

Methodology is the  
set of principles of  
research nursing  
essay



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It is advised to select the appropriate philosophical perspective during the process of research for choosing the appropriate methodology (Sim and Wright, 2000).

The selection of the approach will depend on the three elements of philosophical assumption about the knowledge around the topic, plan of the inquiry and the well crafted process of data collection, analysis and writing (Creswell, 2009). The basic necessity of conducting a comprehensive, thorough and dependable research study is the researcher's intellectual knowledge and critical thinking (Guba, 1990). In order to adopt an approach which will divulge the knowledge around the topic in many different ways the researcher should not select or favour any approach without first comparing the existing approaches (Hart, 2008). This will build critical thinking which will assist in understanding the theoretical perspective behind the studies and critically review them within the paradigms they are constructed (Hart, 2008).

### **Paradigm –**

Paradigms are defined as the framework or the representation of the philosophical beliefs which will guide the researcher to undertake the disciplined enquiry and analyze the findings on the basis of their assumptions (Guba, 1990).

A paradigm presents a general perspective of the diversified view point of the real world through three philosophical questions based on the ontological, epistemological and methodological outlook. Hence it can be

seen as the opening point to determine the inquiry, the opinion behind the process, and finally the measures taken (Guba, 1990).

In relation to the topic of this dissertation, it is assumed that a reality exists that can be uncovered (i. e., the benefits vs. risks of prescribing HRT in menopausal women). Therefore, this study is conducted within the post-positivist paradigm. This paradigm was chosen as its philosophy brings out the various aspects surrounding the question bringing more clarity to the subject and will make the research process more generaliseable and reliable.

The post-positivist paradigm is an extension of the positivist paradigm. It attempts to rectify the limitations of positivism; hence prediction and control become the aim (Guba, 1990). The critical realist ontology of post-positivist approach is built on the belief that a real world or reality does exist but there are limitations to reach there. These limitations might confound the real picture making the findings less reliable, still the fact that the reality does exist remains (Guba, 1990).

Its modified objective epistemological approach presents the opinion that there could be sizable limitations for a human researcher or inquirer to have an objective observation devoid of any human subjectivity. However by being unbiased which Guba (1990; p21) describes “ as neutral as possible” and depending on critical reasoning it can be achieved closely (Guba, 1990). Methodologically, the post-positivist approach attempts to address the imbalances by the modified experimental or manipulative approaches which give emphasis to innovation in the research process (Guba, 1990).

The three philosophical questions posed by Guba (1990; p18) are addressed in this dissertation as follows:

1) Ontological: what is the nature of the “ knowable” or the nature of the “ reality”?

The nature of the knowable in this study are the benefits of prescribing HRT despite the risk of breast cancer.

2) Epistemological: What is the nature of the relationship between the knower (the researcher) and the known (or knowable)?

The relationship between the researcher and the knowable is objective as the researcher will be reviewing data from the existing studies selected by a comprehensive search of various databases.

3) Methodological: Which process shall the inquirer implement for finding the knowledge?

Using the post-positivism paradigm, this dissertation aims to highlight the benefits and risks of HRT. Data will be gathered by conducting a comprehensive search of published primary research studies (Aveyard, 2010). After reviewing, selecting and collecting the data, the researcher will analyze and summarise the findings to answer the research question (Aveyard, 2010; Punch, 2006). The findings of this dissertation might assist menopausal women to know what benefits they could expect from HRT treatment, and uncover the reasons why millions of menopausal women undergo HRT treatment in the presence of the foresaid risk (Banks et al, 2003).

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## **Literature Review as a research methodology –**

Conducting primary research could not have answered the research question posed by this dissertation. Therefore, a literature review was undertaken to address the research question. This methodology is appropriate as there is no direct involvement between the researcher and the participant, and there was a time limitation of completing this research study (Aveyard, 2010).

There are many relevant research studies which are readily available from different parts of the world. Since these studies already exist the researcher decided to use literature review as the appropriate methodology to undertake this dissertation to answer the research question in the most comprehensive way.

According to Aveyard (2010) a literature review with a well defined question and which is carried out with a systematic approach is a research methodology in its own right. Using this methodology allows the results of such a review to be reliable and generalisable. The preliminary research review (chapter 2) uncovered many studies that evaluated the link between HRT and Breast cancer. Hence it became clear that by using the methodology of literature review many relevant studies from an extensive time span, and from different parts of the world would uncover the opinion of the medical fraternity and would help develop an overview of the topic.

## **Advantages of Literature Review which made literature review the appropriate methodology for this dissertation –**

Hart (2008; p13) defines literature review as “ integral to the success of academic research”. One of the advantages of using literature review is that through the preliminary search the research ability of the topic can be

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ensured even before the dissertation or the study commences (Hart, 2008). At the initial stage a researcher is mostly enthusiastic of a topic of interest which might make them select a topic too broad perhaps out of feasible limitations, but conducting a literature review helps overcome this by narrowing the topic down and giving a practical aspect to it (Hart, 2008). It will help to refine the research process by a systematic approach from the beginning of finalising the research question up to answering it (Hart, 2008; Kumar, 2005). The researcher's critical thinking and analysis skills also are vital for conducting a literature review (Guba, 1990).

There are various studies conducted in various settings hence critical reading and critical thinking aspects of the literature review methodology will help gather knowledge of a topic and make a decision as to which information would be relevant (Hart, 2008). The literature review methodology brings clarity to the research procedure and broadens the existing knowledge base (Kumar, 2005). This will build the theoretical background of the study (Kumar, 2005) and help identify the relationship between the ideas and practice of use of HRT and rationalise the significance of the dilemma associated with the use of HRT (Hart, 2008). This is done by an extensive reading and developing an in depth understanding of the subject (Aveyard and Sharp, 2009).

And there is less purpose of applying literature review as a methodology if it doesn't develop this subject further and aid the medical fraternity and women know more than what is already known (Burns and Groove 2005; Hart, 2008).

Information in health and social care sector is increasing everyday and literature review would help explore published and un-published primary research studies to give a comprehensive view pertaining to the benefits associated with the use of HRT and the risk of breast cancer (Aveyard, 2010).

The cause and effect relationship of HRT its benefits and prevalent risk of breast cancer would be explored using prospective studies like Randomized Controlled Trails (RCT) and cohort, as they are the most accurate method for measuring disease risk (Aschengrau and Seage, 2008). Case control studies too would be used as they are the cost-effective and time-efficient method for research studies (Smith and Ryan 2008).

Literature review will further assist the identification of the relevant literature from the vast literature available around the topic of the research question.

The researcher will then analyze the studies and extract the relevant information (Averyard, 2010). It will help to build the knowledge beyond what is known and advance the understanding of the use of HRT which will help uncover important determinants associated with its use (Hart, 2008).

Combining these determinants of the use of HRT and synthesising them would help bring out a new outlook to the study and draw new interpretations about the benefits associated with the use of HRT with the foresaid risk of breast cancer (Hart, 2008).

These aspects of the literature review methodology will help construct a comprehensive study and the analysis of the relevant literature will enable to view the findings of a particular research study within the perspective of the other (Averyard, 2010). It will help to contextualise the findings and interpret

them to highlight the benefits of using HRT with the foresaid risk of breast cancer derived which will help to build the existing knowledge of the doctors and the women using them (Kumar, 2005).

The researcher will then answer the research question which will facilitate further interpretations for future research studies (Sim and Wright 2000).

To sum it up the literature review methodology has been used for its striking features of narrowing the topic, refining the research process, broadening the existing knowledge base, identification of the literature, analysing the studies, synthesising and contextualise the findings and interpreting them so as to answer the research question in the most appropriate method.

## **Limitations of Literature Review**

There are limitations to the literature review methodology, for example researcher bias in interpreting the findings of studies, or selecting studies for inclusion into the review. Some research may be missed due to the vast literature available. These limitations may be overcome by maintaining transparency of the method of data selection and analysis and a comprehensive search strategy.

According to Hart (2008) there are important ethical implications which the researcher needs to be aware of before using someone else's work. The following steps are important to ensure that the quality and value of this dissertation is maintained.

1) Avoid sloppiness and nepotism (Hart, 2008) - Aveyard (2010) suggests that the references of the literature used are cited properly and that the



researcher should not abruptly cite the any reference which makes a point but track the sources which have some originality so as to continue the discussion of the relevant topic.

2) Avoid plagiarism (Hart, 2008) – It is important to acknowledge the author even if a direct quotation is not being made. In case of a direct quotation from a source, quotation marks should be used and the source has to be referenced (Aveyard, 2010).

3) Avoid falsification and fabrication (Hart, 2008) – It is important to understand the complete synopsis of the review rather than the superficial link (Aveyard, 2010).

Hart (2008) further suggests that it is the responsibility of the researcher to utilize the work of other people in a balanced, legal and fair way. This comprises all the above mentioned steps and also involves abiding by the copyright and Data Protection Act (Hart, 2008). These steps will ascertain ethical standard of the dissertation and avoid any speculation about its efficacy.

## **Critical Appraisal of literature**

Critically appraising studies involves considering the validity, results and relevance of studies which is important to minimize bias in a literature review (Bandolier site, 2009). Aveyard (2010) defines critical appraisal as a structured process of evaluating studies for their strengths and weakness.

Critical appraisal is essential skill in evidence based medicine which can be used by researchers to ensure that the studies are reliable and resourceful,

and to assess whether bias inherent in different research designs have  
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distorted the results (Bandolier site, 2009). This is the distinguishing feature between a review and an essay (Aveyard, 2010). It is the process of minute and organized examination of appropriate studies identified to evaluate their validity, importance and quality in context to the research question. It is vital for the researcher to develop this skill and use it appropriately (Bandolier site, 2009).

### **Critical Appraisal tools**

This dissertation intends to adapt a structured method of appraisal for quantitative literature which has varied tools to critically evaluate the different types of studies which are going to be selected (Aveyard and Sharp, 2009). The studies selected will be RCT, cohort and case-control studies using quantitative methodology (Aveyard, 2010; Pearson et al. 2007).

Quantitative research is often attributed with a strong emphasis on scientific rigor. This is linked to excellence with discipline and consistent approach to detail with accuracy (Burns and Grove, 2005). It is also an appropriate method where pre-existing knowledge is present and hence standardized collection methods could be expected (Bowling, 2002). Quantitative research is predominantly used in medical research based on the philosophy of post-positivist, providing sounder base for applying results into practice by its involvement of rigor, validity, objectivity and control (Burns and Grove, 2005). The selection of the right tool plays an important role in extracting the data relevant for the review (Burns and Grove, 2005). Critical appraisal is a reductionist approach as it involves breaking the whole into parts to have a better examination (Burns and Grove, 2005). This process will enable to review the rigor of the studies; their relevance to the dissertation which will

help to decide the credence each study has in answering the research question (Aveyard, 2010).

It is suggested that selected studies are critically appraised with specific tools according to their design in order to help evaluate their usefulness and relevance to the topic (Aveyard and Sharp, 2009). There are a number of critical appraisal tools that could be used here, for example the Center for Evidence Based Medicine (CEBM, 2010) RCT tool or the critical review appraisal form developed by McMaster University Occupational Therapy Evidence-Based Practice Research Group (McMaster University, 2008), however these have limitations for assessing a range of studies. The Critical appraisal skills program (CASP) by the Solutions for Public Health (SPH, 2010) developed specific appraisal tools for specific studies and these tools presented a viable alternative for critical appraisal in this dissertation. These tools take into consideration the three broad issues validity, reliability and applicability that are important for reviewing quantitative research (SPH, 2010). Validity is termed as measuring data which it is meant to measure. Reliability means consistency and is concerned with the repetition of same result in future (Aveyard and Sharp, 2009). Replication is of prime concern for quantitative research since if a study couldn't be replicated its validity would be questioned (Bryman, 2008). This will depict that the derived results were not confined only to this study but can be generalised to a heterogeneous target population (Bryman, 2008). This step will increase the creditability and reliability of the study, further strengthen the knowledge and a better literature review can be expected (Burns and Grove, 2005).

## **DATA TO BE EXTRACTED**

In order to compare and contrast the studies so as to integrate them and interpret the findings, Aveyard (2010) suggest assigning codes and developing themes.

The aim of this study is to highlight the benefits associated with the prescription of HRT despite the risk of breast cancer. Hence given the aim of this dissertation the broad themes which arise are benefits associated with the use of HRT and risk of breast cancer associated with the use of HRT.

The results are presented in two broad “ themes” of benefits associated with the use of HRT and risks of breast cancer risk associated with the use of HRT chosen for their relevance to the research question and its objectives.

These themes will be addressed as issues in this dissertation and the following information will be extracted from selected studies:

ISSUE -1 - Benefits associated with the use of HRT

ISSUE -2 - Breast cancer risk associated with the use of HRT.

The codes will be the grading of the reliability of the studies and of the levels of benefits and risk of breast cancer derived from the studies to help ascertain the strength of the findings.

## **PRESENTATION OF STUDIES**

A table will be used to present the studies with detailed methodological characteristics. This will assist in summarising the information extracted

form each study, comparing the studies, deducing the results and also aid evaluation of the strength of the studies (Aveyard, 2010; Hart, 2008).

This dissertation is conducted within the post-positivist paradigm using literature review methodology and quantitative research by critically appraising the studies and synthesising the results into relevant and reliable data. The researcher is hopeful to deliver a good review which will link the past research to the present and assimilate the knowledge derived so as to learn from the past and install new ideas for the future.