

Exploring the understanding of the research process nursing essay



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The purpose of this assignment is to explore the research process and look at a specific topic. Research is an important factor within all health professions as it is essential to keep practice up-to-date. It is used to generate knowledge that will directly and indirectly influence midwifery practice.

Research is central to the aims of the Department of Health, in seeking to provide a scientific basis for its policy decisions (DoH, 1997).

The aim of the research and development strategy for public health is to provide high quality research evidence which will be used to improve the health and well-being of the population and reduce inequalities in health (DoH, 2001).

Evidence-based practice has emerged from the desire to provide high quality maternity care, that is effective and efficient, while also being women centred and achievable (Cluett & Bluff, 2006).

In accordance with The Code (NMC, 2008), it states that professionals should

‘ Use the best available evidence

We must deliver care based on the best available evidence or best practice.

We must ensure any advice we give is evidence-based if we are suggesting healthcare products or services’.

Therefore, research is an integral part of midwifery and the professional lives of all midwives.

Why

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The Briggs Report, which was carried out by The Department of Health and Security (1972), advocated that all health-related care should be research based and this should include midwifery. Practitioners need to be aware of the ever changing research so their practice can be based on the best evidence available.

It is important for professionals to have knowledge and basic understanding of the research process in order to review it and go on to determine its significance.

Research should be an organised, systematic and logical process of inquiry or investigation.

The basic steps which should be included in the research process are:

Introduction

Literature Review

Research Question or Hypothesis

Aims and Objectives

Study Design

Population and Sampling

Data Collection Methods

Data Analysis

Mechanisms to assure quality

Study Period

Ethical Considerations.

(Gerrish, 2006).

My research question has come from personal curiosity.

Whilst working out in the community, I have heard my mentors suggest using cabbage leaves for breast engorgement. I am interested to know where this comes from so this had led to the topic of this assignment; Do cabbage leaves help reduce breast engorgement?

Literature review

Literature reviews are essential for researchers as they summarise what is already known on a subject, they provide the reader with an analysis of the available literature and encourage objective thinking (Aveyard, 2007)

Whilst carrying out my literature review, I could find many articles that recommend the use of cabbage leaves for engorgement but none of them really explained why. The majority of them stated there has only been minimal research around the topic.

In Europe, it is common practice to cover engorged breasts with cabbage leaves to relieve oedema (Lawrence & Lawrence, 1999).

In Australia, South Africa and the United States, randomised controlled trials have been carried out to compare the effects of cabbage leaves to either massage or chilled gel packs. None of them have found that the cabbage leaf treatment provided a statistically significantly better intervention.

However, women preferred the relief obtained from the cabbage leaves to other interventions (Nikodem et al, 1993/Roberts, 1995/Enkin et al, 2000).

Lawrence and Lawrence (1999) recommend offering it to woman for relief of discomfort as there are no reported adverse effects from this practice.

Cabbage leaf extract has also been studied in a trial concerning lactation. Cabbage leaf extract was compared to a placebo cream and it was found there was no statistical differences among the groups in any of the measures recorded (Roberts et al, 1998).

The hypothesis or research question

For researchers to be able to undertake a study, they first need to have a hypothesis or research question. A hypothesis is a statement describing the proposed relationship between the given variables (Cluett & Bluff, 2006).

Researchers then design a study to test the hypothesis. The numerical/statistical data collected in the study allow the researchers to determine whether their hypothesis was confirmed. Research hypotheses can be categorised as directional, non-directional or null (Ary et al, 2010). A directional hypothesis will predict the path or direction the relationship will take. A non-directional hypothesis will predict the relationship but not which path or direction it will take. A null (or statistical) hypothesis predicts that no

relationship exists among or between the variables in the study (Boswell & Cannon, 2010).

A hypothesis will be needed if the study involves an actual experiment, to prove or disprove the statement. However, a question can not be used as you cant prove/disprove a question, you can only answer it (Offredy & Vickers, 2010).

A research question is essentially a hypothesis asked in the form of a question.

I have chosen to use a question for this study, Do cabbage leaves help reduce breast engorgement compared to cold gel packs?

This could however be changed into a hypothesis by stating; Cabbage leaves significantly help to reduce breast engorgement compared to cold gel packs.

Aims and Objectives

The aim of a study is essentially the motivating force. The aims are statements which the researcher sets to achieve, or simply, what they want to find out.

The aims are then broken down into smaller steps, which are called the objectives.

The objectives are a more specific set of statements pertaining to the aim of the research and therefore must fulfil the requirements of the aim (Offredy & Vickers, 2010).

The primary aim of this study is to assess how effective cabbage leaves are for treating engorgement (control group) compared to cold gel packs (intervention group). The control group will be mothers who are breast feeding and who are 72 hours postnatal and using cabbage leaves. The intervention group will be mothers who are breast feeding and who are 72 hours postnatal and using cold gel packs.

Therefore my objectives will be:

To compare the women's perception of breast engorgement between the 2 groups at different time intervals.

Type of study (study design)

Dawson (2007) says the first thing we need to do when it comes to research is consider the methodology as this is the general philosophy that will guide our research. Dilemmas, constraints and ethical choices will all be considered from this approach.

According to Dr Kothari (2009) the basic types of research are as follows:

Descriptive vs. Analytical

Descriptive research includes surveys and fact-finding enquiries of different kinds. It sets out to collect, organise and summarise information about the matter being studied. The main characteristic of this research is the researcher has no control over the variables. He/she can only report what is happening/or happened.

Analytical research on the other hand, uses facts or information already available and analyse these to make a critical evaluation of the material.

Applied (Action) vs. Fundamental (Pure)

Applied, or action, research aims to find an immediate solution to a problem facing to a societey, industry or business.

Fundamental, or pure, research is mainly concerned with generalisations and the formulation of a theory.

Quantitative vs. Qualitative

Quatitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity.

Qualitative research is concerned with phenomena relating to or involving quality or kind. This research is specially important in behavioural sciences where the aim is to discover the underlying motives of human behaviour.

Conceptual vs. Empirical (Experimental)

Conceptual research is that relating to an abstract idea(s) or theory. It is generally used by philosophers to develop new concepts or to reinterpret existing ones.

Empirical research relies on experience or observation alone often with disregard for system and theory. This research is appropriate when proof is sought that certain variables affect other variables in some way. Today,

evidence gathered through empirical or experimental is considered to be the most powerful support possible for a given hypothesis.

Experimental research is where participants are assigned to groups based on some selected criterion often called treatment variable.

Quasi-experimental research is where participants are preassigned to groups based on some characteristic or quality such as differences in sex, race, age, neighborhood, etc.

Some other types of research include:

One time research where it is confined to a single period of time or longitudinal research which is carried out under several time-periods.

Field-setting research, laboratory research or simulation research, depending upon the environment in which is it to be carried out.

Research can also be understood as clinical or diagnostic research. These usually follow case-study methods or in-depth approaches to reach the basic causal relations. Such studies will usually go into great depth into the causes of things or events that interest us.

Explanatory research is the development of hypothesis rather than the testing. Whereas formalised studies are those with substantial structure and with specific hypotheses to be tested.

Historical research is that which utilises historical sources, like documents, remains, etc, to study events or ideas of the past.

Conclusion-orientated is where the researcher is free to pick up a problem, re-design the enquiry as he/she proceeds and is prepared to conceptualise as he/she wishes. Where as decision-orientated the researcher is not free to embark upon research according to his/her own inclination, there is always the need for a decision maker.

Randomised controlled trial's (RCT's) are seen as the gold standard for health study research. The evidence from RCT's is considered to be the most rigorous or trustworthy for the purpose of building evidence-based practice guidelines to improve clinical practice (Holzemer, 2010).

For this reason I would use a RCT to carry out this study. RCT's seek to determine if an intervention causes change so therefore has variables. A variable is any item of interest that can have more than one possible value, therefore its value can be variable. In an experimental study the researcher chooses a variable and manipulates it. The variable that is manipulated is called the independent variable and the effects of the manipulation on other variables (the dependent variable) is measured to compare outcomes (Goddard & Melvin, 2007).

The independent variable for this study will be cabbage leaves. And the dependent variable will be the women's perception of their breast engorgement.

The participants would randomly be allocated to one of the two groups. The experimental group would received the application of cabbage leaves and the control group would receive the cold gel packs.

RCT's typically seek to measure and compare different outcomes and due to the outcomes being quantified, they are classed as quantitative studies. They are also considered comparative studies as they are comparing two or more interventions (Jadad & Enkin, 2007).

In an RCT, threats to the internal validity are minimised due to the participants being randomly assigned to the treatment groups and also confounding variables are distributed equally amongst them. Without the random allocation there would be a strong threat to the internal validity. Randomly selecting the study's participants is also important to minimize threats of external validity. This is to see if the results can be generalised to the wider population (Holzemer, 2010).

Physiologic breast engorgement is a normal feature of lactogenesis that tends to occur on about the third or fourth postpartum day.

Therefore, the inclusion criteria for my study would be women who are 72 hours postnatal and breast feeding. Surveys state that breast engorgement is present in about 5% of women 48 hours postpartum, in 35-40% by 72 hours, and in 40-45% by 96 hours (Beischer & Mackay, 1986). Breast feeding should be firmly established by day 3.

There are no restrictions on age, parity or gestational age at birth.

The exclusions would be women who are artificially feeding or in cases where there have been problems with breast feeding and it is not established.

Ethical considerations

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For research to be approved by ethic committes, it must not cause harm. If anything causes harm, it is likely to be rejected.

This is to ensure it is ethical and the potential participants are protected.

Six key principles were outlined by the Internation Council of Nurses (ICN, 1996) that should guideline the research by nurses and midwives. These are:

Beneficence - The research should be positive good by benefiting both the participant and the wider community through aquisition of new knowledge.

Non-malificence - The research should do no harm to the participants, either physically or pyshcologically.

Confidentiality - The confidentiality of any data provided by the participants in a research project should be respected. The individuals identification should be protected and information can only be disclosed with the participants permission.

Justice - All participants must be treated fairly and without preference.

Giving some participants one treatment and not to others, which could effect their well-being, if the non-treatment is a disadvantage could be viewed as questionable.

Fidelity - The researcher should take responsibility for the welfare of all participants. This trust is crucial to the research since it provides protection from risk.

Veracity - The researcher must be honest at all times and not deceive, mislead or trick the participants in any way.

Data population and Sampling-

The data population for this study will be postnatal women who are breast feeding.

The inclusion and exclusion criteria, as mentioned above, are needed in research to ensure the internal validity.

Convenience (or accidental) sampling would probably be used for this study.

This is a non-random sampling method where participants are included in the study because they happen to be in the right place at the right time.

Available participants are simply entered into the study until the desired sample size is reached. This is sometimes viewed as a weak approach to sampling because it provides little opportunity to control for biases (Burns & Grove, 2005). In quantitative studies, the bigger the sample size, the better.

Data collection and analysis methods

The process of selecting participants and gathering data from them is known as data collection. The steps to collecting the data are specific to each study as they are dependent on the research design and measurement methods.

For this study, the data collected will be numerical. Participants would be asked to answer questionnaires, at 3, 6, 9 and 12 days postnatally. The questionnaire will use the Likert (1932) scale which measures the extent to which the participant agrees or disagrees with a certain statement.

The data from these questionnaires would then be presented using descriptive statistics.

Descriptive statistics can be used to give the reader a summary of the data I will have collected. It will also help me to understand whether I have captured the sort of data I wanted. It will also allow me to get a feel for the data, to appreciate their common features and any unusual features (Scott & Mazhindu, 2007).

After using the descriptive statistics, I could go on to use inferential statistics. I could do this to analyse the sample data to then reach a conclusion about the population. A confidence interval (CI) could also be estimated which is the population parameter stated as a range, with an upper and lower limit, with a degree of certainty (Levine & Stephen, 2010). This gives an indications of how significant the effect may be. When deciding if practice should be changed due to the research, this can be a very good indicator.

Conclusion-

Research seems to be a very complicated and drawn out process and often faces many difficulties. It is very important to keep our knowledge up-to-date with current research so that our practice and clinical skills can develop. To be able to do this practioners must intially be able to recognise evidence based research and then be able to understand and review the research process. I feel I have gained alot of knowledge and understanding from writing this assignment and choosing my own topic to look at.

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