Reviewer's report

Title: PRIME - PRocess modelling in ImpleMEntation research: selecting a theoretical basis for interventions to change clinical practice.

Version: 1 Date: 4 October 2003

Reviewer: Susan Michie

Reviewer's report:

General

This paper addresses an important topic: developing a theoretical and scientific basis for understanding the implementation of evidence based practice. It describes a highly original study designed to elucidate which psychological constructs are most predictive of professional practice, as a basis for informing future interventions. A great strength of this paper is the rich integration of perspectives from several disciplines, including psychology, health services research and medical practice. Complicated issues are presented clearly, and the detailed rationale for the development of this study is a significant contribution to thinking in this area.

Discretionary Revisions (which the author can choose to ignore)

The paper would read better if "protocol" and "proposal" were replaced by "study". p. 6, line 12 - "other factors" - would be helpful to have examples.

line 19 - "illness cognitions" - would be useful to explain briefly here, although it is fully explained later in the article.

p.7 - the phrase "subjective norms" is introduced without immediate explanation. Although it is explained later in the paragraph, it might help those not familiar with the terminology to include a brief explanation on first mention.

It would be useful to refer to Table 1 at this point.

The last few lines of p.7 are slightly repetitive of material presented earlier on this page.

p.8 Operant conditioning: In addition to the example of remuneration as a positive consequence, it might be worthwhile to give an example of the absence of a negative consequence.

line 16. "An incentive is a positive consequence of a behaviour". I would suggest that "perceived" should be inserted before "positive". If consequences are positive in actuality but not perceived as that in advance, they do not function as incentives. I would also suggest that the construct "perceived consequences of behaviour" (line 24) would be more appropriately placed under the motivational theory of social cognitive theory (equivalent to outcome expectancy) than under operant theory. In Table 1, the construct is labelled "anticipated consequences of the behaviour" - this supports the interpretation that this is a psychological construct that precedes behaviour and serves to motivate, rather than one that succeeds the behaviour and serves to reinforce. Reinforcers may increase the frequency of the behaviour without this function having been anticipated in advance.

My other substantial point concerns the inclusion of "implementation intention theory" as providing
constructs that are not already incorporated within the other theories. There are two components to this 'theory'. The first is "cues to action". This construct is part of operant theory in that behaviour is influenced both by what happens after, but also by what happens before ("antecedents" or "cues to action"). The other component attributed to this theory is "action planning". Part of action planning is to plan the occurrence of antecedents and consequences of behaviour that will maximise the likelihood of it occurring (operant theory). Another function of action planning is to increase self-efficacy: knowing one has an action plan increases a sense of self-efficacy which increases the likelihood of the behaviour occurring, independently of the effects of implementing the plan itself. If the study data show that self-efficacy mediates the association between action planning and behaviour, it may be that the authors could consider this construct as part of social cognitive theory.

It would be helpful to provide a rationale for selecting anxiety as the emotional construct to measure. On p.10, examples of emotional reactions are given as fear and 'heartsink' reactions (which would seem closer to depression than anxiety).

p.12, penultimate sentence - I wasn't sure what "tracer activities" referred to, and whether they were the same as "behavioural outcomes". I am assuming that all of these are attributable to individual professionals: it would be good to make this clear.

A final paragraph summarising the questions that these data will inform would strengthen the paper.

Minor Compulsory Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

What next?: Accept after discretionary revisions

Level of interest: An exceptional article

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests: None