Evidence-based nursing implementation:  
An impact study of a short formative intervention in northern Portugal

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Health 2020 goal:  
To improve health and well-being of populations and reduce health iniquities

Beneficiaries:  
- Individuals and populations  
- Health systems and services  
- Health professionals

Sustainable, competent and motivated nursing and midwifery workforce providing safe and evidence based:  
- Patient centered care;  
- Health promotion;  
- Disease prevention.

World Health Organization  
European Region, 2014

Strengthening Nursing and Midwifery: European Strategic Directions towards 2020

Priority areas of action  
- Scaling up and transforming education  
- Workforce planning and optimizing skill mix  
- Ensuring attractive work environment  
- Ensuring evidence-based practice and innovation

Enabling mechanisms  
- Regulation;  
- Research;  
- Partnerships;  
- Management & Leadership
**Exploratory study**

*Barriers to evidence-based nursing practice in a community setting: A case study in northern Portugal (N = 95)

**Study I**
*Integrative literature review
EBN: Attitudes, barriers and practices

**Study II**
Methodological study a)*
AEBPQ – 26 (N = 244)

**Study III**
Methodological study b)*
EBPQ – 20 (N = 358)
(N = 388)

**Study IV**
*Main Survey
● BRUS
● AEBPQ – 26
● EBPQ – 20

**Study V**
*Pilot-study (impact of a formative intervention)
(N = 652)
(388 + 264)

*PhD in Nursing Sciences (2010 – 2015)
"Evidence-Based Nursing: Attitudes, Barriers and Practices"

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**Intervention Research**
- Consult with Principal Investigators to design for dissemination.
- Add measures of sustainability and dissemination to research.
- Consult on designs for dissemination research.

**Fundamental Research**
- Educate researchers about characteristics and features of innovations that facilitate subsequent dissemination.
- Encourage basic research on tools and measures.

**Knowledge Synthesis**
- Participate in/conduct evidence reviews.
- Scan, package and disseminate relevant evidence reviews and EBI's.

**Application and Program Delivery**
- Collaborate with partners for dissemination.
- Conduct training for adoption of EBI's.
- Educate key people regarding evidence.

**Surveillance Research**
- Monitor dissemination of evidence-based innovations.

**Research & Dissemination**
- Consult with researchers regarding designs and measures for dissemination research.
- Provide support for pilot dissemination research.
- Package interventions for dissemination research and dissemination.

Adapted from Barbara K. Rimer, 2004 from the original model – Advisory Committee or Cancer Control, National Cancer Institute of Canada, 1994
Research design: One-group (independent samples), pre-intervention survey, intervention and post-intervention survey (2 months after the intervention).

Pre-intervention survey (N = 388):
- BRUS;
- EBPQ-20;
- AEBPQ-26.

Intervention:

**Intensive short formative intervention (EBP)**

Post-intervention survey (N = 264):
- BRUS;
- EBPQ-20;
- AEBPQ-26.

Flow of participants
PROGRAMMATIC COMPONENTS OF THE FORMATIVE INTERVENTION
(SYNTHESIS)

1. Concept, importance and EBP relevance to Nursing;
2. EBP steps;
3. Where to find pre-appraised valid evidence;
4. Evidence and qualitative research;
5. The “Knowledge-To-Action-Cycle”: Translation and evidence-based interventions implementation.

Baseline sample

<table>
<thead>
<tr>
<th>Main setting of clinical practice</th>
<th>n</th>
<th>%</th>
<th>Male</th>
<th>n</th>
<th>%</th>
<th>Female</th>
<th>n</th>
<th>%</th>
<th>Total*</th>
<th>n</th>
<th>%</th>
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<tr>
<td>Hospitals</td>
<td>268</td>
<td>69.6</td>
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<td>80</td>
<td>20.7</td>
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<td>187</td>
<td>49.3</td>
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<tr>
<td>Primary health care</td>
<td>110</td>
<td>28.5</td>
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<td>307</td>
<td>79.3</td>
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<td>367</td>
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<td>Other settings</td>
<td>7</td>
<td>1.8</td>
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<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0.3</td>
<td></td>
<td>8</td>
<td>2.2</td>
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<tr>
<td>Total*</td>
<td>385</td>
<td>100.0</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>385</td>
<td>100.0</td>
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*missing = 1

<table>
<thead>
<tr>
<th>Participants age (ungrouped)</th>
<th>n</th>
<th>%</th>
<th>Male</th>
<th>n</th>
<th>%</th>
<th>Female</th>
<th>n</th>
<th>%</th>
<th>Total*</th>
<th>n</th>
<th>%</th>
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</table>

<table>
<thead>
<tr>
<th>Level or degree at the beginning of professional practice in nursing</th>
<th>Generalist nursing degree</th>
<th>Bachelor</th>
<th>Licensure</th>
<th>Masters</th>
<th>Ph.D.</th>
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</thead>
<tbody>
<tr>
<td>n %</td>
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<td>n %</td>
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<td>n %</td>
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<tr>
<td>115 30.0</td>
<td>160 41.3</td>
<td>111 28.7</td>
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</table>

<table>
<thead>
<tr>
<th>Highest academic degree obtained in nursing</th>
<th>Generalist nursing degree</th>
<th>Bachelor</th>
<th>Licensure</th>
<th>Masters</th>
<th>Ph.D.</th>
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<tbody>
<tr>
<td>n %</td>
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<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>1 0.3</td>
<td>2 0.5</td>
<td>329 82.5</td>
<td>62 16.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest academic degree obtained in another disciplinary field</th>
<th>Generalist nursing degree</th>
<th>Bachelor</th>
<th>Licensure</th>
<th>Masters</th>
<th>Ph.D.</th>
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<tbody>
<tr>
<td>n %</td>
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</table>
Main results: Pre and post-intervention

<table>
<thead>
<tr>
<th>EBPQ-20 “Practices”</th>
<th>Before: $\bar{X} = 4.43$ (SD = 1.38)</th>
<th>After: $\bar{X} = 4.05$ (SD = 1.48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$t_{(652)} = 3.33; p = 0.001$</td>
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<thead>
<tr>
<th>BRUS “Organization”</th>
<th>Before: $\bar{X} = 3.04$ (SD = 0.63)</th>
<th>After: $\bar{X} = 3.15$ (SD = 0.51)</th>
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<tbody>
<tr>
<td>$t_{(652)} = 2.63; p = 0.009$</td>
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<thead>
<tr>
<th>BRUS “Communication”</th>
<th>Before: $\bar{X} = 3.03$ (SD = 0.55)</th>
<th>After: $\bar{X} = 3.24$ (SD = 0.52)</th>
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<tbody>
<tr>
<td>$t_{(652)} = 4.86; p = 0.0001$</td>
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</table>

<table>
<thead>
<tr>
<th>BRUS “Adopter”</th>
<th>Before: $\bar{X} = 3.08$ (SD = 0.67)</th>
<th>After: $\bar{X} = 3.20$ (SD = 0.58)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$t_{(652)} = 2.37; p = 0.018$</td>
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<table>
<thead>
<tr>
<th>BRUS “Innovation”</th>
<th>Before: $\bar{X} = 2.94$ (SD = 0.69)</th>
<th>After: $\bar{X} = 3.08$ (SD = 0.67)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$t_{(652)} = 2.579; p = 0.01$</td>
<td></td>
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</tbody>
</table>

Percentage of daily practice it considers to be evidence-based:

Pre-intervention = 63.86%. Post-intervention = 60.0%.

Main results: Descriptive – I

- A more realistic perspective on the adoption of EBP;
- Perception in the workplace of major difficulties in the dimensions of BRUS;
- Maintain positive attitudes to EBP recognizing it as a fundamental support to best practices;
Lack of skills of senior nurses regarding the EBP, even considering the greater experience and recognizing the central role of leadership in the transferability of knowledge to practice;

The habits, traditions and routines characterize much of the professional practice of nurses, framed in a context of resistance to change and lack of motivation.

Main results: Descriptive – II

The study's findings have implications at several levels: continuing education and training, professionals accountability and awareness and the need for greater organizational support;

A short formative program is an intervention that can be used by leaders of health organizations in order to provide nurses with more skills involving them on the dynamics of EBP being so, even if conditioned, relevant;

Main conclusions / practical implications – I
Main conclusions / practical implications – II

• We also agree with the authors that advocate the development of pilot projects that promote the implementation of evidences;
• The multimethod approach have proved how they can achieve greater success considering different settings, through tailored, individualized interventions to each situation, which should be considered in a priority mode;

Main conclusions / practical implications – III

• No approach to the transferability and incorporation of knowledge in practice is higher compared to other approaches in other situations or contexts;
• Behavioral changes are likely to occur however it requires a systemic vision at various levels, including professionals, teamwork, organizations and even the working environment in a comprehensive perspective.
• The lack of a random sample;
• Unpaired subgroups (before / after intervention);
• The lack of a late follow-up (at least 6 months after intervention);
• We can not conclude that the results obtained in the evaluation are explained from a strictly due to the intervention;
• These results should not be directly extrapolated to other groups of nurses.

Study limitations

Thank you for your attention!

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