

## Shadow and Substance: Values and Knowledge

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Three umpires are sitting discussing the game and one says, "There's balls and there's strikes, and I call 'em the way they are." Another says, "There's balls and there's strikes, and I call 'em the way I see 'em." The third says, "There's balls and there's strikes, and they ain't nothin' until I call 'em." (Anderson, 1990, p. 75)

This essay is about the factors that influence the making of judgements in science: the shadow and the substance. We will review some studies that indicate the clear requirements of quality nursing research in order to examine outcomes and measures. The knowledge of methods assumes — and this is particularly true of quantitative traditions — objectivity or neutrality in the science of inquiry. The epistemological problem is that any process that generates and interprets outcome research is value-laden. Often left unexamined is the impact of the researcher's biases and values on the direction of the inquiry and the interpretation of findings. For example, we recently found that 45% of sole-supporting parents on welfare were depressed, as observed by the nurses. Our social scientist colleagues, from the same data set, noted, "Isn't it amazing that as many as 55% of sole-supporting parents on social assistance programs are not depressed?" Given the current emphasis on evidence-based nursing, who will raise questions concerning the impact of this value-laden evidence on practice, and on planning and policies, considering the nature and extent of our services?

Is there such a thing as comprehensiveness in science? What we set out to quantitatively measure or qualitatively *notice* reflects our values and assumptions about important variables, mechanisms, pathways, and interactions. We find what we intend to notice, or indeed fail to find what we did not even know enough to notice. Do we ever consider measuring simultaneously (noticing) the opposite, or the unintended effects — the harms and risks — as well as the benefits and impacts? Is the glass half empty or half full? Is it short or tall? Are the contents 7-

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Up or another soda? Is this even relevant? How does the reality of the simultaneous nature of multiple effects and states affect our inquiry and our interpretation of events? Will the results of our inquiry be affected by our failure to observe that the glass is opaque, not clear; red, not blue; effective or ineffective in alleviating thirst? We must notice what we intend to effect; however, once we do so, we often fail to notice something else. There is no such thing as value-free and meaning-free knowledge, nor is there objective or comprehensive information.

In the research process, however, the structure of the argument and the design of the study itself may help to control the bias of value-laden knowledge. From this perspective, we are required to seek the outcome in different situations, at controlled points in time, that may challenge assumptions or expectations. Time alone may produce unintended effects and expenses! In addressing selected methodological issues, Onyskiw (1996) and Sidani (1996) acknowledge the importance of the design features, including the need for a control group when evidence for changes in outcome, with or without exposure to the intervention, are required in order to produce an intended effect.

On the other hand, although certain measures of outcome may be reliable and valid, they assume, by definition, what is favourable and unfavourable — for example, measures of quality of life, coping strategies, and decision-making approaches. Should we wonder about the circumstances under which it is healthier to find a situation intolerable, meaningless, or unmanageable? Does adversity ever provide an advantage? Is adversity always faced alone, and what is most problematic or protective — the circumstance, the event, or the response? In such intolerable situations, what should be measured — the outcome, the input, the pathway, or the mechanism by which individuals succumb to or survive the circumstance? Or should all of the above be measured — the shadow and the substance?

Should we measure the clinically important change between groups or the minimally important change within an individual? Is it our intention to discriminate or to evaluate, to say that there is a difference or that there is an equivalence? Onyskiw (1996) suggests that the significance lies in not only the size of the effect, but also the variation in effectiveness that may lead to further inquiry. Harrison, Juniper, and Mitchell-DiCenso (1996) elaborate on the conditions that facilitate the choice of one option over another. Whichever one is chosen, the outcome of interest may be the alleviation of a symptom or a gain in competency. The important issue is whether a state of health has been reached. Onyskiw describes this state as "the level of the variable."

Bunn and O'Connor (1996) describe it as "the individual's valuation of the achievement of a goal."

Harrison et al. (1996) cogently argue that enhanced quality of life is the ultimate goal of most nursing interventions. Nursing practice aims to modify, when necessary, a person's response to their circumstance, to cast a different shadow on the same substance, or indeed to redefine the substance. Consequently, outcomes of interest may be the *capacity* to cope or not to cope with a deteriorating circumstance when other perspectives may view coping as the *mediator* or pathway variable to a state of peaceful death.

Individual, group, and system outcomes coexist. In noticing one level we can ignore another, and generalize that a benefit was produced in a group when in fact a subgroup of individuals deteriorated. People on antidepressant medication may sleep better, have more energy, and cry less, but some of these people may view themselves as broken or defective because they require medication. Gottlieb and Feeley (1996) demonstrate the value of studying the mechanisms by which change occurs and the power of analyzing subgroups in detail.

How do we deal with the uncertainty and error inherent in measurement? Does the information obtained from such measures inform the policy for the average (means, modes) or the practice policy for the exception (extremes)? Do we treat, according to the available evidence, on the basis of the "average" dose, or the "exceptional"? Are the standardized methods used in the "managed care" approach applicable to all people, across all contexts?

We may think service interventions produce favourable individual outcomes with no more expense to the system when, in reality, the cost is merely shifted from one sector to another. Consider the shift in expenditures from the health-care system to the family system, such as occurs in the case of home care. In contrast, reductions in social services generate health-care services, which shifts costs, however inappropriately, from one entitlement program to another. Outcomes, whether individual, systemic, or societal, require interpretation from multiple perspectives. We create reality, problems, or resources by the way in which we view them.

Given that reality is created by our view of it, the value of synthesis and integration of findings from a number of authors is clear. Onyskiw (1996) describes meta-analysis both as a way of integrating findings from quality studies and as criteria for judging it to be a good primary study to begin with. In this, she alludes to the importance in

outcome research of the research design, or the structure of the argument. When, in both the presence and the absence of the circumstance, service, or intervention, should one observe the effect, expense, outcome, or mechanisms?

Outcomes are values at different points in time and should not be considered a final truth. The goal is to "flirt with your hypotheses, but don't marry them!" (Freedman & Combs, 1996, p. 7).

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