

# Critical Appraisal through a New Lens

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**Many websites, nursing education** sessions and journal articles stress the importance of critical appraisal of research for evidence-informed decision-making. Prior to starting our doctoral program, we assumed that because a study was published, it had strong evidence. In reading research reports we, like others, had a tendency to focus on results and sample size, taking what was presented more or less as fact or at face value. We often gave all evidence equal weight regardless of the strength of the study design or the internal validity of the methods. After all, these published articles had been peer reviewed! However, we have now learned that astute critical appraisal requires the ability to critically appraise the research methodology, the quality of the evidence, the applicability to clinical practice and the opportunities to improve patient care and outcomes. Furthermore, it is also important to be able to assess the quality of a body of evidence in addition to the quality and limitations of individual studies. So, critical appraisal is a skill that nurses require. But how can we develop it?

## **Our Epiphany about Critical Appraisal**

In our undergraduate nursing education, we learned that to develop any skill, practice is required. As nurses, we understand skill development. To learn how to take a patient's blood pressure (BP), we practised possibly a hundred times before transferring this knowledge and skill to the clinical setting. Based on our

assessment or appraisal of a patient's BP, important clinical decisions were made for that patient. Through all these BP assessments we learned the nuances and variations of the sounds of the systolic and diastolic pressures. By practising, we developed confidence to transfer this skill to the clinical area. However, even when we arrived in the clinical setting, our instructor accompanied us to guide our assessments until we were competent to work independently.

Is this what happens with the skill of critical appraisal of research evidence? Important clinical decisions, such as choice of dressings to promote optimal wound healing, are also made for clients based on the assessment and appraisal of research. However, the preparation that we received about evaluating research evidence is dissimilar to the preparation we received for learning how to do a BP. Undergraduate students are often required to find a minimum number of research articles in preparation for clinical work or for writing a paper, but usually they do not critique the methods used in these research reports. Students often do not distinguish between a literature review and a research study. Even after they have completed a research methods course, the key limitations that students identify often focus on sample size, validity and reliability of instruments, and generalizability, with equal weight given to all types of study designs and study quality. Lack of consistent use of critical appraisal tools may contribute to such superficial appraisals.

As nursing students, we were taught that research is vital to nursing practice, but unlike learning to take a BP, we did not practise critical appraisal of research studies a hundred times. As well, we had no opportunity to develop the confidence to transfer these skills to the clinical setting. The incongruity is that we knew evidenced-informed decision-making was vital to delivering high-quality care, but we did not fully appreciate the depth of critical appraisal required to make a thorough assessment. This situation would be similar to knowing that assessing a BP was vital for patient care but not being able to transfer and apply that knowledge to practice.

As doctoral students in a research methods course, we had the opportunity to study critical appraisal, practise it and receive feedback. This experience led to an epiphany about the complexity of critical appraisal as a systematic skill to be developed and enhanced over time. Our intention is not to criticize undergraduate education, but to look at critical appraisal through a new lens and to explore the implications of this epiphany for nursing management, education and practice.

### **Critical Appraisal Skills in the Practice Setting: Who Needs Them?**

It is easy to understand why researchers need to appraise research evidence critically in order to develop research proposals and interpret their own research findings. It is less easy to understand why those in practice need good critical appraisal skills. However, we believe that they do! Nurses in practice, at all levels, need the same critical appraisal skills as researchers, although they may apply them in different contexts. For example, programs and policies need to be informed by the best evidence, and this can occur only if critical appraisal is conducted. It is therefore especially important that nurses who serve on policy and procedure committees be able to find, critically appraise and synthesize the available evidence to inform policy and practice recommendations.

Others in practice frequently consult the literature for different reasons than policy and procedure committee members. All nurses read literature to keep up to date about their particular practice area. Managers, clinical educators and those in specialist roles also look at literature to identify new approaches to address concerns or to prepare an educational session for nurses, patients or patients' families. Being able to assess the validity and value of individual research studies and literature reviews will help ensure that their own recommendations are informed by evidence. Staff nurses may read fewer research reports than managers and educators, and they may read them for a different purpose, but critical appraisal skills will facilitate their questioning and validation of their practice.

### **Implications for Nursing Practice, Education and Partnerships**

It is crucial that those in leadership positions in nursing academia address the development of critical appraisal skills in nursing students, because this is where future nurses and nurse leaders are first introduced to research and research utilization. At the same time, educational initiatives in the practice setting should be undertaken to promote skill development in practising nurses, because they likely have the same understanding of critical appraisal that we had prior to starting our doctoral program. Journal clubs may help nurses on the front line feel better prepared to appraise research, participate in committee work and help translate evidence into practice, as well as stimulate them to discuss and question practice. Now is the time for nursing leaders to find opportunities to create environments that promote learning in critical appraisal, particularly in areas where nurses would most utilize these skills. For example, those who work on policy and procedure committees, or who rely heavily on the literature in their work, may need more focused education and support related to critical appraisal.

Collaboration among leaders in nursing education, practice and research, as well as with other health professions, would be beneficial. Using similar approaches in these different areas of nursing will result in continuity and consistency for nurses as they continue to build and apply their critical appraisal skills. Furthermore, collaborative inter-professional educational initiatives will mean that research expertise from all involved disciplines can be shared and enhanced. If nurses receive the same education as other health professionals, they will learn to use a common language in critical appraisal and in promoting evidence-informed recommendations.

### **So What's Next?**

We need to change the system so that future new nurses will have a stronger skill set and the work environment will help them strengthen and apply those skills. But we also need to play catch-up. Nurse leaders must make a special effort to address the present situation in both education and practice, and to bring critical appraisal skills to the essential level required to achieve evidenced-informed decision-making and practice. Building this expertise can help improve outcomes for patients, nurses and the populations they serve. Let's get moving!

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