Perceptions and self-perceived knowledge of evidence-based health care (EBHC) amongst registered nurses and midwives in rural areas of the Western Cape

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Position limb at level of heart. Place cuff above wrist. Auscultate radial artery.

Place cuff above malleoli or at midcalf. Auscultate either the posterior tibial artery or the dorsalis pedis artery.

Position limb at level of heart. Place cuff on upper arm. Auscultate brachial artery.

Place cuff above the knee. Auscultate the popliteal artery.
ARE YOU SURE THIS IS THE WAY TO TAKE BLOOD PRESSURE?
Evidence-based health care

• conscientious use of current best evidence
• in making decisions about the care of individual patients or the delivery of health services.
• Current best evidence is up-to-date information from
  – relevant,
  – valid research about the
    • effects of different forms of health care,
    • the potential for harm from exposure to particular agents
    • the accuracy of diagnostic tests,
    • the predictive power of prognostic factors
5 Steps in EBHC

• Step 1: Formulate your question.
• Step 2: Search for the evidence.
• Step 3: Appraise the evidence.
• Step 4: Put the evidence into practice.
• Step 5: Monitor what has been done and ensure that it is effective.
Aim of study

To describe registered nurses and midwives’ perceptions and self-perceived knowledge of Evidence-based health care in Rural South Africa
Methods
Methods:

• Ethical approval from SU
• Authorization from the department of health
• The questionnaire was discussed with a peer group
• The principal investigator (PI) visited each institution to
  – explain the study procedure
  – obtain written consent from all eligible participants
  – before distributing the questionnaire
  – The responder were rewarded with a gift voucher from Woolworths
The Questionnaire

- Paper-base, in English and Afrikaans

First section
- Demographic data
- RN understanding of EBHC

Second section
- Self-perceived confidence in implementing EBHC
- Their attitude towards EBHC (a Likert Scale)
- Barriers in implementing EBHC
Results

• We approached 240 RNs and midwives
  
  • @ Worcester and Paarl provision hospital
  • Community health centre: GGS40
  
• Permission was not granted for
  • the second community health center and
  • the private hospitals
  • due to a large burden of current research at these facilities
  
• Overall, our response rate was
  • **52%** (125/240)
# Demographic Data

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>n=124</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-25</td>
<td>9</td>
<td>7%</td>
</tr>
<tr>
<td>26-30</td>
<td>13</td>
<td>10%</td>
</tr>
<tr>
<td>31-35</td>
<td>20</td>
<td>16%</td>
</tr>
<tr>
<td>36-40</td>
<td>18</td>
<td>15%</td>
</tr>
<tr>
<td>41-45</td>
<td>28</td>
<td>23%</td>
</tr>
<tr>
<td>46-50</td>
<td>21</td>
<td>17%</td>
</tr>
<tr>
<td>51-55</td>
<td>11</td>
<td>9%</td>
</tr>
<tr>
<td>56-60</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>60+</td>
<td>2</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience (years)</th>
<th>N=125</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>1 – 5</td>
<td>34</td>
<td>27%</td>
</tr>
<tr>
<td>6-10</td>
<td>22</td>
<td>18%</td>
</tr>
<tr>
<td>11-15</td>
<td>12</td>
<td>10%</td>
</tr>
<tr>
<td>16-20</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td>&lt; 20</td>
<td>36</td>
<td>29%</td>
</tr>
</tbody>
</table>
## Results: Demographic Data

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>N=125</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma bridging course</td>
<td>37</td>
<td>29.6%</td>
</tr>
<tr>
<td>Diploma integrated nursing (e.g. R425)</td>
<td>62</td>
<td>49.6%</td>
</tr>
<tr>
<td>Degree</td>
<td>26</td>
<td>20.8%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post graduate qualification</th>
<th>N= 185</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>72</td>
<td>38.9%</td>
</tr>
<tr>
<td>Diploma</td>
<td>111</td>
<td>60.0%</td>
</tr>
<tr>
<td>Advance diploma</td>
<td>1</td>
<td>0.5%</td>
</tr>
<tr>
<td>Degree</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Hons Degree</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Masters degree</td>
<td>1</td>
<td>0.5%</td>
</tr>
<tr>
<td>PHD/D Cur</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
# Knowledge of the Term Evidences based Health care

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>NO</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you heard the term “evidence-based health care” before?</td>
<td>81</td>
<td>44</td>
<td>125</td>
</tr>
<tr>
<td>Do you know the meaning of the term “evidence-based health care”?</td>
<td>68</td>
<td>54</td>
<td>122</td>
</tr>
<tr>
<td>Do you generally find a reliable answer to your question?</td>
<td>108</td>
<td>12</td>
<td>120</td>
</tr>
<tr>
<td>Do you implement new practices, based on this answer?</td>
<td>59</td>
<td>61</td>
<td>120</td>
</tr>
<tr>
<td>Do you evaluate the effectiveness of these newly implemented practices?</td>
<td>74</td>
<td>46</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>NO</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>65%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>90%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>49%</td>
<td>51%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>62%</td>
<td>38%</td>
<td></td>
</tr>
</tbody>
</table>
Results

Sources used to evaluate practice n=129
Evidence for care given

**Doing research**
- Applying knowledge
- Healthcare based on evidence
- Research on quality of care
- Following standards leading to quality care
- To provide better health care
- To improve healthcare
- New methods based on research
- Solving problems
- Consulting colleagues
- Applying the findings in practice
- Healthcare based on facts
- Using recent research
- Research to prove effectiveness of treatment
- Scientific methods for best treatment
- To evaluate practices

**Healthcare based on research**
“Depending on what the problem is, for example if the problem was with the medication like adverse effect/allergy, I would Google if that medication can cause it if not listed then consult my team”.
Results
Attitudes towards EBHC

Evidence based health care is realistic to practice in routine patient care

- 0: strongly disagree
- 1: disagree
- 3: don’t know
- 4: agree
- 5: strongly agree

- 43 people agree
- 23 people strongly agree
Results

Frequency of EBHC practices

Search strategies

- **Conduct a PubMed search?**
- **Conduct a search in the Cochrane Library?**
- **Conduct a Google search?**
- **Conduct a search in Wikipedia?**
Step 1 Formulate a question

- Identify a gap in your knowledge related to a clinical situation
- Formulate answerable questions based on your gap in knowledge

[Bar chart showing percentages for each step]
Step 2 Search for evidence

- Develop a search strategy based on the question %
- Perform literature searches to address the question %
- Use MeSH terms in your search %
- Use filters (e.g. sex, date, age) in your search %
Step 3 Appraise the evidence

- **Distinguish between different study designs %**
- **Critically appraise the strengths and weaknesses of different study designs %**
- **Select the most relevant study for your question %**
- **Determine the validity of a study based on the methodology %**
- **Interpret the results of a study with ease %**
Step 4: Put the evidence into practice

- **Red**: Determine if the evidence obtained is applicable to your clinical setting%
- **Blue**: Consider individual patient needs and values%
- **Orange**: Decide on an appropriate course of action based on integrating the research evidence, clinical judgement and patient preferences%
Step 5: Monitor what has been done

- Decide on an appropriate course of action based on integrating the research evidence, clinical judgement and patient preferences %
- Evaluate your implantation of evidence bases practice %
Barriers in implementing EBHC

- limited resources
- no access to the internet
- resistance to change
- lack of EBHC knowledge and skills
- lack of time
- hospital hierarchy
- staff shortages
- lack of motivation
- availability of resources
Suggestion to improve implementation of EBHC practices

- Encourage on-going training of staff
- Improved internet access
- Attending EBHC training
- Improve communication between healthcare professionals
- Being a role model
- Improve staff shortages
- Allow enough time to implement new practices
- Fostering a culture of EBHC
Conclusion

• RNs perceived themselves as having a high level of knowledge about EBHC
• RNs sees EBHC as merely as doing research
• And they are not aware of the extent of the 5 steps in the EBHC process
• Training in EBHC is essential to keep up to date with the latest and best practice and to be able to implement EBHC
Limitations

• Self-administered questionnaire
  – which could be subject to personal bias
  – the participants' ability to self-assess their skills

• An objective competency test could help determine
  • the actual skills
  • particularly information literacy skills of the nurses
THANK YOU

Experience can just mean making the same mistake with increasing confidence.

Statistically-funny.blogspot.com