

Published 1998 Introduction: The importance of theories in health care and research. *British Medical Journal*, 317:1007-10 First of a set of 6 papers

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Abstract

This article introduces a series about theories which are integral to all health care practice, promotion and research. 'Theory' means 'to look', and the choice of theory, although often unacknowledged, shapes the way practitioners and researchers look at evidence, and question, collect and interpret it. Theories range from explicit hypotheses, to working models and frameworks of thinking about reality. The range is reviewed in this introduction and illustrated with examples about pain. Other papers in the series consider theories about masculinity, disability, consent, ethnicity and dying, and their effects on health practice and research. The purpose of the series is to show the scientific and practical importance of recognising implicit theories and how they powerfully influence understandings of health care. The series is intended to be debated rather than to be definitive, and is written for health practitioners and researchers, policy makers, and reviewers of research protocols and reports.

Types of theories and tools (box 1)

'Medical journals and research funders are mainly concerned with practical factual research, not with research that develops theories.' This wide-spread view implies several assumptions or theories: that research and facts can be separated from theory; that considering theories is not necessarily practical or useful; and that thinking about theories means developing them, like taking a non-essential excursion, or even like spinning candyfloss.

This series considers how, rather than being extraneous, theories are at the heart of practice, planning and research. All thinking involves theories and it is not necessary to read academic texts about theories before using them, any more than it is essential to read texts on reproductive medicine before having a baby. Yet because they powerfully influence how evidence is collected, analysed, understood and used, it is practical and scientific to examine theories. Whereas hypotheses are explicit, other theories are often implicit and their power to clarify or confuse understanding, and to reveal or obscure new insights can then work unnoticed.

Positivism (figure 1)

A scientist gazing through a microscope symbolises positivist objective examination, the distance and difference between the observer and the observed, the effort intensely to examine the tiniest part isolated from its context, the use of reliable, visible 'hard' data. In medicine, the emphasis on specific body parts, conditions and treatments assumes these to be universally constant replicable facts, as evinced by telemedicine. Positivism aims to discover general laws about relationships between phenomena, particularly cause and effect. Experiments are designed to measure and explain associations and to test whether a law can be disproved.

Researchers put pain under the microscope when they develop and test analgesics and measure patients' physiological responses. One example is a randomised trial of babies having surgery, with or without analgesia.ⁱ The researchers found 'massive shock reactions' in the babies with no analgesia. Their evidence questioned the standard treatment of withholding analgesia, and theories that babies cannot experience pain. The four-hourly hospital drug round expresses positivist beliefs that clinical norms and standard treatments can be set for effective pain control. Positivism's

concentration on the body and brain, sees real pain as neurological reactions to visibly damaged tissue, like Descartes's view of a 'mechanism' of impulses travelling from the damaged site to the brain, just as when 'pulling on one end of a cord, one simultaneously rings a bell which hangs at the opposite end'.ⁱⁱ

Pain relief has been refined through rigorous experiment and cautious insistence on firm evidence. Yet pain is a paradox in empiricism: an intense personal sensation, it provides no direct reliable evidence for the observer. Positivism's strength in precise observation can be a limitation when it is eluded by pain. Concern about over-estimating pain and over-prescribing deters clinicians from treating pain adequately.ⁱⁱⁱ A possibly greater deterrent is that, to understand pain better, they have also to think partly in non-positivist ways, to accept patients' subjective views and see pain as more than physical, involving body and mind.

Positivism and social medicine (figure 2)

Positivist theories in social medicine take some account of context (shading in figure 2) but tend to see the social in physical terms, like seeing how people's estimations and expressions of pain differ by age, sex or race. The separate parts are still emphasised, as separate variables, rather than connecting the meanings of all the parts and the whole. Positivist concern with cause and effect, like the pain caused by burns, tends to perceive responses as predictable reactions rather than personal choices and motives. This can make people look rather mindless, passively driven by certain characteristics, superficial beliefs, or brief experience like a few counselling sessions to reduce depression. Demographic surveys help to predict individuals' likely choices, but do not explain these: Why, for example, do women accept or refuse analgesia during childbirth? How deeply is refusal linked to their values and their beliefs about becoming a mother? Positivist dichotomies also cannot capture ambiguities, the way some people dread yet value pain, or fear yet long for recommended surgery.

Groups once assumed to require punishment are increasingly being treated as sick: alcoholics who have counselling, children with behavioural difficulties on Ritalin. Treatment tends to address the individual rather than the context; causes for behaviour are sought within the child's

body, rather than in family relationships, education policies or town planning. Despite originating from personal accounts, medical records of reported pain and distress tend to be treated as firm facts and the grounds for treatment and research processes, rather as a solid road supports traffic.

Functionalism (figure 3)

Consensus about the solid facts of positivism fits broadly with the solid morality of functionalism, which sees society as a single organism in which every part functions to the benefit of every other part; doctors are principled and benign, and patients adopt a sick role, wanting to recover and to comply with treatment.^{iv} The deviant minority which does not conform should be reformed or excluded to maintain the status quo. Pain as a punishment and deterrent is used as an important means of regulating some societies.

Social construction (figure 4)

A contrasting approach to positivism is to believe that there is not a single view or truth, and that a range of views can be valid in different ways. It is then possible to attend to different voices. Instead of being treated as agreed facts like a solid road, phenomena are seen as more like part of an ocean affected by tides and currents, shifting lights and opaque depths. People construct evidence through their own experience and observers inevitably join in this activity whether they try to take a surface or a submerged view. There is no neutral objective perspective; whatever the origins of the pain, the experience and the observers' responses are deeply personal. The complex meanings of pain and disease can be seen as questions or problems instead of given facts.

In trying to take nothing for granted and to see reality in a new light, phenomenology or the study of phenomena one of a range of social construction theories, takes the view of a questioning outsider, rather than an accustomed insider. The aim is to see how actors make sense of their experiences, how they try to rationalise and cope with pain. Their reported intentions and motives are seen as more relevant explanations than external causes so, for example, clinicians would discuss with patients their views on possible causes and cures for their suffering. Concepts of individual pain thresholds and innovations like patient controlled analgesia, with the hospice movement's care for the whole

thinking-feeling person, acknowledge that pain is more than physical or generally measurable. The mind's perceptions and emotions of fear or hope affect physical pain, in ways which positivism's separation of body from mind cannot address.

Researchers' and practitioners' relationships with patients, instead of being ignored, or controlled to reduce bias, are seen as areas worth researching in their own right (the arrows in figure 4). The words and gestures during interactions are investigated for how they symbolise larger issues, such as the way doctors maintain their professional authority. Patients also influence doctors through spoken and unspoken signals about their health, understanding and social background and, guided by their interpretation of these signals, doctors tend to adapt their behaviour and language which in turn alter the patients' responses, in mutually changing perceptions and behaviours. (Positivist blind and double blind trials acknowledge these interactions and, for useful reasons, try to cancel them out as unwanted variables such as placebo effects.)

Social construction theories consider how doctors do not simply reveal realities, but they construct and reconstruct, for example, their patients (as "informed and articulate" or as "that difficult adolescent"), while patients reconstruct their doctors (as "caring" or "vague") and themselves (when they accept or resist becoming the kind of person the doctor supposes them to be). Social construction research takes account of the expectations and values, backgrounds and roles of the main groups concerned, as well as the organisation of the clinic or ward, the time, space and funding allowed, and professional and political influences on how meanings of pain and anxiety are expressed, perceived and reconstructed.^v

In figure 4, the shading which denotes context overlaps with the doctor and patient to indicate how social context and personal identity overlap for both of them. Our beliefs, values, language and habits cannot easily be detached and changed but are part of our identity, which raises troubling questions about the extent of free will and autonomy. Attempts to alter people's responses, such as to control chronic pain or to promote a healthier life-style, are more likely to succeed when the social context is no longer addressed as a set of separate variables (as in figure 2) but as a complicated

overlapping mixture of many interacting factors. Pain as partly a social construction, at the intersection between body, mind and culture, varies according to complex personal differences^{vi} and effective health care is sensitive to these.

Postmodernism (figure 5)

The lines in figure 5, though possibly suggesting the fog of confusion commonly felt at the mention of postmodernism, indicate broken down boundaries. Three centuries of modern science are founded on sharp dichotomies: the computer binary system, life/death, mother/child. Yet life/death certainties are challenged by concepts of persistent vegetative state, and reproductive medicine creates new meanings of motherhood. Doctors have been described as among the first to create postmodern society in practice and among the last to acknowledge it in theory;^{vii} and greater use of postmodern thinking could clarify current medical uncertainties.

Postmodernists are sceptical about what truth is, what counts as knowledge and who can determine how valid or worthwhile any enterprise is. They explore how experience and even the apparent fabric of the body are constructed through discourse and power and through changes in medical practice.^{viii} They examine how concepts of masculinity or whiteness illuminate their supposed opposites but also share characteristics with them, as discussed in later papers in this series. They consider the mysterious relations between mind and body, as when intense pain makes the body feel alien; it constricts thought in some ways, but intensifies it in others in the desperate urge to explain the anguish and find relief. Such disruptive pain seems to "shatter the self [into a series of] lived oppositions".^{ix} This attention to different voices, like those of the 'deviant' patients with intractable pain, can help practitioners to give more informed and empathic care.

Critical theory (figure 6)

Showing how people make different but valid sense of experience makes critical theory possible as a rational framework. Unlike functionalism, critical theory does not see society as a well-functioning organism but as a collection of many factions competing for power and resources. Doctors are partly agents of social control with divided loyalties when, for example, they decide who is eligible for medical or psychiatric treatment for pain, or for sickness benefits. Instead of seeing deviants as a minority of outsiders, critical theorists show how large groups of people are constructed as

inadequate or disabled through their circumstances, such as poverty, instead of through their own failings.^x Sick and disabled people are respected as the source of valuable knowledge uniquely gained through adversity. By bridging dichotomies between professional and lay knowledge or able and disabled groups, critical theory verges towards postmodernism which, however, does not share its radical politics. In contrast to the emphasis on treating diseased individuals in the earlier approaches, critical theorists also look at how political change might prevent and reduce painful disease, such as by reducing inequalities or pollution.

In summary: Some of these theories explore new ways of understanding the enigma of pain. The hospice approach could not simply arrive, new theories about bodies, minds and pain beyond positivism first had to be developed, and recalled from earlier centuries, and accepted. Each approach has strengths and limitations; positivist medicine is effective in diagnosing and treating angina, whereas social construction and critical theory research and practice can look more broadly at how angina is exacerbated, experienced, interpreted, managed and, in the longer term, prevented.

Box 1. Types of theories

1. Basic beliefs about: what counts as knowledge and how it is produced; how we can know anything;
the meaning and purpose of things;
the nature and working of things.
2. Theoretical frameworks about facts and reality including:
positivism; social construction and postmodernism.
3. Beliefs about society, policy and relationships, such as:
functionalism; critical theory.
4. Disciplines, such as surgery, chemistry, genetics, which each
include many theories or ways of seeing things and
technical ways of describing them.
5. Theories which explain values and personal aims and
motives,
priorities and preferences.
6. Working theories which explain systems and are accepted
unless they are superseded by a different explanation ^{xi},
for example: Harvey's theory of circulation of the blood;
Lister's theory of antisepsis; Darwin's theory of
evolution;
beliefs about how disability is genetically or socially
determined.
7. Explicitly stated theories: hypotheses, research questions.

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