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'Trust me….' Cognitive and behavioral predictors of

perceived physician empathy.

Abstract

A socio-cognitive model of distal and proximal predictors of empathic judgments was tested among 100 physicians. It was hypothesized that physician perceived control would impact upon empathy ratings via physician communication style. Specifically, physicians with high-perceived control would use more open communication and be rated as more empathic. Physicians with low-perceived control would use a controlling communication style and be rated as less empathic. Physicians completed a medical attribution questionnaire prior to a structured patient consultation exercise, during which patients and assessors rated physician empathy. The exercise was audiotaped, transcribed and content analyzed for verbal behaviors. Support was found for the hypotheses, however, patients but not medical assessors associated empathy with reassurance and provision of medical information.

Empathy is particularly important for medical practitioners. Physician empathy has been shown to predict patient trust, compliance with clinical decisions, and satisfaction with medical services (Barnett, Howard, King & Dino, 1981; Becker & Maiman, 1975; Newton et al. 2000). Yet surprisingly little is known about the factors that lead patients to judge physician empathy. This research set out to address two related research questions: a) how can we explain and predict individual differences in judged physician empathy, and b) what are the behavioral cues that lead patients to judge their physician as empathic? We tested a socio-cognitive model of judged empathy among 100 physicians undertaking standardized patient consultations as part of a structured selection process.

Proximal and Distal Predictors of Perceived Empathy

Empathy has been defined in many ways, reflecting a multitude of theoretical and empirical perspectives (cf. Preston & de Waal, 2002). It is most often conceptualized in one of two ways: (1) as a heightened sensitivity to another's emotional state that results in a shared emotional response and feelings of sympathy, or (2) as the ability to decode a target person's thoughts and feelings and respond accordingly (Marangoni, Ickes, Garcia & Teng, 1995). Both of these treat empathy as a predominantly intra-psychic phenomenon – something experienced (or felt) by the person who is empathizing, rather than something perceived by someone who is being empathized with (Hakansson & Montgomery, 2003). In patient consultations, however, it is arguably whether patients judge their physician to demonstrate empathy that is important (Newton et al., 2000): an interpersonal perspective that is reflected in many medical definitions of empathy. For example, More (1996)

suggests that empathy is '… a form of relational knowledge. Its manifestation is not "concern" but "presence." The empathetic physician is neither objective nor subjective, neither detached nor identified, but dialogically linked to the patient in a continuing cycle of reflexive interpretation …' (p 245: italics added). Not only does this definition emphasize the dynamic nature of empathy judgments, it grounds them in communication. As Bylund and Makoul (2005) point out: '… the primary construct of interest is not a physician's internal empathy, but how that empathy is communicated' (p 124).

The distinction between 'felt', 'demonstrated' and 'judged' components of empathy is made clear in Davis' (1996) mediation model of empathy. Davis suggests that an observer's <u>judgment</u> of another person's empathy is based on their demonstrated behavior (a proximal predictor), which is partly dependent on personality characteristics such as empathic concern (a distal predictor) that differentially sensitize individuals to situational cues. Our research builds on Davis' model and work by Bylund and Makoul (2005) to test a socio-cognitive model of proximal and distal predictors of patients' judgments of physician empathy. We predicted that empathy judgments would be influenced by physician communication behavior (proximal predictor), which would itself be influenced by physician explanatory style - specifically the level of control a physician perceives him- or herself to have over patient outcomes (distal predictor).

Communication Behavior and Empathy

The nature of physician-patient interactions influences both positive clinical outcomes and less positive outcomes such as lawsuits for malpractice (Di Blazi, Harkness,

Ernst, Georgiou & Kleijnen, 2001; Levinson & Chaumeton, 1999; Mercer, McConnachie, Maxwell, Heaney & Watt, 2005; Vincent, Young & Phillips, 1994). Yet, despite a considerable body of research investigating physician-patient communication (e.g., Ben-Sira, 1980; Buller & Buller, 1987; Ong, de Haes, Hoos & Lammes, 1995), surprisingly little is known about the specific communication behaviors that lead to empathy judgments, how they vary across physicians, and why (Makoul, 2003). A notable exception is research by Gillotti, Thompson and McNeilis (2002), which found that observers rated physicians more empathic if they asked fewer closed questions and solicited more answers when delivering bad news. This suggests a link between judged empathy and communication behavior, but does not explain individual differences in the way physicians communicate.

According to Buller and Buller (1987) there is consistent evidence for two styles of physician communication: affiliation (designed to develop a positive relationship between physician and patient, including empathy) and dominant/active (where physicians maintain control by dominating patient interactions). The authors report that higher patient satisfaction is associated with affiliation, and lower satisfaction with dominant /active communication. It is possible that similar communication behaviors influence patient ratings of empathy. Therefore, building on this and other work we identified two communication styles likely to impact on patients' empathy judgments. First, we predicted that physicians would be rated more empathic if they adopted an 'open' communication style during consultations; allowing patients more control over dialogue by encouraging them to discuss topics not directly relevant to the presenting medical problem. Secondly, we predicted that physicians would be rated less empathic if they used a 'controlling communication style', focusing on technical rather than personal information and using

more closed or narrow questions that allow patients less control over the content and direction of the dialogue.

Hypothesis 1: Physicians who use more open communication (characterized by more open questions, more discussion of personal topics, more personal action statements, more statements of personal responsibility) will be rated more empathic by patients.

Hypothesis 2: Physicians using a more controlling communication style (characterized by more closed questions, discussion of medical procedures, missed patient cues, blame of others, interruptions, and fewer action statements) will be rated less empathic.

Perceived Control and Empathy Judgments

Individual differences in experienced empathy have been associated with several personality characteristics, including perspective taking, empathic concern and personal distress (Davis, 1996). However, socio-cognitive theorists have typically focused on how explanatory style shapes interactions (demonstrated behavior) and judged empathy (e.g., Betancourt, 1990; Weiner, 1995). For example, Bradbury and Fincham (1987) propose that on encountering situations likely to trigger empathy individuals process interpersonal information at two levels. Firstly, through an automatic processing of situational cues, and second via a conscious attempt to identify causes of a person's behavior. In relation to the second of these, there is evidence that caregivers are more likely to empathize with people perceived to have little control over the causes of their distress. Nurses have been found to

use less restraint when they perceive violent psychiatric patients to have less control over their behavior (Leggett & Silvester, 2003), and Brewin (1984) found that medical students were less likely to prescribe medication if they felt that patients were partly to blame for their presenting symptoms (e.g., a heavy smoker with a cough). However, less attention has been paid to individual differences in explanatory style in relation to automatic processing of empathy cues and subsequent demonstrated empathic behavior.

Explanatory style is a relatively stable cognitive personality characteristic that predicts behavior over several years (Abramson, Seligman & Teasdale, 1978; Brewin, 1985; Försterling, 1985). A component of explanatory style that has received considerable attention is perceived control: that is, the extent to which individuals explain outcomes in terms of causes they can control themselves (Weiner, 1996). Perceived control is conceptually similar to other cognitive personality traits such as generalized self-efficacy, personal initiative, and locus of control (Ferguson, Dodds, Flannagan & Ng, 1995). However, it has been shown to have particular relevance to interpersonal situations. Studies have found that low-perceived control [LPC] individuals are more reactive to challenging interactions, and act in ways that seek to reassert control and increase their feelings of efficacy (Bugental, Johnston, New & Silvester, 1998). For example, Kipnis, Schmidt, Price and Stitt (1981) found that LPC managers tended to impose solutions, exert control and delegate less to subordinates in order to regain control, maintain self-esteem and maximize feelings of efficacy. Bugental, Lyon, Krantz and Cortez (1997) also found that LPC parents acted to reassert control by directing rather than guiding children. In comparison, high-perceived control [HPC] individuals tend to delegate to others more, encourage involvement and allow others more control during interactions. According to Bugental, Lyon, Krantz and

Cortez (1997) differences in perceived control result from causal knowledge structures, developed through experience and laid down in long-term memory (LTM). In challenging interpersonal situations these are and accessed automatically and influence behavioral response.

In this research, however, we defined explanatory style in terms of the generalized level of control a physician perceives' him or her-self to have over a range of patient outcomes. We predicted that physician perceived control would influence empathy judgments based on evidence that individuals who perceive themselves to have little control over outcomes [low-perceived control: LPC] are more likely to use controlling and directive interpersonal behavior. It is, therefore, possible that HPC physicians will use communication behaviors that allow patients more control over patient-physician dialogue, and LPC physicians will use communication behavior that asserts their control during consultations. Consequently, we tested the prediction that physician perceived control would be a distal predictor of empathy judgments via an influence on communication style. Specifically, that HPC physicians would tend to adopt an open communication style and, as a consequence, be judged more empathic. In contrast, LPC physicians would use more 'controlling' communication and be rated less empathy by patients.

Hypothesis 3: Physician communication style will mediate the relationship between physician perceived control and empathy ratings. Specifically, physicians with high-perceived control over patient outcomes will use an open communication style and be rated more empathic by patients and assessors; those with low perceived control will use a closed communication style and be rated less empathic.

Method

Design and Participants

The research was conducted as part of a selection process for qualified physicians applying to train as General Practitioners [GPs] (footnote 1) with the UK National Health Service. The study focused on physician performance in a patient simulation exercise during an assessment center [AC]. Participation in the study was voluntary and all information collected rendered anonymous to protect participants' identity. Of the 100 physicians (47 female, 53 male) who took part in all parts of the study, 55 were White, 9 were Black-African or Black-Caribbean, 21 were Indian, 7 from Pakistan and 8 described themselves as 'other'. All had completed at least five years of medical training (age range 23-55 years, Median = 28). The research comprised three stages: 1) physicians completed a Medical Attribution Questionnaire [MAQ], 2) physician empathy was observed and rated by (i) an assessor and (ii) a patient in a patient simulation exercise, 3) transcripts of dialogue during the exercise were content analyzed using pre-specified behavioral categories.

Measures

Medical Attribution Questionnaire [MAQ]: A questionnaire was developed to assess physicians' explanations for patient outcomes. Based upon a modified version of the Attributional Style Questionnaire (ASQ: Peterson, Semmel, Von Baeyer, Abramson, Metalsky & Seligman, 1982) it included six positive and six negative hypothetical scenarios of GPs interacting with patients (see appendix A for examples). For each scenario

respondents imagined themselves as the physician, wrote down the most likely cause of the outcome, and then rated it on six causal dimensions ('control-doctor', 'control-patient', 'internal-doctor', 'internal-patient', 'global' and 'stable') using 1-5 Likert-type scales (e.g., control-doctor: 5= totally within your control, 1 = totally outside your control; stable: 5 = long-lasting, 1 = temporary). High-perceived control physicians were defined as those who rated patient outcomes as being more internal, stable, and controllable by themselves (Weiner, 1995).

Patient simulation exercise: Physicians participating in a standardized patient simulation exercise (30 minutes) were told they would be observed and rated in terms of their ability to empathize and engage appropriately with a patient. Physicians played the role of a hospital doctor admitting a patient for a bronchoscopy, a routine surgical procedure, and received brief background information (e.g., patient works in a support role in a building inspection team). Patients were trained medical actors who followed a structured script and provided a standardized experience for all participants. Each patient displayed three emotions and nine verbal prompts in the same order: anger (e.g., 'I would prefer to talk to someone more senior'), confusion (e.g., 'But my GP told me that this was just a routine procedure'), and fear (e.g., 'Does this mean that I might have cancer?'').

Judged empathy: Empathy ratings were obtained from two independent sources (i) assessors and (ii) patients. Assessors (16 senior physicians with at least ten years medical experience) were trained (2 days) to observe and rate physicians using a competency framework. Based on previous research 'empathy and sensitivity' was defined as "a capacity and motivation to take in patient/colleague perspective, and sense associated feelings – the ability to generate

a safe/understanding atmosphere" (Patterson, Lane, Ferguson & Norfolk, 2002, p. 323).

Assessors recorded evidence of physician empathy during the exercise and then rated them

on a 1-4 scale (1 = little or no evidence, 4= considerable evidence of empathic ability).

Assessor reliability was calculated by comparing empathy ratings in the patient exercise

with those from the other two AC exercises (α = .75). Patients rated physicians immediately

after the exercise using three items: 1) this physician was sensitive to my feelings; 2) this

physician seemed to understand my situation/concerns; 3) I felt at ease with this physician,

and 1-4 Likert-type scales (1=strongly disagree and 4=strongly agree). Mean empathy

scores were calculated (α = .88).

Analysis of communication: Audiotapes were transcribed verbatim and coded for ten pre-

specified categories of verbal behavior by coders blind to the empathy ratings. For eight

categories, a count was made of the number of times a physician produced the behavior

during the exercise, behaviors in the two remaining categories (Responsibility and Action

Taking) were coded using 1-5 Likert-type scales and a mean score produced for each

physician. To show reliability, two independent raters extracted and coded behaviors from

20 transcripts (Fleiss, 1971). Definitions and kappas are as follows: (1) 'Closed Questions':

questions that could be answered with a 'yes/no' response, or with brief factual information

(e.g., 'Did you have any tests for the phlegm?' k = .81). (2) 'Open Questions': questions

that encouraged the patient to expand on a point (e.g., 'What sort of conditions do you work

in?' k = .76). (3) 'Personal Topic': topics relating to a patient's experiences and feelings,

that may not directly relate to gathering information for diagnosis or the medical procedure

(e.g., 'It must be quite frightening for you at the moment. Have you got a good support at

home?' k = .88). (4) 'Interruption': physician interrupts patient or begins speaking whilst the patient is talking (e.g., patient 'I was told to be here at…..' physician starts talking over patient: 'About that….' k = .79). (5) 'Missed Patient Cue': statements indicating the patient wishes to discuss something of concern, or where a request for reassurance is ignored (e.g.,: patient '….she has been helping with the cooking, physician: Right. Patient: So I haven't noticed that I haven't been eating. Physician: Yes. Patient: Any way thank you doctor I'll go back to…: k = .74). (6) 'Positivity': physician agrees with a patient, indicates they understand, or tries to reassure or offer support (e.g., 'We can write a letter to your boss and let him know what's happening' and 'It might be nothing too serious at all': k = .75). (7) 'Procedure': information provided about a medical procedure, (e.g., The whole process should take about 30 minutes and after that you will come back to the ward: k = .90). (8) 'Summary Statements': (e.g., 'So basically what we're saying is that you are a smoker, you've had a different cough for the last three weeks, that it's occurring all day and you are producing brown phlegm' k = .88).

Mean scores were calculated for the final two categories. (9) 'Responsibility': all statements of responsibility for unsatisfactory outcomes were coded using a 1-4 scale (1 = physician takes personal responsibility, e.g., 'I'm sorry I didn't get off to a good start.' 2 = physician takes joint responsibility, e.g., 'We're not sure what the abnormality is yet, but we will try to get you home for tomorrow', 3 = responsibility attributed to circumstances, e.g., 'It's a very busy clinic, I'm afraid this is the NHS isn't it?', 4 = responsibility attributed to patient, e.g., 'You should have followed the instructions.' (k = .73). (10) 'Taking Action': all action statements were coded (1 = physician takes personal action to help a patient, e.g., 'I'll go and speak to the Sister about trying to find you a private room.' 2 = physician takes

joint action with others, e.g., 'We can arrange for you to see the counselors here if you'd

like' 3 = physician indicates that others, such as hospital colleagues or the patient's GP, will

take action, e.g., 'I'll get someone else to explain what happens next', and 4 = no further

action, the physician indicates they are unable or unwilling to help, e.g., 'I'm afraid it's not

my role' ($\underline{k}$ = .76).

Results

Table 1 presents descriptives and correlation co-efficients. For combined positive

and negative patient outcomes, physicians who made more stable attributions for patient

outcomes ($\underline{r}$ = .20, $\underline{p}$< .05), and attributions that were more internal ($\underline{r}$ = .19, $\underline{p}$< .05) and

controllable to self ($\underline{r}$ = .17, $\underline{p}$< .05) were rated more empathic by assessors. Patients rated

physicians who attributed higher control to self (doctor) as more empathic ($\underline{r}$ = .17, $\underline{p}$< .05).

These relationships were stronger for positive patient outcomes: Assessors rated physicians

more empathic when they attributed positive patient outcomes (e.g., patient satisfaction) to

causes that were more stable ($\underline{r}$ = .25, $\underline{p}$ < .01) internal and controllable to doctor ($\underline{r}$ = .24, $\underline{p}$

< .01; $\underline{r}$ = .17, $\underline{p}$ <.05), and external to patient ($\underline{r}$ = .17, $\underline{p}$ < .05). Patients, however, rated

physicians more empathic if they attributed positive outcomes to causes that were internal

to patients ($\underline{r}$ = .21, $\underline{p}$< .05). Control-doctor ($\underline{r}$ = .17, $\underline{p}$ < .05) for negative patient outcomes

also predicted empathy ratings for assessors, but only global predicted for patient ratings ($\underline{r}$

= .17, $\underline{p}$ < .05) such that patients rated physicians more empathic if they perceived the

causes of negative outcomes to be important.

INSERT TABLES ONE AND TWO ABOUT HERE

We calculated a composite score for physician perceived control [ICS+ = Internal-Doctor + Control-Doctor + Stable for positive outcomes] following procedures adopted in previous studies (e.g., Peterson et al., 1982; Weiner, 1995) in order to test the hypotheses. High ICS+ relates to more stable, internal and controllable explanations for patient outcomes (e.g., the patient was satisfied because I had the expertise to help her). Table 2 provides correlations between ICS+, empathy ratings, and communication behaviors. ICS+ was positively associated with patient and assessor empathy ratings ($r = .21$, $p < .05$; $r = .23$, $p < .05$) and negatively associated with number of closed questions and physician summarizing ($r = .23$, $p < .05$; $r = .22$, $p < .05$). Higher empathy ratings were associated with a number of communication behaviors. For assessor ratings these included more discussion of personal topics ($r = .28$, $p < .01$), fewer missed patient cues ($r = -.26$, $p < .01$), more personal responsibility ($r = -.23$, $p < .05$), and more personal action statements ($r = .22$, $p < .01$). Patient ratings were also associated with missed patient cues and discussion of personal topics ($r = -.31$, $p < .01$; $r = .26$, $p < .01$), but in addition, patients rated empathy higher when physicians made more positive statements and discussed the medical procedure in more detail ($r = .29$, $p < .01$; $r = .21$, $p < .01$). No significant relationships were found with physician gender, but older physicians were rated less empathic by patients and assessors ($r = -.21$, $p < .05$; $r = -.24$, $p < .01$), they also used fewer open questions ($r = -.21$, $p < .05$) and interrupted patients more often ($r = .20$, $p < .05$). These findings provide partial support for hypotheses 1 and 2.

Coding of Broad Communication Strategies

Although we initially predicted two styles of communication ('open' and 'controlling'), inspection of the data suggested the existence of three. 'Positive' and 'procedure' statements were positively associated with each other and patients' ratings suggesting that patients may associate empathy with reassurance. A third 'reassurance' communication style was proposed as important to patients but not assessors. Consequently, three composite values were created for: 1) 'open communication' ('open questions' 'missed cues [reversed coded]' + 'personal topics'), 2) 'controlling communication' ('interruptions' + 'summarizing' + 'closed questions'), and 3) 'reassurance' ('positive' + 'procedure' statements). Behavior categories were summed to give overall scores for each communication style.

Path Models

Based on this theoretical model, separate models were constructed for a) patient and b) assessor ratings of physician empathy to test hypothesis 3. Paths were specified from ICS+ to the three communication styles and empathy judgments. Similarly, paths were specified from the three communication styles to empathy judgments. Within the three communication styles, paths were specified from controlling communications to both open and reassurance communication styles. This is because controlling communications is seen to reflect strategies for managing communication and as such should influence the use of the other styles. It is believed that re-assurance should follow from being open and as such a path was specified from open communication style to reassurance. Models were specified in LISREL 8.7.

Model fit was examined using the criteria specified by Hu and Bentler (1999). Specifically a model was defined as having a good fit to the data if the Root Mean Sqaure Approximation of Error (RMSAE) approaches .06 or less and the Comparative Fit Index (CFI) approaches .96 or greater. Although the sample size for the structural models is relatively small (N = 90), Bentler and Chou (1987) argue that issues of sample size depend on model complexity. They suggest that this should be estimated by the ratio between sample size to number of parameters to be estimated, with a recommended ratio of 5 to 1: for the current study this ratio is 9 to 1. Sample sizes equivalent to that reported here have been analyzed in a similar manner (see also Ferguson, James, O'Hehir & Sanders, 2003; Martocchio & Judge, 1997).

Both models showed excellent fit to the data. For the patients the RMSAE was .0 (90% CI = .0, .13) with a CFI of 1.0 and for the assessor the RMSAE was .0 (90% CI = .0, .13) with a CFI of 1.0. These models and their path coefficients are shown in Figures 1 and 2. In both models ICS+ is significantly related to two communication styles (open and controlling). Specifically, physicians with higher ICS+ are more likely to use an open communication style and less likely to use a controlling communication style. ICS+ is not directly related to judgments of empathy, but aspects of communication style are, depending on who is making the judgment: patients or assessors. For patients (Figure 1) higher empathy ratings are associated with use of a reassurance communication style: this was related indirectly to ICS+ via controlling and open communication styles. For assessors (Figure 2), use of an open communication style relates to empathy ratings. ICS+ is indirectly related to empathy judgments via open communication style and indirectly via controlling communication. These results provide support for hypothesis 3.

Discussion

We know that the extent to which a patient judges their physician to be empathic has important consequences for the quality of the care-giving relationship. Less is understood about the behaviors and characteristics that lead to empathy judgments. In this study we predicted that physician perceived control would act as a distal predictor, and physician communication behavior a proximal predictor of judged empathy. By undertaking a detailed analysis of physician communication in a controlled and standardized environment, it was possible to identify behaviors associated with the empathy ratings provided by two independent sources: assessors and patients.

Perceived control was found to have an indirect influence on empathy ratings via communication behavior. Specifically: (1) empathy ratings were positively associated with physicians' use of 'open' and 'reassuring' communication styles, and negatively associated with a 'controlling' communication style; (2) physicians who attributed positive patient outcomes to causes that were stable and internal and controllable to themselves (high perceived control: HPC) received higher empathy ratings from assessors; (3) path models for assessor and patient empathy ratings showed that physician perceived control related to empathy ratings via use of an 'open' or 'closed' communication style, and; (4) a 'reassuring' communication style was associated with empathy ratings for patients but not assessors.

These findings point to subtle differences in the cues that patients and assessors used to judge physician empathy. Physician perceived control appears to have an indirect influence on empathy judgments via communication strategy: HPC physicians were more likely to use 'open' and 'reassuring' communication behavior, and less likely to use 'controlling' communication. It is possible that by encouraging patients to provide more information, HPC physicians can make more informed diagnoses and tailor responses more effectively to the patient's needs. Therefore, open communication may in fact enhance perspective taking and empathic accuracy. Unfortunately, we did not assess empathic accuracy in this study. However, it would certainly be interesting to explore the degree to which patients' perceptions of physician empathy matched physicians' ratings of their own empathy: or indeed, whether patients' ratings of physician empathy accurately predict physicians' ability to perspective-take. Future studies might therefore include a self-report measure such as the Interpersonal-Reactivity Index (Davis, 1996).

In contrast, low-perceived control [LPC] physicians tended to use a 'controlling' communication style that reduced opportunities for patients to provide information. However, a significant path between controlling communication and open and reassuring communication suggests that controlling communication may be useful up to a point, facilitating the use of reassuring and open communication. Although controlling communication may help physicians manage and shape the interaction, too much may mean physicians focus too much on directing the interaction rather than encouraging the patient's perspective. Caution is needed, however, because whilst data was collected longitudinally (i.e. perceived control, then communication behavior, then empathy ratings), the method precludes analysis of transactional patterns of communication and empathy judgments.

The different path models for assessors and patients are interesting. Assessor ratings appear to be influenced by open communication cues (i.e. whether physicians allowed patients to discuss personal topics and were sensitive to patient cues); whilst patients were more influenced by reassurance (i.e. positive comments about diagnosis outcome and information about the medical procedure). The model for patients suggests that perceived control influences open communication, which in turn influences reassurance and patients' empathy judgments. This suggests that although patients associate empathy with physicians listening and being sensitive to needs, patients are also looking for support (positive comments) and opportunities for informed decision-making. A finding that fits with previous research which showed that patients were more satisfied and likely to adhere to treatments if they were clearly informed about prognosis and treatment options (Mullen, 1997; Stiles, Putnam, Wolfe & James, 1979). The differences between the assessor and patient models support recent moves to ensure that physicians seek patient perspectives during consultations (General Medical Council, 2002). In selection, including patient and assessor ratings may also improve criterion-related validity.

We recognize that the study is not without limitations. For example, no measure was taken of the stability of perceived control. Neither did we include any self-report measures of empathy that could shed more light on how perceived control relates to other factors such as personal distress, empathic concern, locus of control, or proactive personality (Davis, 1996; Ferguson et al. 1995). It is possible that perceived control is situation-specific, and, like self-efficacy, may increase with training and experience. However, physicians with unrealistically high levels of perceived control may be problematic and potentially

dangerous in clinical settings. Further research could therefore consider how physician

perceived control develops, the circumstances under which it operates automatically, and

how it relates to moment-to-moment appraisal of ongoing medical events (Bugental et al.

1998). A better understanding of physician perceived control may help to tailor medical

training more effectively to individual needs.

Finally, our use of medically trained actors permitted standardized comparisons of

communication behavior across physicians, but raises questions relating to the realism of

empathy judgments in simulated interactions. Actors may experience empathy differently to

patients presenting with serious concerns about their health. Similarly, empathy judgments

may be different when patients are interacting with physicians they have known for a long

time. However, a high proportion of medical situations involve physicians and patients who

do not know each other (Howie et al., 1999). Research has also found that the length of a

consultation and level of familiarity do not impact on empathy judgments (Bylund &

Makoul, 2005).

The study has generated findings with important practical relevance. The

expectation that physicians should dominate patient consultations has been increasingly

challenged in recent years (West, 1984). Yet, today there is growing acceptance of the need

for more interactive and patient-led dialogue not least because poor communication and the

failure to take account of the patient perspective have been found to be at the heart of most

formal patient complaints and legal actions (Coulter, 2002). Vincent, Young and Phillips

(1994), for example, found that an overwhelming majority of litigants who sued healthcare

providers were dissatisfied with the nature and clarity of the explanations they received, and

the lack of sympathy displayed by staff. Moreover, the key recommendation of a UK

inquiry into the failures of heart surgeons operating on children was a need for doctors to be

'open and candid when adverse events occur' (Coulter, 2002). Clearly, the need for patients

to judge their physician empathic remains central to the efficacy and perceived competence

of physicians across all medical fields. This research provides evidence to help design more

effective and targeted training for medics and other professions where empathy and trust are

important to role success.

References

Abramson, L.Y., Seligman, M.E.P. & Teasdale, J. (1978). Learned helplessness in humans: critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Barnett, M.A., Howard, J.A., King, L.M., & Dino, G.A. (1981). Helping behavior and the transfer of empathy. Journal of Personality and Social Psychology, 115, 125-132.

Becker, M.H. & Maiman, L.A. (1975). Sociobehavioral determinants of compliance with health and medical recommendations. Medical Care, 12, 10-24.

Ben-Sira, Z. (1980). Affective and instrumental components in the physician-patient relationship: An additional dimension of interaction theory. Journal of Health and Social Behavior, 21, 170-180.

Bentler, P. M., & Chou, V. (1987). Practical issues is structural equation modeling. Sociological Methods and Research, 16, 78-117.

Betancourt, H. (1990). An attribution-empathy model of helping behavior: Behavioral intentions and judgments of help giving. Personality and Social Psychology Bulletin, 16, 573-591.

Bradbury, T.N. & Fincham, F.D. (1987). Affect and cognition in close relationships: Towards an integrative model. Cognition and Emotion, 1, 59-87.

Brewin, C. (1984). Perceived controllability of life events and willingness to prescribe psychotropic medication. British Journal of Social Psychology, 23, 285-287.

Brewin, C. (1985). Depression and causal attributions: What is their relation? Psychological Bulletin, 98, 297-309.

Bugental, D.B., Johnston, C., New, M., & Silvester, J. (1998). Measuring parental attributions: conceptual and methodological issues. Journal of Family Psychology, 12, 459-480.

Bugental, D.B., Lyon, J.E., Krantz, J. & Cortez, V. (1997). Who's the boss? Accessibility of dominance ideation among individuals with low perceptions of interpersonal power. Journal of Personality and Social Psychology, 72, 1297-1309.

Buller, M.K., & Buller, D.B. (1987). Physicians' communication style and patient satisfaction. Journal of Health and Social Behavior, 28, 375-388.

Bylund, C. L., & Makoul G. (2005). Examining empathy in medical encounters: An observational study using the empathic communication coding system. Health Communication, 18, 123-140.

Coulter, A. (2002). After Bristol: Putting patients at the center. British Medical Journal, 324, 648-651.

Davis, M.H. (1996). Empathy: A social psychological approach. Oxford: Westview Press.

Di Blasi, Z., Harkness, E., Ernst, E., Georgiou, A. & Kleijnen, J. (2001). Influence of context effects on health outcomes: A systematic review. Lancet, 357, 757-762.

Duan, C. (2000). Being empathic: The role of motivation to empathize and the nature of target emotions. Motivation & Emotion, 24, 29-50.

Ferguson, E., Dodds, A., Flannagan, H., & Ng, L. (1995). Perceived control: Distinct but related levels of analysis. Personality and Individual Differences, 16, 425-432.

Ferguson, E., James, D., O'Hehir. F., & Sanders, A. (2003). A pilot study of the roles of personality, references and personal statements in relation to performance over the 5 years of a medical degree. British Medical Journal, 326, 429-431.

Fleiss, J.L. (1971). Measuring nominal scale agreement among many raters. Psychological Bulletin, 76, 378-382.

Försterling, F. (1985). Attributional retraining: A review. Psychological Bulletin, 98, 495-512.

Freeman, G.K., Horder, J.P., Howie, J.G.R., Hungin, A.P., Hill, A.P., Shah, N.C., & Wilson, A. (2002). Evolving general practice consultation in Britain: Issues of length and context. British Medical Journal, 324, 880-882.

General Medical Council (2001or 2 – check with Fi). Draft recommendations on undergraduate medical education. www.gmc-uk.org/med_ed/tomorrowsdoctors/index.htm

Gillotti, C., Thompson, T., & McNeilis, K. (2002). Communicative competence and the delivery of bad new. Social Science and Medicine, 54, 1011-1023.

Hakansson, J. & Montgomery, H. (2003). Empathy as an interpersonal phenomenon. Journal of Social and Personal Relationships, 20, 267-284.

Howie, J.G.R., Heaney, D.J., Maxwell, M., Walker, J.J., Freeman, G.K., & Rai, H. (1999). Quality at general practice consultations: Cross-sectional survey. British Medical Journal, 319, 738-743.

Hu, L., & Bentler, P.M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. Structural Equation Modeling, 6, 1-55.

Kipnis, D.S., Schmidt, K., Price, K., & Stitt, C. (1981). Why do I like thee? Is it your performance or my orders? Journal of Applied Psychology, 66, 324-328.

Leggett, J. & Silvester, J. (2003). Care staff attributions for male and female patient

behavior during restraint episodes: A field study. British Journal of Clinical

Psychology, 42, 393-406.

Levinson, W., & Chaumeton, N. (1999). Communication between surgeons and patients in

routine office visits. Surgery 125, 127-135.

Makoul, G. (2003). Communication skills education in medical school and beyond.

American Medical Association, 50, 79 – 84.

Marangoni, C., Ickes, W., Garcia, S. & Teng, G. (1995). Empathic accuracy in a clinically

relevant setting. Journal of Personality and Social Psychology, 68, 854-869.

Martocchio, J.J., & Judge, T. (1997). A relationship between conscientiousness and learning

in employee training: Mediating influences of self-deception and self-efficacy.

Journal of Applied Psychology, 82, 764-773.

Mercer, S. W., McConnchie, A., Maxwell, M., Mheaney, D., & Watt, G. C. M. (2005).

Relevance and practical use of the consultation and relational empathy (CARE)

measure in general practice. Family Practice, 22, 328- 334.

More, E. S. (1996). Empathy as a hermeneutic practice. Theoretical Medicine, 17, 243-254.

Mullen, P.D. (1997). Compliance becomes concordance. British Medical Journal, 314, 691.

Newton, B.W., Savidge, M.A., Barber, L., Cleveland, E., Clardy, J., Beeman, G. et al. (2000). Differences in medical students' empathy. Academic Medicine, 75, 1215.

Ong, L.M., de Haes, J.C., Hoos, A.M., & Lammes, F.B. (1995). Doctor-patient communication: a review of the literature. Social Science & Medicine, 40, 903-918.

Patterson, F., Lane, P., Ferguson, E. & Norfolk, T. (2002). Competency based selection system for general practitioner registrars. British Medical Journal, 323: S2-7311.

Peterson, C., Semmel, A., Baeyer, D., Abramson, L.Y., Metalsky, G.I. and Seligman, M.E.P. (1982). The attributional style questionnaire. Cognitive Therapy and Research, 6, 287-299.

Preston, S.D., & de Waal, F.B.M. (2002). Empathy: Its ultimate and proximate bases. Behavioral and Brain Sciences, 25, 1-72.

Silvester, J., Patterson, F. & Ferguson, E. (2003). Comparing two attributional models of performance in retail sales: A field study. Journal of Occupational and Organizational Psychology, 76, 115-132.

Stewart, M. (1995). Effective physician-patient communication and health outcomes: A review. Canadian Medical Association Journal, 152, 1423-1433.

Stiles, W., Putnam, S., Wolfe, M., & James, S. (1979). Interaction exchange structure and patient satisfaction with medical interviews. <u>Medical Care, 17</u>, 667-679.

Vincent, C., Young, M. & Phillips, A. (1994). Why do people sue doctors? A study of patients and relatives taking legal action. Lancet, 343, 1609-1613.

Weiner, B. (1995). Judgments of Responsibility: A Foundation for a Theory of Social Conduct. NY: Guildford Press.

West, C. (1984). Medical misfires: mishearings, misgivings and misunderstandings in physician-patient dialogues. Discourse Processes, 7, 107-134.

Footnote

1. General Practitioner [GP] is a UK term for family practitioner. This research was

conducted as part of the regional selection process for doctors applying for postgraduate GP

specialist training in the National Health Service [NHS].

Appendix A

Positive Outcome

You make a home visit to a patient recovering from chemotherapy. He seems very depressed, but after a little while he becomes brighter and talks with greater optimism about the future. When you leave he thanks you for coming and says that he will make a list of things that he most wants to do in the coming year.

Negative Outcome

During a routine examination of one of your elderly patients you discover he has been taking his wife's high blood pressure medicine, in the belief it would help him avoid a heart attack. You try to explain that this is not the case, but the patient becomes irate and claims that you are deliberately trying to worry him.

Table 1: Correlations between MAQ causal dimensions and assessor and patient empathy ratings.

	α	M	SD	r (A)	r (P)	M	SD	r (A)	r (P)	M	SD	r (A)	r (P)
		All Outcomes					**Positive Outcomes**				**Negative Outcomes**		
Stable	.52	3.16	.41	.20*	.09	3.21	.56	.25**	.10	3.10	.51	.01	.03
Global	.66	3.90	.36	.14	.14	3.96	.43	.09	.07	3.84	.43	.07	.17*
Internal-Doctor	.73	2.91	.55	.19*	.12	2.65	.67	.24**	.11	3.16	.67	.01	.08
Control-Doctor	.74	2.85	.53	.17*	.17*	2.77	.58	.17*	.14	2.93	.64	.17*	.15°
Internal-Patient	.61	2.31	.46	.05	.16†	2.39	.58	.17*	.21*	2.25	.56	.03	.04
Control-Patient	.52	2.77	.41	.06	.03	2.58	.48	.07	.02	2.96	.56	.03	.02

Note: N = 132, r (A) = correlation between MAQ causal dimension and assessor empathy ratings, r (P) = correlation with

Patient empathy rating. High scores = more stable, global, internal and controllable. * p < .05, ** p < .01, † p < .06, ° p < .08.

Table 2: Correlations between empathy ratings, physician attributions and behavioral indicators

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	.56	.60														
2. Age	30.32	7.74	.11													
3. ES (Assessor)	3.07	.98	.01	-.24												
4. ES (Patient)	8.49	2.15	.05	-.21	.45											
5. ICS+	12.12	1.57	-.13	-.04	.23	.21										
Behaviors:																
6. Closed qs.	14.15	9.63	-.03	.07	-.05	-.04	-.23									
7. Open qs.	1.66	1.32	.07	-.21	.17	.08	-.14	.26								
8. Responsibility	2.01	1.77	.10	-.03	-.23	-.14	-.07	-.13	-.02							
9. Action	7.18	4.46	-.07	.14	.22	.14	.05	.19	.05	-.21						
10. Positivity	7.58	4.84	-.04	-.03	.17	.29	.13	.07	.02	.01	.37					
11. Personal topics	3.82	3.27	.01	-.05	.28	.26	.17	.19	.18	-.15	.25	.38				
12. Interruptions	3.67	4.32	-.20	.20	-.04	.05	-.11	.24	-.03	.04	.06	.20	.25			
13. Missed cue	.70	1.04	.01	.02	-.26	-.31	-.16	.18	.12	.01	-.06	-.21	-.08	.05		
14. Summary	1.13	1.79	.04	-.03	-.03	.04	-.22	.39	.29	-.07	-.01	-.03	.18	.10	.27	
15. Procedure	21.70	10.55	-.03	-.04	.12	.21	.11	.07	.07	.06	.15	.07	.38	.22	-.04	.12

Notes: N=132 for variables 1-5, N=100 for behavioral variables 6-15, For N=132 correlations above $r = .20$ are significant at

$p < .05$. For N = 100 correlations above $r = .22$ are significant at $p < .005$ (all 2-tailed Pearsons). ES = empathy ratings made

by assessors or by patients, ICS+ = a composite attribution score [Internal-D + Control-D + Stable]. High scores represent

higher levels of empathy and more internal, controllable and stable attributions for positive patient outcomes.

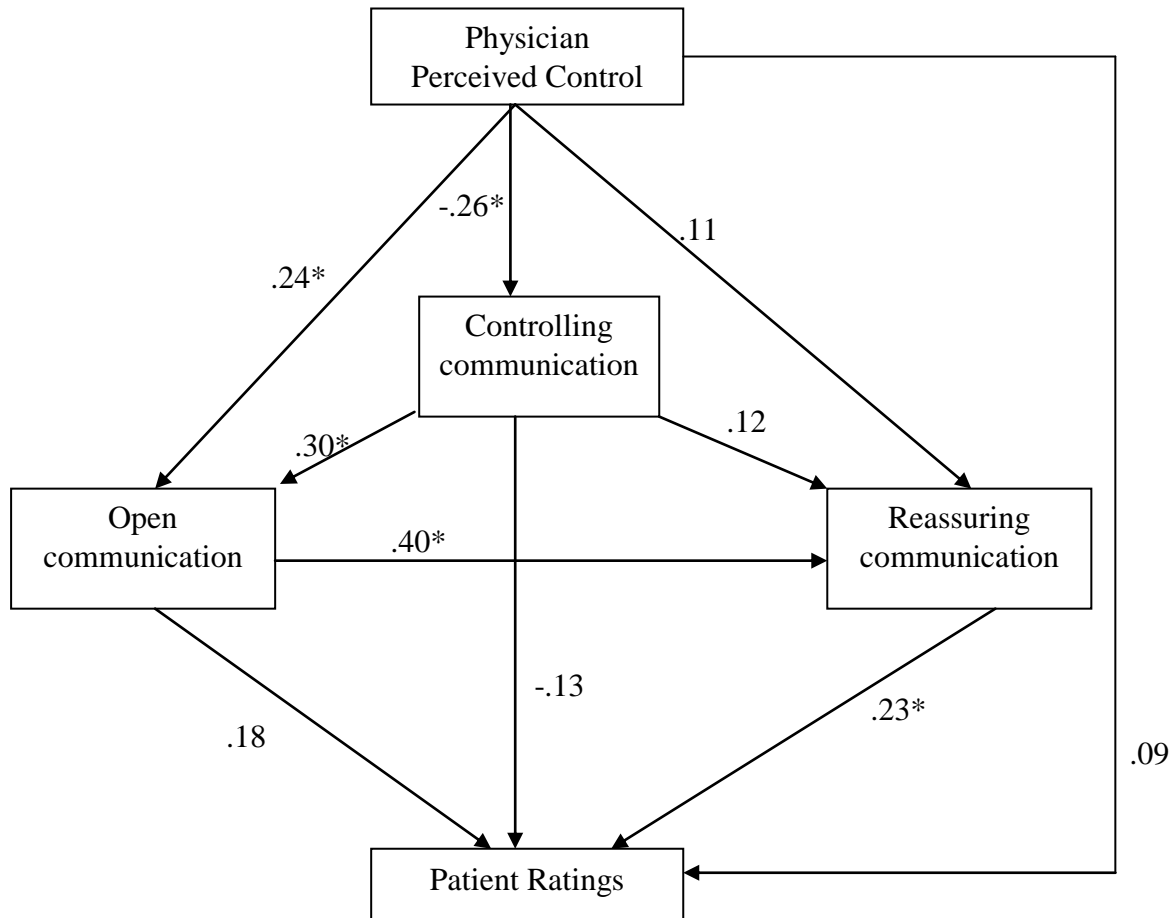Figure 1 - Structural model for patients' ratings of empathy.

Figure 2 – Structural model for assessors' ratings of empathy.