

Embracing Implementation Science in Nursing and Midwifery to Translate Evidence-based Interventions into Policies and Clinical Practice

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Abstract

Evidence-based interventions (EBIs) are the subject of dissemination and implementation efforts in nursing and midwifery. Nursing and midwifery research generates mountains of EBIs with proven efficacy and effectiveness. These include interventions such as the diabetes prevention programme, practices such as cervical cancer screening, and workplace policies such as Covid-19 vaccination. However, evidence is not always used in practice, and there are many examples of problematic implementation of research into practice. Implementation science, defined as “the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practice into routine practice ... to improve the quality and effectiveness of health services” (Eccles and Mittman 2006), is increasingly being used to implement evidence-based nursing interventions in real-life settings.

Keywords: implementation science; nursing; midwifery; evidence-based interventions; policies; clinical practice

What is Implementation Science and why Does it Matter?

Evidence-based interventions (EBIs) are the subject of dissemination and implementation efforts in nursing and midwifery. Nursing and midwifery research generates mountains of EBIs with proven efficacy and effectiveness. These include interventions such as the diabetes prevention programme, practices such as cervical cancer screening, and workplace policies such as Covid-19 vaccination. However, evidence is not always used in practice, and there are many examples of problematic implementation of research into practice (Van Achterberg, Schoonhoven, and Grol 2008).

Implementation science (IS), defined as “the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practice into routine practice ... to improve the quality and effectiveness of health services” (Eccles and Mittman 2006), is increasingly being used to implement evidence-based nursing interventions in real-life settings.

According to the National Cancer Institute (2019), IS aims to accelerate the adoption and integration of evidence-based practices, interventions and policies into routine healthcare and public health practice to improve the impact on population health. By using IS, nursing and midwifery researchers can help bridge the divide between research and practice and bring programmes that work to communities in need. Applying IS may help nurse researchers to understand how to best use specific interventions and strategies that have been proven to work in similar settings.

Why is Implementation Science important for Implementing Nursing Interventions?

This new discipline has become important for several reasons, which shows that there is a huge know-do gap in public health and nursing. Firstly, it takes an average of 17 years for evidence to be implemented into practice (Balas et al. 2000). Secondly, only 14% of original research will reach patients, and thirdly, 80% of health research dollars do not make a public health impact (Morris, Wooding, and Grant 2011). Implementation science has the answers to close this know-do gap.

Implementation science examines how evidence-programmes work in the real world. By applying implementation science frameworks and models, nurse researchers may reduce programme costs, improve health outcomes and decrease health disparities in the community (National Cancer Institute 2019)

Embracing Implementation Science in Nursing

Despite efforts to promote evidence-based nursing, there is still a gap in the translation of research findings into policies and clinical practice. While nurse researchers provide an increasing body of evidence-based research that could be applied in clinical practice, only a fraction of this research is translated into real-world clinical settings to address the pressing clinical needs of patients and communities (Zullig, Deschodt, and De Geest 2019).

All categories of nurses play an important role in the IS pipeline, as no successful implementation can be achieved without the involvement of nurses in research, care and policy settings, as well as other key stakeholders. Nurse researchers should partner with their clinical colleagues and policy makers to introduce methodological rigour in supporting policy and practice. Clinically focused nurses who work in real-world settings provide hands-on nursing care, and are trusted by patients and their caregivers.

Clinical nurses may identify implementation gaps that lead to new research projects and may also be well positioned to facilitate implementation.

A study by Shuman et al. (2018) demonstrated that nurse managers play a significant role in creating the right climate in nursing units for the implementation of evidence-based interventions, mainly through their leadership. Nurse researchers, on the other hand, have been trained to address clinical problems using rigorously designed research approaches. When all collaborate, their skills and tools can be effective at various points along the IS pipeline. In a nursing enterprise that operates optimally, there is a seamless translation of evidence-based research findings into policy, clinical practice, and vice versa. This could provide an opportunity for nursing researchers to rapidly translate promising evidence generated from clinical trials into policies that are implemented in real-world clinical practice. Unfortunately, in the current set-up, there are many inefficiencies, making this translation unsuccessful (Zullig et al. 2019).

What Does an Implementation Science Study on a Nursing Issue Look like?

Implementation science offers nurse researchers a systematic approach to implementing evidence-based nursing programmes, regardless of where they are in the implementation process. A typical IS study in nursing and midwifery is organised and framed into four components: assessment, preparation, implementation, and evaluation, which blend and overlap in practice (National Cancer Centre 2019).

During the assessment phase, nurse researchers assess whether an intervention is grounded in research and evidence and whether it fits the community and resources for its implementation. Researchers then conduct stakeholder engagements and form partnerships to better understand the community and its strengths and weaknesses, increase the likelihood that the intervention will be adopted and sustained, ensure that the intervention is relevant to stakeholders, and enhance the quality and practicality of intervention efforts (National Cancer Centre 2019).

This is followed by the preparation phase, where the intervention is adapted to the local situation, and preparations are done to ensure fidelity—this is the degree to which an evidence-based intervention is implemented without compromising the core components essential for the programme’s effectiveness. Evidence-based interventions are not one-size-fits-all, so they are adapted to give a better fit for the community or local conditions. Adaptations may involve the addition, deletion, expansion, reduction, or substitution of various intervention components (Rabin et al. 2008). Core components to adapt may include the setting, target audience, delivery, or culture (National Cancer Centre 2019).

During the implementation phase, researchers use theories, models, frameworks, or implementation strategies to understand how to address the gap between identifying an intervention and ensuring its adoption (the research-to-practice gap) and later sustaining

the intervention. The most common models that nurse researchers can use include Diffusion of Innovations, Consolidated Framework for Implementation Research (CFIR) and Interactive Systems Framework for Dissemination and Implementation (National Cancer Centre 2019).

Once the intervention has been implemented, it will be evaluated to determine its sustainability, scale-up, and sometimes to evaluate its return on investment. The latter is the systematic collection of information about activities, characteristics and results to assess the intervention and its implementation outcomes (Centre for Disease Control and Prevention [CDC] 2012) in order to answer three key questions: i) Is what we are doing, working? ii) Why or why not? iii) How do we show the value of the work we do? Evaluation approaches and frameworks often used by nurse researchers and practitioners include a logic model that provides a visual representation of how an intervention is expected to produce the desired outcomes (Petersen, Taylor, and Peikes 2013). The RE-AIM framework to evaluate the Reach, Effectiveness, Adoption, Implementation and Maintenance is most often used for implementation evaluation. Economic evaluations are useful to determine the affordability of implementation efforts in achieving individual and community outcomes. They help to quantify cost-effectiveness and can help justify scaling up the intervention in the future (National Cancer Centre 2019).

Way forward for Nursing and Implementation Science

The good news is that nursing has been involved in IS since its inception and has influenced important theoretical and empirical work in this discipline (Zullig et al. 2019); however, there are gaps in translating nursing and midwifery research evidence into clinical practice. Nursing research missed a golden opportunity of playing a more prominent part in the exponential growth of IS over the past 20 years.

Going forward, nursing should increase its impact substantially by embracing IS as a central research paradigm. In order to bridge the gap between the EBR and real-world settings, nursing should fully embrace IS as a paradigm to increase its impact (Zullig et al. 2019). Implementation science extends beyond methods typically used in efficacy or effectiveness studies, it is supported by theoretical frameworks, requires contextual analysis, builds on patient and stakeholder involvement, applies implementation strategies, and focuses on both clinical and implementation outcomes. Implementation outcomes could address fidelity, reach, and adoption, among others (Proctor et al. 2011). We urge more master's and doctoral-level nursing researchers to tackle topics that translate research evidence into policy and nursing practice.

In the next year and forward, the *Africa Journal of Nursing and Midwifery* will have a special issue focusing on quality research translating evidence-based interventions into policies and clinical practice.

In summary, nurses and midwives are the largest groups of healthcare workers, who are closest to patients in clinical settings and have been involved in IS since its inception. Embracing IS might transform nursing and midwifery toward a new research paradigm, with exponential benefits to health outcomes (Stone 2019). Nursing and midwifery need good research institutes and clinical sites to build research capacity for the implementation of research and to dramatically increase research that translates evidence into policies and clinical practice (Richards, Hanssen, and Borglin 2018). Implementation science offers an array of methods and tools to support nursing research in attaining this goal.

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