Comparative Effectiveness Research: Enhancing Nursing Science

Intervention research is vitally important to nursing practice. Despite the proliferation of intervention research reports, the relative efficacy of different interventions for the same issue is often unknown. Initial intervention studies typically compare groups of participants who receive interventions with control groups. While these studies document whether some intervention is better than no intervention, they provide little information about which interventions are most effective. The comparative effectiveness research (CER) thrust is designed to address gaps in knowledge about which interventions work best, and for which participants. We are pleased to publish an excellent overview of CER in this issue (Hastings-Tolsma, Matthews, Nelson, & Schmiege, 2013).

Multiple research methods can achieve CER goals (Hastings-Tolsma et al., 2013). For example, randomized controlled trials, quasiexperimental studies, existing data sets about participants who received different interventions, and meta-analysis moderator analysis comparing interventions can all provide valid CER information. Although national focus on CER is relatively recent, considerable previous nursing research studies not labeled as CER have provided CER information in their findings. A brief perusal of Western Journal of Nursing Research articles since 2009 revealed many studies that compared interventions.

Some recently published papers directly compared two or more interventions (Bartfay & Bartfay, 2013; Shin, Ha, Park, & Heitkemper, 2009; Tuck, 2012; Villareal-Reyna, Salazar-González, Cruz-Quevedo, Carrillo-Cervantes, & Champion, 2012). The article by McDonald and colleagues (2009) compared stroke prevention information interventions with and without personal relevance statements. Studies that compare two treatment groups as well as a control group often provide comparative data between the treatment groups (Shellman, Mokel, & Hewitt, 2009). Comparisons between an experimental intervention and usual care among participants receiving a specific form of usual care can also provide CER information (Arslanian-Engoren, Hagerty, &
Eagle, 2010; Barnason, Zimmerman, Hertzog, & Schulz, 2010; Gray-Miceli, Ratcliffe, & Johnson, 2010; Wambach et al., 2011; Wilkie et al., 2010).

Sometimes, research reports appear to be comparing treatment and control groups, but on further inspection, it is clear the “control” group did indeed receive a form of intervention. Hendrix, Landerman, and Abernethy (2013) compared an experimental group that received a self-efficacy cancer caregiver training program with a comparison group that received information about community-based resources. Researchers may compare one intervention, such as a web-based disaster management course, with an enhanced intervention, such as when comparison participants receive the same web-based course supplemented with simulation experiences (Farra, Miller, Timm, & Schafer, 2013). Other studies can provide data about alternative delivery modes like face-to-face and mediated delivery of the same intervention content (Walker et al., 2012). Because many psychosocial interventions should not be compared with true control groups, studies may compare an intended treatment group with a comparison group that received an intervention that may very well affect psychosocial outcomes (Garcia, Pintor, Vazquez, & Alvarez-Zumarraga, 2013). Interventions designed to change health behaviors are often compared with health education interventions (Mallory & Hesson-McInnis, 2013). Unplanned and planned variations in intervention content or dose can yield CER information (Mowry & Hartman, 2011; Riesch et al., 2012; Vetter-Smith et al., 2012).

Narrative reviews can provide information for comparing specific interventions (Dalky, 2012; Perez, Fleury, & Keller, 2010; Popejoy, Moylan, & Galambos, 2009; Rogers, Larkey, & Keller, 2009; Shearer, Fleury, Ward, & O’Brien, 2012). For example, Kao, Gibbs, Clemen-Stone, and Duffy (2013) compared traditional and computer-based delivery of interventions to address adolescent risky behavior. Meta-analyses can compare intervention content as well as dose. Kim, Kang, and Park (2009) used meta-analysis moderator analyses to compare types of exercise, exercise dose, and intervention timing on outcomes among women treated for breast cancer. Meta-analysis comparisons of individual and combined interventions can be very helpful. For instance, Jung, Lee, and Lee (2009) used meta-analysis to compare exercise, hip protector, and exercise plus hip protector interventions.

The number and diversity of studies published recently in this journal confirm that nurse researchers have already been conducting studies that meet the CER goals and that diverse study designs have been used to address the CER aims: Our small non-representative sample of nursing research suggests nurses may need to attend more to research opportunities with existing data sets. This may be especially important in the current context of challenges in
obtaining funding to conduct new intervention studies. Research examining which interventions are effective for which participants will also likely expand. The emphasis on CER will enhance the ability of nurses to provide outstanding care to patients. As always, that is the ultimate goal of our research.

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References


