for which those studies have been undertaken and evaluate.
- 2) Select a research report from a nursing library and read it carefully to see if all sections/chapters of report are included as presented here.

A study to assess the effectiveness of a home management guide regarding self-care in maintenance of haemodialysis in-terms of knowledge, practice and selected parameters of patients attending dialysis units of selected hospitals of Kerala.

The **objectives** of the study were: (1) To assess the knowledge of patients regarding self-care in maintenance of haemodialysis before and after administration of the home management guide. (2) To assess the practices of patients regarding self-care in maintenance of haemodialysis before and after administration of the home management guide. (3) To assess the selected parameters (IWG, BP, and Serum K) of patients on maintenance of haemodialysis before and after administration of the home management guide. (4) To find the relationship among knowledge, practice and selected parameters of patients on maintenance of haemodialysis and (5) To determine the acceptability and utility of the home management guide for patients on maintenance of haemodialysis by doctors, nurses and patients.

The **conceptual framework** adopted for the study was Orem's self-care deficit theory. The study was evaluative in nature, with one group pre-test post-test design. The data were collected from Lisie and AIMS Hospital, Kerala using purposive sampling technique. The sample consisted of 30 maintenance of haemodialysis patients attending dialysis units of the hospitals.

Thus, the **findings** of the study revealed that the home management guide was effective in enhancing the knowledge and practice of patients on maintenance of haemodialysis as well as in bringing down their IWG values.

Based on the findings, the following **recommendations** are proposed for future research: (1) The study can be replicated in a large sample to validate and generalize the findings. (2) A similar study can be carried out with both experimental and control groups. (3) The present study follow up can be done to evaluate the long-term effectiveness of the home management guide. (4) The present study can be elaborated including other parameters also. (5) A study can be conducted to find out other factors which influence the self care practice of maintenance of haemodialysis patients as knowledge and practice in this study did not reveal a significant relationship. (6) In order to assess the psychosocial correlates viz. personality, social support, emotional well-being a correlational study is recommended and (7) A study can be conducted by using other methods like self instructional module, audio and video tapes to find out best strategy in teaching this group of patients.

The **tools** used for generating necessary were a structured interview schedule, structured proformas and two opinionnaires. A home management guide was developed and structured for enhancing knowledge and practice and, in turn to, bring down the values of selected parameters of patients on maintenance of haemodialysis patients.

Data were collected from 27- 12-1998 to 14-01-1999. The data obtained were analyzed using both descriptive and inferential statistics in terms of frequencies, percentage, mean, median, standard deviation 't' value and coefficient of correlation.

Sample characteristics revealed that majority of the subject were males, 63.33 per cent of subjects from urban area, half of them on dialysis for more than one year and 86.87 per cent subjects had AV. Fistula as blood access.

The **significant** findings of the study were as follows: (1) The mean post-test knowledge scores were significantly higher than the mean pre-test knowledge scores for the total as well as in each content area. (2) There was a significant gain in post-test practice score after introduction of the home management guide. (3) The mean post-test value of only IWG of the three selected parameters was significantly lesser than mean pre-test value. (4) There was no significant relationship between knowledge and paractice scores as well as knowledge and selected parameters. (5) There was a significant negative relationship between practice and two of the selected parameters i.e. IWG and serum K. and (6) The home management guide was found highly acceptable by doctors, nurses and patients.



Master Data Sheet of Values of Selected Parameters of Patients

Code No.	IWG (Kg)	Serum K (Meq/l)	Systolic BP (mm of Hg.)	Diastolic BP (mms. Hg.)	IWG I (kg)	Serum K (Meq/l)	Systolic BP (mm of Hg)	Diastolic BP (mm of Hg.)
1.	2.4	4.5	154	90	2.8	4.8	140	90
2.	2.1	5.3	180	70	2.1	4.7	140	80
3.	3.8	6.5	180	100	2	5.6	170	100
4.	2.2	5.8	180	100	2.2	6.4	150	100
5.	5.9	6.3	200	100	4	5.3	160	100
6.	4.6	6.2	190	110	4.9	6.7	180	110
7.	4.9	5.2	220	120	4.3	5.3	180	110
8.	5.8	4.5	120	70	2.3	4.4	130	80
9.	4.3	7.8	186	94	4.8	7.1 •	210	110
10.	3.7	5.8	150	100	2.3	6.1	160	110
11.	2.5	7.5	150	100	2.6	6.7	150	80
12.	3.9	5.9	210	100	3.5	5.7	200	100
13.	4.5	6.5	130	100	3.5	5.5	150	90
14.	5	5.6	140	96	4	7.1	170	110
15.	4.1	6.2	160	100	2.3	5.5	190	110
16.	5.4	6.5	160	80	2.9	7.4	130	80
17.	5.8	6.1	194	120	5.5	7.8	180	100
18.	4.8	7.6	140	90	4.9	7.4	140	90
19.	3.9	7.3	220	80	4	5.5	170	70
20.	3.5	7.4	220	120	3.1	7.3	160	110
21.	3.9	6.7	170	90	2.4	6.9	180	90
22.	4.6	6.9	140	90	4	5.6	120	80
23.	5	7.9	160	80	2.7	7.6	180	80
24.	6	8.4	180	120	5	7	190	110
25.	1.9	5.6	140	100	1.9	4	180	112
26.	1	4.7	160	110	2.7	4.6	178	112
27.	1.3	3.7	128	94	1.9	4.2	136	108
28.	2.1	6.2	168	114	0.4	2-4	166	100
29.	3.2	4.6	136	94	1.8	4.4	170	110 ;...
30.	1.8	4.4	142	102	1.6	4.6	142	96
	113.85	183.6	5008	2934	93.4	173.6	4902	2928

**Master Data of Area-wise Knowledge Score and
Practice Score of Patients**

PRE-TEST							POST-TEST						
KNOWLEDGE SCORES							KNOWLEDGE SCORES						
Code. No	Area	Area	Area	Area	Total	Practice Score (Total)	Area	Area	Area	Area	Total	Practice Score (Total)	
1.	3	3	4	19	29	54	5	8	6	37	56	69	
2.	1	5	3	18	27	61	3	9	8	44	64	70	
3.	5	5	6	23	39	59	5	9	6	46	68	76	
4.	4	7	5	36	52	70	5	9	8	41	63	74	
5.	2	7	7	34	50	52	3	10	7	42	62	62	
6.	1	5	4	26	36	65	3	10	7	46	66	67	
7.	3	6	3	31	43	59	2	8	7	49	66	64	
8.	1	5	3	27	36	58	2	8	7	48	65	62	
9.	3	8	8	32	51	59	3	9	8	48	68	63	
10.	3	5	6	25	39	55	5	8	8	44	65	59	
11.	4	7	7	45	63	65	5	9	8	57	79	73	
12.	2	5	5	26	38	55	3	9	8	54	74	66	
13.	3	8	2	34	47	55	5	9	6	52	72	71	
14.	3		5	35	50	55	3	7	6	40	56	62	
15.	6	7	8	35	56	60	6	11	8	45	70	72	
16.	5	6	7	41	59	55	5	7	8	42	62	55	
17.	3	9	7	37	56	65	4	11	7	44	66	67	
18.	3	7	6	36	52	65	3	11	7	47	68	72	
19.	3	3	4	26	36	54	6	6	8	60	80	65	
20.	2	3	3	19	27	45	5	7	8	52	72	63	
21.	3		7	39	56	55	6	13	8	55	82	65	
22.	3	5	7	18	33	53	5	12	8	41	66	68	
23	5	10	8	61	84	59	6	13	8	70	97	65	
24.	3	6	8	27	44	52	5	10	8	39	62	61	
25.	1	4	3	24	32	68	4	8	7	46	65	74	
26.	3	7	4	43	57	74	4	11	7	61	83	78	
27.	3	5	4	29	41	76	4	6	6	48	66	76	
28.	3	8	6	34	51	68	5	11	7	52	75	73	
29.	2	6	6	30	44	57	2	9	7	52	70	70	
30.	3	5	6	36	50	78	6	12	7	63	68	78	
	89	181	162	946	1378	1806	128	282	221	1465	2096	2040	