Closing the theory–practice gap: a model of nursing praxis

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Summary

- Despite the efforts of nursing theorists, educationalists and practitioners, the theory–practice gap continues to defy resolution. This paper argues that only by reconsidering the relation between theory and practice can the gap be closed.

- Drawing upon ideas from teaching and other practice-based disciplines, including nursing, the article suggests that the current model of viewing theory as informing and controlling practice should give way to a mutually enhancing model in which theory is derived from practice, and in turn influences future practice.

- This coming together of theory and practice is referred to as nursing praxis, and suggests that informal theory should be unique to each individual encounter with each patient.

- The clinical nurse is thus not only a practitioner, but a theorist and researcher, who responds to patients not according to some grand, inflexible theory, but by the process of reflection-in-action, drawing upon their expertise and a repertoire of past experiences and encounters.

Keywords: theory–practice gap, nursing praxis, reflection in action.

Introduction

One of the most contentious and enduring problems in nursing is the observation that what happens in clinical situations rarely, if ever, matches what the textbooks say ought to happen. Most nurses will have had some experience of this so-called theory–practice gap, but it is probably felt most acutely by student nurses, who often find themselves torn between the demands of their tutors to implement what they have learnt in theory, and pressure from practising nurses to conform to the constraints of real life clinical situations. According to the theorists, the gap is between what research and theory says should ideally be happening, and what actually happens in the 'imperfect' clinical area. From this perspective, the gap will be reduced by nursing practice moving closer to theory. Yet according to the practitioners, the gap is between what theory says should happen and what actually works. From this perspective, the gap will be reduced by nursing theory more closely reflecting the realities of clinical life.

The fact that the gap is still with us, suggests that neither view is an accurate representation of the actual situation. This paper will argue that the gap is based on a misconception about the nature of nursing theory and the relationship of theory to practice. Furthermore, it will be argued, the gap is a necessary consequence of the way in which theory has developed over the years. It is a logical gap, predicated by a body of theory which can never fully account for what happens in clinical practice. As such, the
theory–practice gap cannot be bridged either by practice moving closer to existing theory or by theory conforming to the constraints and limitations of real-life practice. Rather, a new relationship between theory and practice must be sought, which will be referred to as nursing praxis.

**The theory–practice gap**

Nursing theory has developed according to the paradigm of the natural sciences, what Schön (1983) refers to as the technical rationality model. Thus, in regard to nursing, the term ‘theory’ is generally used in its scientific context as meaning ‘a systematic set of interrelated concepts, definitions, and deductions that describe, explain, or predict interrelationships’ (Pinnell & de Meneses, 1986). Theory and research in nursing has tried to emulate disciplines such as physics and chemistry, in the attempt to build a firm foundation of nursing knowledge. Despite a small but growing body of research grounded in phenomenology, this paradigm is now so established that it is generally accepted without question. However, it has serious implications for practice, because the paradigm of the natural sciences generally differentiates between the scientist or pure researcher who makes the discovery, and the technician or engineer who then develops its practical uses.

Applying this to nursing, theory becomes elevated in status compared with practice, and theorists become separated from practitioners, with research being something mainly carried out by the former. Thus, according to this paradigm, practitioners are merely the passive implementors of theories which they had no part in developing. For example, a theorist may produce a nursing model, which practitioners then attempt to put into action with their patients in their particular clinical setting.

Underlying the technical rationality model is the assumption that people are as predictable as inanimate objects. However, whereas one piece of steel, for example, will always behave in the same way as another similar piece of steel under the same conditions, whether in a laboratory or as a component in a bridge, with people we can only make statistical predictions based on the laws of probability. For this reason, the application of theory to practice is problematic—we can never be certain that what theory tells us should happen, actually will in a consistent fashion. This observation, that theory can never fully account for what happens in practice, is sometimes referred to as underdetermination—we say that practice is underdetermined by theory, unlike in physics, where theory determines precisely what will happen to a piece of steel under any given conditions and for any application. The concept of underdetermination was developed by Steven Lukes (1981), who put forward the thesis that, particularly in the social sciences, ‘... theories may be underdetermined by data: that is, that theories may be incompatible with each other and yet compatible with all possible data’. Thus in the social sciences including nursing, theories can never be accepted with certainty, because there will always be other contesting theories which are equally accounted for by the same empirical research data.

The reasons for this underdetermination in nursing are partly due to the nature of nursing theory, and partly to the nature of nursing practice. Theories in nursing are generally derived from one of two sources. Either they are synthesized from theories in one of the so-called foundation disciplines of psychology, sociology, philosophy and biology; or they are generated from nursing research. In the former case, Carr (1982) pointed out that not only is there conflict and disagreement between each of these foundation disciplines, but also within them, because they, too, are subject to underdetermination.

In the case of theory generated from nursing research, we are confronted with the problem of induction. Popper (1969) argued that this problem is inherent in all empirical research carried out within the paradigm of the natural sciences, which includes most nursing research. Briefly, the process of induction is the generalizing of findings from individual research studies into a global theory which applies to all people in all situations all of the time. However, Popper claimed that no matter how many times something is observed to happen, we can never logically conclude that it will always happen—the next observation might reveal something different.

For example, a research project may conclude that method X is a more effective form of mouthcare than method Y, and may therefore recommend that method X is used in preference to method Y. But Popper argued that just because method X was associated with better mouthcare in the research project, that does not mean that it will always be associated with better mouthcare in all situations—a replication of the study might show method Y to be more effective.

As well as the problem of induction, it must be borne in mind that research with human subjects usually deals in probabilities and significant differences. Regarding the issue of probability, it would be very unusual for a research study such as the one above to find that all the subjects responded better to method X. It may be possible to say that on average 90% of all patients will respond better to method X, but it cannot tell us which 90%. Therefore, it is only probable that a certain patient will respond. Regarding the related issue of significant differences, Gross (1987) pointed out that a study of this kind usually, ‘involves the
use of statistical procedures which tell us the probability of our results having occurred by chance alone. It is important to note here that probability is the best we can hope for—there is no no certainty in science.' (p.30) It is the researcher who must make the decision as to the level of significance that is acceptable, that is, the degree of probability that the differences between method X and method Y is due to chance factors. Levels of one in a thousand or one in two thousand are usually considered significant. Thus, nursing knowledge is largely statistical in nature—nursing theory can never predict with absolute certainty what will happen in practice in any individual case.

As with nursing theory, practice is also concerned with individual people in individual situations, and unlike pieces of steel each is unpredictable and unique. For example, a nurse faced with a question from a terminally ill patient as to whether he is dying, may turn to theory for an answer as to how to respond. She will first have to sift through psychological theories of communication and counselling, philosophical theories of ethics, and nursing research studies about the effects of giving information to patients, all of which will provide her with conflicting advice. Even once she has decided which theories to accept and which to reject, she is still faced with the problems of underdetermination and induction. She can never be certain that the theory on which she chooses to base her actions will result in the best nursing intervention for this particular patient in this particular setting. This then is the problem of the theory–practice gap. It is a gap that is inherent in the nature of nursing theory, and as such, can never be bridged.

Nursing theory, nursing practice and nursing praxis

If, as is being argued in this paper, theory can never fully explain or predict what will happen in practice, it might appear that theory is of no relevance to nursing. Fortunately, there is a way out of the dilemma, but it involves re-examining the nature of nursing theory. We need to discover new ways of conceptualizing what happens in practice, ways that are more closely related to practice itself. We must therefore replace the scientific notion of 'theory', as defined earlier by Pinnell & Meneses (1986), with one that more accurately reflects the realities of the clinical world. This is difficult however, because the term 'theory' is often used to denote the opposite of practice, for example when we say 'its all very well in theory, but will it work in practice?'. In order to develop a theory of practice, we must distinguish it from both the scientific definition of the term, and also from its more popular usage. Benner (1984) made the useful distinction between 'knowing that' and 'knowing how', and argues that knowing how to do something does not always require theoretical knowledge, or knowing that something is the case. Becoming an expert in practice requires the development of 'know-how', of knowledge embedded in practical expertise.

Carr (1980, 1986) suggested that practice is an intentional activity located in conceptual frameworks, and as such contains its own internal theory. This kind of theory is not something which is applied to practice, but rather, theory is implicit in practice, because without it practice degenerates into random and meaningless behaviour. Usher & Bryant (1989) referred to this as 'informal theory' in contrast to the formal theory of the technical rationality model, and argued that: 'Informal theory enables practitioners to work within the situations in which they find themselves, by relating their activities to both what is desirable and what is possible within those situations and to assess the outcomes of their activities in the light of these considerations.' (p. 80). Furthermore, this informal theory is not ('scientific' in the sense of being abstract and decontextualized, but nor does it suffer from being unsystematic and intuitive. Rather it transcends the dualism of the positivist/phenomenological distinction by its location within practice.

The relationship between theory and practice is to some extent reversed. Theory does not determine practice, but is generated from practice. In fact the process is circular, with practice generating theory, theory modifying practice, which generates new theory and so on. In this way argued Schön (1983); each practitioner builds a situational repertoire which is forever being expanded and modified to meet new situations. Often, the alternating from practice to theory to practice and so on is so fast as to seem like one integrated process, what Schön referred to as reflection-in-action, and it is this entire process of reflection-in-action which is central to the 'art' by which practitioners sometimes deal well with situations of uncertainty, instability, uniqueness and value conflict.' (p. 50)

This is primary nursing in its truest sense, where not only is each patient responded to as an individual, in some ways similar but in many ways different from all other patients; but each individual encounter with each patient is treated as a new situation which requires a flexible approach and which will, in turn, modify all future encounters with all future patients. For example, when considering the mouthcare needs of a particular patient, the nurse will draw on her situational repertoire of mouthcare interventions to find similar cases to the one she is now faced with. She will also take into account the unique
situation of this individual patient, and provide care that will best meet his individual needs. This approach is similar to that described by Benner (1984), in which, "expert nurses develop clusters of paradigm cases around different patient care issues, so that they approach a patient care situation using past concrete situations much as a researcher uses a paradigm." (p. 8) Informal nursing theory is therefore not generalizable in the same way that formal scientific theory tries to be. We cannot argue that because mouthcare method X proved to be better than method Y in clinical trials, then it will be better for this patient in this situation. Nevertheless, informal theory is generalizable in the sense that theory derived from reflection-in-action can be used to modify future practice. However, the relationship between theory and practice is not a deterministic or causal one, but a mutually enhancing one. Theory and practice are locked in an inseparable whole, such that reflective practice produces informal theory, and reflexive theory modifies and develops practice (Fig. 1).

We can see from this model that the gap between formal theory and practice has been bridged by the generation informal theory out of practice itself. This process has been referred to as praxis, a Greek term for 'action' which Karl Marx used to denote 'the unity of theory and practice'. Praxis or 'doing action' effectively dissolves the traditional theory-practice gap by making theory and practice mutually dependent on one another.

'A 'practice', then, is not some kind of thoughtless behaviour which exists separately from 'theory' and to which theory can be 'applied'... The twin assumptions that all 'theory' is non-practical and all practice is non-theoretical are, therefore, entirely misguided.' (Carr & Kemmis, 1986, p. 113)

Informal theory is contained in practice by definition, because without it practice is merely random and uncoordinated activity. Similarly informal theory is by definition generated from practice by the process of reflection-in-action. Nursing praxis is a bringing together of theory and practice which involves a continual process of hypothesizing and testing out new ideas, and modifying practice according to the results. The argument here is that this is similar to the method of doing research known as grounded theory which is 'the discovery of theory from data systematically obtained from social research' (Glaser & Strauss, 1967). Therefore the contention is made that all practitioners are not only 'theorists', but 'researchers', engaged in numerous pieces of 'action research' and the generation of informal theory. Schön referred to this research as on-the-spot experimenting, generating what Polanyi (1962) called 'personal knowledge'. This role of practitioner-as-researcher does not fit the traditional role of the nurse researcher as specialist, coming into the clinical area to 'do' research. In fact, the role of researcher cannot be separated from the role of practitioner, because to practice is to research. However, this research will not fit the technical-rationality paradigm, in which findings from large samples are generalized to whole populations. Indeed, the kind of research that takes place within nursing praxis might have a sample of one, and might not be generalizable beyond that single person. Nevertheless it is still valid research, and not subject to the same problem of induction and statistical generalization as positivist scientific research.

Conclusion

This paper has argued that the gap between theory and practice in nursing is largely due to the inability of nursing theory to adequately account for what happens in real-life clinical situations, and that this inability stems from the location of nursing within the traditional scientific paradigm in which theory informs and determines practice. If the theory–practice gap is to be closed, then theory must relinquish its hierarchical position and develop from practice, sensitive to the needs of individual practitioners in unique situations. A model of nursing praxis has been proposed, in which informal theory is generated from practical situations by reflection-in-action, and practice is modified by the reflexive application of that theory back into practice. This model has several profound implications for nursing.

Firstly, traditional 'formal' nursing theory would be replaced in importance by grounded or 'informal' theory. The role of formal theory would now be supportive in that...
it provides the 'tools' for praxis. Let us take the example of the terminally ill patient who asks the nurse if he is dying. In deciding how to respond, the nurse will reflect on similar situations which she has found herself in previously with other patients, and will draw on her relationship with this particular patient, and her knowledge of how he responded in different situations. Although these will be the main factors in coming to a decision, she may also draw on principles of counselling or humanistic psychology, on ethical considerations, and on experimental research. However, these considerations will be secondary—they will provide supporting material for her reflection-in-action. Thus, what is normally considered as nursing theory will have the role of praxis of information rather than knowledge.

Secondly, and following on from this first point, because this model does not allow for general, universal theories in nursing, the nature of nurse education would be fundamentally different. Knowledge is constantly developing and changing, and no single theory can account for the complexities of any given situation. Thus, each encounter by each nurse with each patient is unique, and while formal theories can provide information on which to base action, the nurse would generate her own informal theory through reflection-in-action and on-the-spot experimenting. Nurse education would therefore need to take more account of the clinical settings in which students find themselves, and the traditional division between theory and practice would be largely abolished. There would be less time spent on attempting to apply theories and models to practice, and more time on reflecting on individual clinical situations through role-play, reflective diaries, portfolios and critical incident work.

Finally, the status of nursing practice and of the ward-based nurse would be elevated in accordance with her new role as action researcher and generator of theory. She would no longer merely apply theories dictated by educationalists and researchers—she would be an educationalist and a researcher. In short, the clinical nurse practitioner would be an expert, with 'a deep background understanding of clinical situations based upon many past paradigm cases' (Benner, 1984, p. 294). There would be a coming together of theory and practice, and the theory–practice gap would be abolished, to be replaced by a new model of nursing praxis.

References
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