Authors' objectives
To review studies that examine the relationship between measures of patient-centred consulting and outcomes in primary care, and to examine the methodological quality of the studies.

Searching
MEDLINE and PsycINFO were searched from 1969 to 2000 for English language publications in non-nursing journals. The reference lists in identified studies were examined. One additional study undertaken recently by the authors was also included.

Study selection
Study designs of evaluations included in the review
The inclusion criteria were not explicitly stated in terms of the study design. All of the included studies were observational studies.

Specific interventions included in the review
Studies of 'patient-centred(ness)', as defined by the authors, were eligible for inclusion if some quantitative measure of this construct was used.

Participants included in the review
Studies of qualified or trainee doctors and patients in primary care were eligible for inclusion.

Outcomes assessed in the review
Studies that assessed at least one consultation outcome were eligible for inclusion.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Internal validity was assessed by considering study design, statistical power, whether problems of 'clustering' were addressed (multiple consultations by an individual doctor), and the extent of control for potential confounders. The measures of patient-centred consulting were assessed for reliability and validity, and examined against a five-dimensional model of patient-centred care. This model, proposed by the authors (see Other Publications of Related Interest No.1) considers the following elements: biopsychosocial perspective; 'patient-as-person'; sharing power and responsibility; the therapeutic alliance; and 'doctor-as-person'. The generalisability of the results was assessed using the recruitment methods for doctors and patients, and the characteristics of the participants. One author extracted external validity criteria. The authors do not state how papers were assessed for internal validity, or how many of the reviewers performed the validity assessment.

Data extraction
One author extracted the data into data extraction tables. The extracted data included: the instrument used to measure patient-centredness; the type of measure; non-verbal clues included; patient behaviours included; method of application; inter-rater reliability; doctor behaviours measured; and post-consultation patient outcomes.

Methods of synthesis
How were the studies combined?
A narrative synthesis was undertaken.

How were differences between studies investigated?
Differences between the studies were discussed in the text with respect to internal and external validity. The results were presented separately for studies that used univariate and multivariate analyses.

Results of the review
Nine studies were included (310 patients).

Measurement issues.
All of the included studies used verbal coding schemes to measure patient-centredness and most studies used the frequencies or proportions of specific verbal behaviours defined as patient-centred by the researchers. Three studies measured doctors’ responses to patients’ ‘verbal offers’ and one study measured the doctor’s best performance in five interviewing skills. One study measured the doctors’ non-verbal behaviour. Four studies measured aspects of the patients’ (and doctors’) verbal behaviour. All of the included studies used audio or videotapes of the consultations. One study also used patient interviews. Seven studies reported inter-rater reliability of the measures used.

Eight studies measured the patients’ satisfaction with the consultation, but the instruments used and their application varied considerably. Satisfaction was measured immediately after the consultation and up to 10 days afterwards. The studies used face-to-face interviews and telephone surveys. The instruments included the 29-item Medical Interview Satisfaction Scale with or without additional items; self-completion forms using rating scales developed by the investigators or the 18-Item Consultation Satisfaction Questionnaire; items derived from a validated scale; and five-point scales. One study used three students as role-playing patients.

Studies also assessed other aspects of the patients’ view, such as the perceived doctor-patient agreement, feeling understood, feeling enabled, changes in health status, treatment compliance, information recall, and use of health services.

All measures of patient-centred care examined some aspect of the dimension ‘sharing power and responsibility’. Most of the studies measured ‘the therapeutic alliance’ dimension, but focused on doctor rather than patient behaviour. Five studies attempted to measure the ‘patient-as-person’ dimension. There were fewer measures of ‘biopsychosocial perspective’ and none of the studies measured the ‘doctor-as-person’ dimension.

Internal validity.
The overall internal validity was not high. Four studies controlled for confounding using multivariate statistical techniques. Three studies reported a power calculation. The testing of multiple hypothesis was common. The problem of clustering was taken into account in five studies.

External validity.
The overall external validity was not high. The studies largely provided little information about the participating doctors. Three studies attempted to recruit a random sample; the others used convenience sampling. The participating doctors may not be representative (more likely to be College members and more recently qualified). Seven studies recruited consecutive eligible patients with high response rates (72 to 94%). One study used a convenience sample, while another used simulated patients and raters. The typical patient participant tended to be female, mid-40s and married.

Univariate analyses (5 studies).
Only one of the five studies found no relationship between patient-centredness and outcome. Most of the studies tested multiple hypotheses and found non-significant correlations between some measure of patient-centredness and outcome. All five studies reported patient satisfaction and found different results: two studies found no evidence of a relationship, two studies found a relationship, and the findings of the other varied according to the measure of patient-
Multivariate analyses (4 studies).

One study found a relationship with patient satisfaction, but not with other health outcomes. Two studies found no relationship with satisfaction, while another found no relationship with patient enablement. One study found no relationship with patient health outcomes, but found a relationship between the patients' perceptions of the consultation and health status and health service utilisation.

**Authors' conclusions**
The authors concluded that although the evidence suggests there may be a relationship between patient-centredness and patient outcomes, the evidence is not definitive.

**CRD commentary**
The review question was clear in terms of the intervention, participants and outcomes. The inclusion criteria were not explicitly defined in terms of the study design. Limiting the search to publications in English that were listed in two databases may have resulted in the omission of other relevant studies. The lack of an attempt to locate unpublished studies raises the possibility of publication bias. One recent study by the review authors was also included. The methods used to select the studies and assess validity were not described, hence the adequacy of the methods used cannot be judged. Validity was assessed using defined criteria and the results were discussed. Only one author extracted the data; this lack of duplication increases the potential for errors and bias. Some relevant information on the included studies was tabulated, but the numbers of participating doctors and patients were not stated. The characteristics of the studies were summarised and the narrative synthesis of the data was appropriate. The evidence presented appears to support the authors' conclusions.

**Implications of the review for practice and research**

**Practice:** The authors stated that the evidence that patient-centred consultations improve patient outcomes in primary care is ambiguous.

**Research:** The authors stated that reports of future research should provide sufficient detail of participating doctors and patients to assess the representativeness of the population studied. They further stated that the studies should use the same validated instrument to assess patient satisfaction. The authors also suggested that future research should base their measure of patient-centredness on one of the two proposed multi-dimensional models of patient-centred care (see Other Publications of Related Interest nos.1-2).

**Bibliographic details**

**PubMedID**
12220750

**Other publications of related interest**

**Indexing Status**
Subject indexing assigned by NLM
MeSH
Humans; Patient-Centered Care; Physician-Patient Relations; Primary Health Care /organization & administration /standards; Treatment Outcome

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.