

Differences between GP perception of delivered empathy and patient-perceived empathy:

a cross-sectional study in primary care

Abstract

Background

Empathy has positive effects on a range of healthcare outcomes. It is therefore an important skill for a GP. However, the correlation between GP perception of delivered empathy and patient perception of GP empathic communication during consultations is still unclear.

Aim

To investigate the correlation between GP perception of delivered empathy and patient-perceived empathy.

Design and setting

Cross-sectional study in primary care in the Netherlands, between December 2016 and February 2017.

Method

GPs and their patients were asked to fill in an empathy questionnaire directly after a consultation. Patient perception of received empathy during the consultation was measured through the Dutch version of the Consultation and Relational Empathy (CARE) questionnaire. GP perception of delivered empathy during the consultation was measured with an adapted version of the CARE questionnaire.

Results

The authors obtained questionnaires from 147 consultations by 34 different GPs in 16 primary care practices. A total of 143 consultations were eligible for inclusion in the analysis. Mean patient-perceived empathy score was significantly higher than mean GPs' empathy score (42.1, range 20.0 to 50.0 and 31.6, range 24.0 to 41.0, respectively, $P < 0.0001$). Furthermore, a low correlation ($r = 0.06$) was found between GP empathy score and patient-perceived empathy score.

Conclusion

GPs rate the delivered empathy during consultations consistently and significantly lower than their patients experience empathy during consultations. Moreover, GPs' impressions of the empathy delivered during the consultation do not predict the actual amount of empathy perceived by their patients. Patients experience a great deal of empathy during their clinical encounter. GPs' self-reports on empathy delivered gives an inaccurate reflection, and underestimates patient-perceived empathy.

Keywords

consultations; empathy; general practitioners; patient perceptions; questionnaires.

INTRODUCTION

Physician empathy is widely acknowledged as an important factor in patient care, particularly in primary care.¹⁻³ Empathy has mostly been defined as *'the competence of a physician to understand the patient's situation, perspective, and feelings; to communicate that understanding, and check its accuracy; and to act on that understanding with the patient in a helpful therapeutic way'*.^{2,4} It is therefore considered as having an affective, cognitive, and behavioural component, and refers to physicians' understanding of the patient as a person.^{2,4}

Over the years, a growing body of research reported that empathy is a pillar of the physician-patient relationship, and positively associated with healthcare outcomes. An empathic communication style from a physician results in more patient satisfaction,⁵⁻⁷ a better physician-patient relationship,^{1,8} less symptom reporting by patients, less concern in patients, and an increase in patient participation, enablement, and education. Consequently, it has positive effects on diagnostic accuracy^{1,4} and therapeutic and medication adherence.^{1,4,9-11} Due to its complexity and multidimensionality, more knowledge and understanding of empathy, as reported by the physician as well as perceived by the patient, is crucial for the determination of contextual factors that contribute to positive clinical outcomes.^{4,12,13}

Previous investigations have used several

available instruments for assessment of empathy.¹³ Measurement of empathic communication can be self-reported by physicians, independently and objectively observed by others, or judged subjectively by the patient. Most research on empathy has focused on the student or physicians' point of view, whereas the patient's perspective on the topic has been investigated relatively rarely.^{4,14,15} And when patients' perception of physician empathy is the focus of research, measurement scale psychometrics are frequently its goal, rather than its effectiveness.^{14,16-19} Studies have used physician, student self-report measures, or observers more often than patients to assess empathy, with a tendency to separate it from the clinical context in which empathy is developed and practised.^{4,13} Therefore, the results of these studies should be interpreted with caution, as it is not known whether self-reported or observer-reported empathy reflects the amount of empathy patients experience in the clinical consultation. Furthermore, empathy increases with clinical experience.^{17,20}

Though differences^{21,22} and correlation¹⁸ between physician and medical student self-reported empathy and patient-perceived empathy have already been shown, few studies looked at self-reported empathy directly linked to the specific clinical consultation in which empathy was practised. Moreover, few attempts were made to actually compare patients' versus physicians' empathy perceptions of the

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How this fits in

Empathy is considered a key element in patient care. Studies on empathy are often based on self-reports outside medical practice. This study includes physicians' and patients' concrete experiences and interpretations of empathy within the medical context. There are differences between GPs and their patients in the perception of GP empathy.

same clinical encounter. Empathy as a key concept in a physician–patient engagement is the communication of empathic understanding, concrete experiences, and interpretation between doctor and patient.¹³ It is therefore of paramount importance to compare and examine the agreement between patient and physician perception of empathy. This study aims to examine the level of agreement between GP perception of delivered empathy and patient-perceived empathy in primary care consultations.

METHOD

Study design and setting

A cross-sectional study was conducted in 16 primary care practices in the Netherlands. One of the researchers was present at participating practices from December 2016 to February 2017 to collect data from consultations between GPs and their patients. Consultations were

randomly assigned to the study in advance, without GPs' knowledge, with emergency consultations and home visits excluded for practical reasons. Patients were asked by their GP to participate in the study at the end of the consultation. This prevented them from focusing more on empathy than they usually would during a consultation. If the patient agreed to participate, the researcher informed both the GP and patient whether their consultation had been assigned to the study, and if it had been they were consequently asked to fill in the questionnaire. A maximum of five consultations were included per GP. Patients and GPs filled in the questionnaires separately, directly after the consultation.

Subjects

GPs were recruited within the network of the researchers, and by using snowball sampling. There were no exclusion criteria for GPs. All patients who were aged ≥ 18 years and spoke Dutch during the consultation were eligible to participate.

In order to find an estimated mean difference of 5 with a standard deviation (SD) of 5, an α of 0.05, and power of 0.80, 34 consultations were needed for a reliable study sample. This analysis, a power calculation, assumes a different patient and GP during every consultation. In practice, a different patient was used in every consultation, with GPs included in a maximum of five different consultations. Using one GP for multiple consultations could bias the data, considering the possible differences between GPs, their levels of empathy, and their views on their own empathy levels. Therefore, the authors aimed to include as many GPs as possible, with the intention of including 34 different GPs.

Measurements

The Dutch version of the Consultation and Relational Empathy (CARE) measure was used for patients (Box 1).¹⁹ This five-point Likert scale (1 = poor to 5 = excellent) questionnaire contains 10 questions regarding aspects considered to be a component of empathy, and is derived from the original CARE measure. Empathy is defined as outlined in the introduction. The original CARE measure is an English patient-assessed questionnaire, developed with feedback from patients obtained from in-depth interviews, and is a validated questionnaire for measuring patients' perceptions of relational empathy in consultations in general practice.^{23,24} It has previously been translated into Dutch using

Box 1. CARE measure for patients

How good was the practitioner at ...

- 1) Making you feel at ease**
(Introducing him/herself, explaining his/her position, being friendly and warm towards you, treating you with respect; not cold or abrupt)
- 2) Letting you tell your 'story'**
(Giving you time to fully describe your condition in your own words; not interrupting, rushing, or diverting you)
- 3) Really listening**
(Paying close attention to what you were saying; not looking at the notes or computer as you were talking)
- 4) Being interested in you as a whole person**
(Asking/knowing relevant details about your life, your situation; not treating you as 'just a number')
- 5) Fully understanding your concerns**
(Communicating that he/she had accurately understood your concerns and anxieties; not overlooking or dismissing anything)
- 6) Showing care and compassion**
(Seeming genuinely concerned, connecting with you on a human level; not being indifferent or 'detached')
- 7) Being positive**
(Having a positive approach and a positive attitude; being honest but not negative about your problems)
- 8) Explaining things clearly**
(Fully answering your questions; explaining clearly, giving you adequate information; not being vague)
- 9) Helping you to take control**
(Exploring with you what you can do to improve your health yourself; encouraging rather than 'lecturing' you)
- 10) Making a plan of action with you**
(Discussing the options, involving you in decisions as much as you want to be involved; not ignoring your views)

CARE = Consultation and Relational Empathy.

translation and back-translation by native speakers. A recent study has investigated the psychometric properties of the translated version, with promising results regarding validity and reliability in general practices.¹⁹ The authors expanded the questionnaire by including questions regarding sex, age, and delays in consultation time.

The authors also adapted the Dutch CARE measure to ask GPs' opinions about the empathy they delivered during the consultation (Box 2). GPs and patients were therefore asked the same questions so as to compare their answers. Questions about sex, years of working experience, and reason for consultation were added to the questionnaire for GPs.

Statistical analysis

Both questionnaires were scored as described elsewhere.^{23,24} Adding the scores of all 10 items provides a score between 10 and 50. 'Not applicable' responses or missing values were replaced with the average score for the remaining items, with a maximum of two responses per questionnaire.^{23,24} Questionnaires with more than two 'Not applicable' responses, or missing values, were removed from the analysis. Because the aim was to compare scores between patients and GPs per consultation, removing one of the questionnaires led to the removal

of that consultation from further analyses.

After calculating the difference between the sum score of GP and patient for every consultation, the authors used a random-effects model (mixed model) to test the difference. The authors considered the study to be a test-retest design. Therefore, a two-way mixed intraclass correlation coefficient (ICC) was calculated for comparing answers between GPs and patients, using the absolute-agreement definition based on a single-rater definition.²⁵ The authors chose the absolute-agreement definition because, in their sample, different raters (GP, patient) were assigned the same score (CARE measure) to the same subject (empathy).

One-way analysis of variance (ANOVA) was used to see if one GP in multiple consultations could have influenced the outcome. ICC estimates and their 95% confidence intervals (CIs) were calculated using statistical package version IBM SPSS Statistics 24.

RESULTS

Subject characteristics

Data from 147 consultations were collected in 16 practices, from 34 different GPs. Using snowball sampling when recruiting GPs allowed the authors to include GPs unknown to them, assigning a mixture of academic and non-academic GPs. One or more 'Not applicable' responses were given in 43 consultations (29.3%), of which 24 were from GP questionnaires (16.3%) and 23 from patient questionnaires (15.6%).

In four cases, too much data was missing from the questionnaire to allow for inclusion, leaving 143 consultations for further analysis. Characteristics of consultations and participants are shown in Table 1.

Primary outcomes

The mean self-reported score of GPs was 31.6 [standard deviation [SD] 4.2], with a range between 24.0 and 41.0. The mean patient score for the CARE measure was 42.1 (SD 7.0), and ranged between 20.0 and 50.0. GPs rated themselves significantly lower than their patients rated them, with a mean difference of 10.6 (95% CI = 9.3 to 11.8) ranging from -7.0 to 24.0.

According to the GPs, the self-reported empathy delivered was lower than the patient-reported perceived empathy in 131 of the 143 consultations.

Intraclass correlation coefficient between the scores of GPs and their patients was 0.06 (95% CI = -0.52 to 0.19, $P=0.023$), showing a low reliability between the two scores, meaning that there is little agreement in this study between the scores

Box 2. Reformulated questionnaire for GPs

How good were you at ...

- 1) Making your patient feel at ease**
(Introducing yourself, explaining your position, being friendly and warm towards your patient, treating your patient with respect; not cold or abrupt)
- 2) Letting your patient tell his/her 'story'**
(Giving him/her time to fully describe his/her condition in his/her own words; not interrupting, rushing, or diverting him/her)
- 3) Really listening**
(Paying close attention to what your patient was saying; not looking at the notes or computer as he/she was talking)
- 4) Being interested in your patient as a whole person**
(Asking/knowing relevant details about his/her life, his/her situation; not treating your patient as 'just a number')
- 5) Fully understanding your patient's concerns**
(Communicating that you had accurately understood his/her concerns and anxieties; not overlooking or dismissing anything)
- 6) Showing care and compassion**
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- 9) Helping your patient to take control**
(Exploring with your patient what he/she can do to improve his/her health him/herself; encouraging rather than 'lecturing' him/her)
- 10) Making a plan of action with your patient**
(Discussing the options, involving your patient in decisions as much as he/she wanted to be involved; not ignoring your patient's views)

Table 1. Subject characteristics

Characteristics	n (%)
Sex of patients, n= 143	
Male	60 (42.0)
Female	83 (58.0)
Age, years	
18–24	12 (8.4)
25–64	86 (60.1)
≥65	45 (31.5)
Sex of GPs, n= 34	
Male	15 (44.1)
Female	19 (55.9)
Working experience, years	
<10	11 (32.4)
10–20	9 (26.5)
>20	14 (41.2)
Consultations, n= 143	
Reason for consultation	
Physical	101 (70.6)
Psychosocial	8 (5.6)
Both physical and psychosocial	34 (23.8)
Delay in consultation time	
None	51 (35.7)
5–15 minutes	70 (49.0)
>15 minutes	22 (15.4)

of GPs and patients on empathy in primary care consultations.

Correction for using one GP in multiple consultations

ANOVA analysis showed a variance in the mean difference between GPs ($P=0.003$), suggesting that some GPs may be better at estimating the amount of empathy their patients experience than others. However, looking at the means of the consultations per GP, all participating GPs rated themselves lower than their patients did (range 3.0 to 21.3).

Taking into account the possible influences of using a single GP in multiple consultations, the authors recalculated the t-test using a random-effects model (mixed model). This model showed a mean difference of 10.64 [95% CI = 9.0 to 12.27].

Correction for possible confounders

Accounting for multiple measures from a single GP, and also correcting for all measured variables together, the authors found no statistical differences for any of the following possible confounders: reason for consultation ($P=0.66$), delay in consultation time ($P=0.41$), age of the patient ($P=0.54$), sex of the patient ($P=0.44$), sex of the GP ($P=0.53$), and years of working experience ($P=0.12$). Descriptive statistics of these variables are shown in Table 2.

DISCUSSION

Summary

To the best of the authors' knowledge, this is the first study primarily aimed at exploring the level of agreement between physician self-reported and patient-experienced empathy in individual consultations in general practice. GPs in this cross-sectional study rate themselves consistently and significantly lower on empathy than their patients did. Moreover, the weak correlation between answers of GPs and their patients shows that patients and GPs differ substantially on the level of agreement. The poor agreement means that questioning GPs only on empathy in primary care consultations would not be sufficient to estimate patients' perceptions. The authors can, however, conclude that GPs are generally being found to be empathic by their patients.

Strengths and limitations

A major strength of this study is that both GPs and their patients were questioned on empathy in specific consultations, particularly because both were asked the same questions, allowing answers to be

compared. A further strength is that patients were not aware of the study during the consultation itself and therefore did not focus on their physician's empathy more than usual. Validity of the Dutch version of the CARE measure has recently been established,¹⁹ and also previous research investigating its psychometric properties showed promising results regarding validity and reliability.¹⁹ Moreover, the CARE measure is a widely used questionnaire to examine patient perception of physician empathy in other countries,^{24,26,27} suggesting that it is a proper instrument of measurement for this study.

A few limitations should be noted. Although the authors strictly reformulated the validated Dutch CARE measure into a GP perspective, this modified questionnaire has not been validated. Another possible limitation is the fact that physicians were aware of the content of the study in advance, which could have caused them to put more effort into being empathic, and therefore could have raised patient scores. The authors tried to minimise this possible bias by not telling participants whether a consultation would be evaluated until after the consultation. Furthermore, since the patients' scores on the CARE measure are similar to other studies using this questionnaire, it seems that this possible bias has had either no effect, or limited effect, on their answers.

Comparison with existing literature

Patients' high ratings of their physician's empathy in this study (mean 42.1, $SD\pm 7.0$) are consistent with those of the study examining the psychometric properties of Dutch CARE measure (mean 40.5, $SD\pm 7.4$),¹⁹ and a study investigating the relevance and practical use of the original CARE measure (mean 40.8, $SD\pm 8.8$).²⁴ Although this was not the authors' primary outcome, it suggests that the patients' results in this study are representative of primary care patients. Moreover, these results show that, although some research finds a decline in physician empathy after finishing medical school,²⁸ physicians are still being found empathic by their patients.

The low correlation between empathy scores of GPs and their patients are consistent with the findings in another study in a primary care setting, which found that patient perception of physician empathy was not a significant predictor of physicians' self-reported empathy.²⁹ However, the study only compared mean scores of groups of physicians with those of patients, whereas the authors looked specifically at individual

Table 2. Descriptive statistics of outcomes split by group

	Number	GP score	Patient score	Mean difference	SEM	SD
Patients, n = 143						
Sex						
Male	60	31.75	41.12	9.37	0.99	7.68
Female	83	31.42	42.86	11.44	0.78	7.13
Age, years						
18–24	12	29.75	40.63	10.88	1.65	5.73
25–64	86	31.76	43.18	11.43	0.74	6.84
≥65	45	31.65	40.50	8.85	1.29	8.62
GPs sex and number of patients seen						
Male	67	32.12	41.47	9.35	0.88	7.22
Female	76	31.06	42.70	11.65	0.86	7.46
GPs working experience in years and number of patients seen						
<10 years	41	31.06	43.89	12.83	0.99	6.34
10–20 years	38	30.74	42.54	11.80	1.19	7.31
>20 years	64	32.35	40.75	8.39	0.95	7.61
Consultations, n = 143						
Reason for consultation						
Physical	101	31.41	41.69	10.28	0.75	7.53
Psychosocial	8	32.81	46.29	13.48	1.92	5.44
Both physical and psychosocial	34	31.69	42.44	10.75	1.28	7.49
Delay in consultation time						
None	51	31.73	43.12	11.38	1.04	7.41
5–15 minutes	70	31.35	41.98	10.64	0.91	7.59
>15 minutes	22	31.80	40.29	8.49	1.44	6.76

SD = standard deviation. SEM = standard error of the mean.

herself to be so in some of the questioned subjects. Patients, on the other hand, might be more likely to give their GP 'excellent' scores if they highly appreciate their GP in general. It is most likely a combination of these factors that causes GPs to score themselves lower than their patients score them. The poor level of agreement found between GPs and their patients suggests not only that GPs generally rate themselves lower, but also that there is a discrepancy between their answers. In other words, higher GP scores do not predict higher patient scores, and vice versa. The authors have no explanations for these findings.

Implications for research and practice

The results of this study show that GPs and their patients disagree to some extent on the level of empathy during consultations. Physicians should be made aware of this disagreement to give them more confidence in their empathic skills. Given the therapeutic effects of empathy in the clinical encounter, GPs' trust in their own empathic skills might result in even better person-centred communication and further enhancement of quality of care. Where improvements in physician empathy are required, the use of interventions has proven to be a good method.²⁸

Both the discrepancies and the differences found in this study show that studies using self-reporting to rate physician empathy may not accurately reflect actual patient-perceived empathy, and might therefore provide inaccurate results regarding physician empathy, and consequently its effectiveness. This might also apply to other methods where patients are not asked to rate physician empathy, such as the use of observers, for example, in the GP residency training programme. Questioning patients themselves about their physicians' empathy seems the most reliable and accurate way to examine empathy and its effectiveness in the clinical encounter. Further research using qualitative methods should be conducted to find explanations for the different answers of GPs and patients. Moreover, research on the consequences of using different perspectives in studying the effects of empathy is needed.

physician–patient consultations. Another study examined physicians' ability to estimate patient satisfaction in patients with cancer, indicating that physicians generally underrate patient satisfaction.³⁰ Considering the importance of physician empathy in patient satisfaction,⁶ the authors' results are in line with those findings. GPs might underestimate their empathic skills and therefore rate themselves lower than their patients. This might be due to a sense of modesty or insecurity on the part of the physician. For example, some of the participating GPs mentioned their insecurity to the visiting researcher about whether their patients found them empathic, even though some were rated 'perfectly empathic' by their patient. Another explanation might be that GPs find it difficult to rate themselves as being 'excellent'. One of the GPs explained that she did not want to rate herself 'excellent' on paper, although she found

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Competing interests

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