Scientific Method

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Learning Objectives

By the end of the session, the learners will be able to

- Define scientific terms, and nursing process
- Discuss the steps of scientific method and nursing process
- Compare the scientific method and nursing process
Science

It is a process by which experimentation is used to answer questions.

It is the systematic observation of natural phenomena for the purpose of discovering laws governing those phenomena.

[Definition of Science](http://medical-dictionary.thefreedictionary.com/Definition+OF+Science)
Scientific Method

A process of experimentation is called scientific method.

A procedure used by scientists to test hypotheses by making predictions about the outcome of an experiment before the experiment is performed. The results provide support or refutation of the hypothesis.
Steps of Scientific Method

1. Observation = Problem
2. Hypothesis
3. Experiment = Data
4. Theory
5. Principle / Law = Conclusion
Problem

A difficult question or situation with an unknown or unclear answer.
Hypothesis

A statement that explains or makes generalizations about a set of facts or principles, usually forming a basis for possible experiments to confirm its viability.
Experiment

An operation or procedure carried out under controlled conditions in order to discover an unknown effect or law, to test or establish a hypothesis, or to illustrate a known law.
A theory is an explanation or model based on observation, experimentation, and reasoning, especially one that has been tested and confirmed as a general principle helping to explain and predict natural phenomena.
A basic generalization that is accepted as true and that can be used as a basis for reasoning or conduct; “their principles of composition characterized all their works”.

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Nursing Process

A organizational framework for the practice of nursing

- Orderly, systematic
- Central to all nursing care
- Encompasses all steps taken by the nurse in caring for a patient.

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Steps of Nursing Process
Nursing Process
& Critical Thinking

Assessment

Nursing Diagnosis

Evaluation

Planning

Implementation
Comparison Between

Scientific Method

&

Nursing Process

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## Similarities Between Scientific Method & Nursing Process

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<tr>
<th>Scientific Method</th>
<th>Nursing Process</th>
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<tr>
<td>Observation</td>
<td>Assessment</td>
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## Differences Between Scientific Method & Nursing Process

<table>
<thead>
<tr>
<th>Scientific Method</th>
<th>Nursing Process</th>
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<tbody>
<tr>
<td>Problem oriented</td>
<td>Client oriented</td>
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<tr>
<td>Continuing of steps</td>
<td>Continues of care</td>
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<tr>
<td>No prioritization of problem</td>
<td>Prioritization of nursing diagnoses</td>
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<tr>
<td>Usually controlled environment</td>
<td>Usually no controlled environment</td>
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<td>Confirmation or refutation of hypothesis</td>
<td>Evaluation of the goals</td>
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Summarization

Who is going to summarize the session?
Any More ...
Thank You