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Short communication

Exploring patient-centeredness: The relationship between self-reported empathy and patient-centered communication in medical trainees

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ABSTRACT

Objective: To explore the relationships between self-reported Empathy and the patient-centered communication patterns of physician trainees.
Methods: "Eighty-four 3rd year medical students completed the Jefferson Scale of Empathy (JSE – student version) and had recordings of a single OSCE analyzed using the Roter Interactional Analysis System (RIAS). Correlation and regression were employed to explore the relationships among JSE total score, 3 JSE subscales, 10 composite codes of provider communication, and a summary 'patient centered communication' ratio, reflecting the balance of psychosocial and emotional to biomedical communication of the simulated patient and student.
Results: Results indicate that controlling for other elements of student communication, the RIAS composite of codes reflecting 'emotional responsiveness' (characterized by empathy statements, legitimization, showing concern, partnership statements and medically relevant provider self-disclosure) was positively related to the JSE Total Score while student 'question asking' and 'biomedical counseling' were negatively related to the JSE Score. RIAS-coded communication variables accounted for 32.4% of the JSE Total score.
Conclusion: The relationship between student expressions of emotional responsiveness and predicted self-reported empathy provides concurrent validation evidence for the JSE.
Practice implications: Further research is needed in order to elaborate and further explore a Patient-Centeredness latent variable.

1. Introduction

1.1. Patient-centered communication

Patient-centeredness is widely regarded as a core indicator of quality care [1] and although the conceptualization of patient-centeredness continues to evolve in the empirical literature [2], patient-centered communication is a well-established concept and critical component of care [3] that has been called the 'royal road' to patient-centered medicine [4]. Evidence supports a relationship between patient-centered communication and clinical outcomes [5] as well as greater patient satisfaction and perceived quality of care [6].

The Roter Interactional Analysis System (RIAS) is widely used quantitative method for coding medical interaction and characterizing patient-centered communication. Based in a theoretical model of reciprocity [7], the RIAS system quantitatively assigns every statement expressed by all speakers in the medical interaction into mutually exclusive and exhaustive code categories. A subset of the provider-talk codes is 'emotional responsiveness', including codes reflecting the expression of concern, reassurance, partnership, and empathy [7]. These are often recognized elements of patient-centered communication and are communication behaviors that have been used as a proxy for empathy in other reports [2].

There is an abundance of research on 'clinical empathy' – its definition [8] as well as its hypothesized and observed outcomes [9]. It has been suggested that empathy could be a pathway through which patient-centeredness impacts patients and ultimately patient outcomes – by strengthening the therapeutic alliance [10]. Two types of empathy are supported, an affective and

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a cognitive version. The cognitive representation of empathy is embodied in the Jefferson Scale of Empathy (JSE), a common tool in research and in the clinical training of healthcare providers [11]. Scores on the JSE have been shown to predict some chronic disease outcomes [12,13].

On the basis of this evidence suggesting a relationship between empathy and patient-centered communication, we explored the relationship between 3rd year medical students' self-reported empathy and their verbal performance during an objective structured clinical exam (OSCE) in which communication was coded from audio tapes of the interactions. To our knowledge, this is the first study directly examining the communication of medical students in relationship to their self-reported empathy.

2. Method

2.1. Participants

We randomly sampled 96 3rd year medical students who were participating in an OSCE at the end of a 3rd year Family and Community Medicine clerkship. The OSCE was an approximately 15 min encounter focused on colon cancer screening. Eighty four of the sampled students (87%) provided both a JSE score and a had their OSCE coded with the Roter Interactional Analysis System (RIAS). Participants included 51 females (61%) ranging from 22 to 34 years old (*M*age = 25.79, *SD* = 2.17). 57% were White and 32% were Asian. Data were merged and de-identified by a third party, and the study received IRB approval.

2.2. Measure – empathy

We used 20-item The Jefferson Scale of Empathy (student version) [12]. Factor analytic studies of the JSE confirm it to be comprised of 3 underlying dimensions used as subscales: "Walking in the Patient's Shoes', 'Compassionate Care', and 'Perspective Taking' [14].

2.3. Measure – communication

The RIAS was used to derive variables related to the student's communication with a simulated patient during the OSCE. The RIAS employs a systematic approach to the coding of medical dialogue with well-documented reliability and predictive validity [15]. RIAS assigns one of 37 mutually exclusive and exhaustive categories to each complete thought expressed by either the clinician or the patient – these codes consist of conversational elements such as 'showing agreement, "asking open-ended or close-ended questions", empathy statements', and 'legitimization statement' (as examples of the 37 total codes). These codes are combined into composite scores – See Table 2 for the 10 provider level composites investigated in this study.

We also explored the RIAS summary 'patient-centered score" computed as a ratio of code composites that reflect emotional and psychosocial exchange in the numerator relative to a denominator that is characterized by medical condition, treatment and procedural exchange. The ratio is interpreted as the balance between the patients' lived experience and its expression in emotional, psychosocial and lifestyle terms and the biomedical paradigm of medicine [16].

2.4. Analysis

Descriptive statistics were calculated for all variables. We undertook 2 analyses in this data to explore the relationships among the visit dialogue elements and the self-reported empathy variables. First, the bivariate correlations among all the measured variables were computed to identify significant bivariate associations within the set of variables. Then we conducted a linear regression predicting the JSE Total Score from the 10 RIAS composites, entering all the predictors in one block to assess their individual influences controlling for the presence of the others (model 1). As a follow-up, we conducted a regression predicting the JSE Total Score from the same 10 RIAS predictors, but controlling for the total patient-centeredness composite by entering it in a separate block in order to completely isolate the effects of the individual RIAS composite predictors by controlling for codes that include both provider and patient elements of the dialogue. Analyses were conducted in SPSS ver. 24.0.

3. Results

Descriptive Statistics are presented in Table 1. Neither the JSE total score or the RIAS patient-centered communication composite differed between men and women. No other covariates were collected in this study.

The correlational analysis yielded 9 significant associations among the variables (Table 2). The correlation between the JSE empathy total score and the patient-centered communication RIAS composite was significant and indicated that 10.9% of the co-variability was accounted for.

The regression analysis predicting the JSE total from the 10 RIAS composites was significant, $F(10, 71) = 3.34$, $p < .01$. Of the 10 RIAS composites, 3 were significant predictors of the empathy score: data gathering-psychosocial, patient education and counseling-biomedical, and emotional responsiveness. R-squared for the model was 0.224. See Table 3. The follow up analysis controlling for the patient-centeredness composite was also significant, and was only different in that the biomedical counseling variable was non-significant.

4. Discussion & conclusion

In this study we explored the relationships among trainee physician communication patterns and the self-reported empathy of the same trainees. Correlational results indicated a modest, statistically significant relationship between overall patient-centered communication variable coded with the RIAS and the 'Empathy Total' score from the JSE, with about 11% common variance. The only other significant bivariate relationship with the JSE Empathy Total score was obtained with the RIAS physician composite 'emotional responsiveness', with an R^2 of almost 13%. Because this is the composite which includes codes related to empathy and legitimization statements, providing reassurance, partnership statements, and medically-relevant physician self-disclosure, this finding provides concurrent validation evidence for the JSE by suggesting that these trainees are engaged in conversational patterns consistent with their self-rated levels of empathy. Consistent with this interpretation is the finding that the JSE subscales 'compassionate care' and 'perspective taking' were also significantly related to the patient-centered communication variable, while the 'Walking in the Patient's Shoes' subscale was not.

Table 1
Descriptive Statistics for Primary Study Variables.

JSE Subscale	Mean (SD)	Observed/Possible Range
Perspective Taking	58.73 (7.2)	43–70 (36–70)
Walking in the Patient's Shoes	9.73 (2.7)	2–14 (2–14)
Compassionate Care	48.83 (4.9)	31–56 (30–60)
Empathy Total Score	115.77 (9.6)	94–140 (20–140)
Patient-Centered Communication	0.61 (0.19)	0.22–1.27

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