Improving empathy of physicians through guided reflective writing

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Abstract

Objectives: This study was designed to explore how guided reflective writing could evoke empathy and reflection in a group of practicing physicians.

Methods: Total participants recruited included 40 staff physicians at Cleveland Clinic, a tertiary care academic medical center. Twenty physicians (intervention group) were assigned to participate in a 6-session faculty development program introducing narrative medicine and engaging in guided reflective writing. Ten physicians (comparison group 1) received the assigned course reading materials but did not participate in the course sessions. Ten physicians (comparison group 2) neither received the reading materials nor participated in the sessions. Qualitative analysis of the physicians' reflective writings was performed to identify major themes. The Jefferson Scale of Empathy was administered three times during the course.

Results: Qualitative analysis of physicians' writings showed themes of both compassionate solidarity and detached concern. Exploration of negative emotions occurred more frequently than positive ones. The most common writing style was case presentation. A total of 36 staff physicians completed the Jefferson Scale of Empathy. Results of statistical analysis suggested an improvement in empathy in the intervention group at the end of the course (p < 0.05).

Conclusions: These results suggest a faculty development program using guided narrative writing can promote reflection and may enhance empathy among practicing physicians. These findings should encourage medical educators to design additional strategies for enhancing reflection and empathic behavior in trainees and specifically practicing physicians who can role model these behaviors to achieve the ultimate goal of improving the quality of patient care.

Keywords: Empathy, reflection, communication, professionalism, faculty development

Introduction

Effective physician-patient communication is recognized as a critical component of health care quality. Patient Centered Communication Standards have been established by the Joint Commission in 2011. In a recent meta-analysis, Zolnierek and DiMatteo reported a 19% higher risk of nonadherence in patients whose physicians had poor communication skills. Malpractice claims have been shown to be affected by communication skills in primary physicians. Efforts to improve physician communication advance basic tenets of medical professionalism that focus on patient welfare, social justice and healthcare quality. Empathic communication, the skill of understanding the patient’s perspective, is an important aspect of the physician-patient relationship. Hojat has defined empathy as "a predominantly cognitive attribute that involves an understanding of experiences, concerns and perspectives of
The key feature in conceptualization of empathy in patient care is understanding patients’ concerns and problems. Based on this notion, one can assume that any activity that can contribute to improving physicians’ understanding of the patient—including reflective writing—can potentially enhance empathic understanding in the context of patient care. We designed this study to explore how guided reflective writing exercises during a six-session faculty development program could evoke empathy and reflection in a group of practicing physicians. We used qualitative analysis of physicians’ writings as well as quantitative assessment of empathy.

**Methods**

**Participants**

Total participants recruited included 40 staff physicians at Cleveland Clinic, a tertiary care academic medical center. This included 20 physicians in the intervention group and 10 physicians in each of 2 comparison groups. A sample of 20 physicians who responded to our recruitment letter and agreed to participate in the training program was considered the intervention group. One of these physicians originally selected as part of the intervention group was unable to participate in any of the sessions, thus the final number in the intervention group was 19.

We selected two comparison groups of 10 physicians in each group from the list of those who expressed interest in participation. Attempts were made to match the groups by gender, age, and specialty. We successfully matched two comparison groups based on gender, age, and specialty, but such group matching for the intervention group was not possible due to the volunteer nature of participation and limited number of volunteers. Thirty-six staff physicians (50% women, n=18) completed the Jefferson Scale of Empathy (JSE).

**Instrument**

The JSE, Version HP (for administration to physicians and other health professionals), was used as pre- and post-tests to evaluate the outcomes of the course. Evidence in support of the JSE’s construct validity, criterion-related validity, predictive validity, internal consistency reliability, and test-retest reliability has been reported. We selected two comparison groups based on gender, age, and specialty, but such group matching for the intervention group was not possible due to the volunteer nature of participation and limited number of volunteers. Thirty-six staff physicians (50% women, n=18) completed the Jefferson Scale of Empathy (JSE).

**Procedures**

The study protocol (number 09-918) was approved by the Institutional Review Board of Cleveland Clinic. Physicians were recruited to participate in the study through an e-mail message that was sent twice at an 8-week interval to all professional staff (n=2314) at Cleveland Clinic. In this e-mail message we indicated that a 6-session course would be
offered as part of a faculty development program in narrative skills training and reflective writing that required participation for a duration of 9 months and was eligible for continuing medical education credit. Physicians were given an option to participate as a member of comparison groups if participating in the faculty development program was not possible.

Physicians in the intervention group participated in six training sessions from March 2010 to December 2010. Participants engaged in reflective writing during each session in small groups with 4-5 participants and 1 group leader with experience in medical education and from the project team (AMH, JHI, ALH, LC, and MK).

The first three training sessions included an introduction to reflective writing and narrative medicine, the patient experience of pain and suffering, and empathy across cultural barriers. The last three sessions included the use of literature in empathic understanding, empathic communication of treatment plans/health literacy and the use of mindfulness to improve both quality of care and empathic engagement in patient care. Sessions 1 and 6 were four hours in duration and the remaining sessions were two hours each. Pre-reading course materials were assigned to the physicians in the intervention group prior to sessions 2 through 6, and they were asked to write a reflective piece based on the reading materials and a writing prompt (see Appendix #1). Participants were given the option to submit copies of their pre-session as well as in-session reflective writings for qualitative analysis of themes. The participants selected a numeric code to label their writings.

Physicians in the comparison group 1 received the pre-reading course materials as well as the pre-session writing prompt, but did not participate in the sessions. Of note, there was also no requirement to report whether the materials were indeed reviewed. Physicians in comparison group 2 neither received the pre-reading materials nor participated in the sessions.

Data analysis
Because of the small sample size we used nonparametric (van der Waerden) methods to examine the significance of differences between groups on the JSE using Statistical Analysis System (SAS, version 9.1 for Windows) Software. For the qualitative analysis, unedited writings submitted by course participants in the intervention group were reviewed and coded by project team members (AMH, KKP, and MK). Analytic methods associated with grounded theory were used to develop the coding scheme through an iterative process. We independently read the reflective writings and identified themes using open coding. As additional writings were read, new codes were identified and the original codes were revised and expanded. As codes evolved, additional writings were analyzed to challenge, expand, and refine the categories. The final coding scheme was then applied to the entire set of reflective writing pieces.

When codes assigned differed between coders, differences were discussed until consensus was reached and the consensus code was assigned to that written piece.

The project team was also guided by previous research in identifying how to code the reflective writings. For example, the team sought to identify the conceptual framework found within the written pieces using Coulehan's dimensions of "compassionate solidarity" or its absence which was coded as "detached concern." The other coding categories including emotional tone, perspective, setting, and writing style were informed by the reflective writings themselves.

The JSE was also reviewed for underlying themes to guide our qualitative analysis. We incorporated assessment of emotions in the writings (conceptual framework: detached concern vs. compassionate solidarity, emotional tone: negative vs. positive) as well as perspective of the writer, the setting in which the narrative story took place as well as the writing style. Each writing was coded along five dimensions: conceptual framework, emotional tone, perspective taking, setting, and writing style (see Appendix #2 for coding scheme). In the descriptions that follow, verbatim quotations provide examples of text classified within those categories.

Results
Qualitative analysis
The 19 physicians in the intervention group submitted a total of eighty-two reflective writing pieces which were analyzed. An additional 14 pieces written during session 6 addressed “final thoughts” about the program and focused more on course evaluation thus they were excluded from the formal analysis. The number of written reflections submitted by session ranged from a low of 6 (session 4) to a high of 24 (session 2) counting those written both before and during the sessions.

Each writing was coded to identify whether the writing expressed compassionate solidarity with the situation described in the piece or detached concern. About half, altogether 42 (51%) were coded as expressing compassionate solidarity i.e. "Acknowledging a patient as a person-a person with a name, with feelings, desires and fears, accomplishments- reassures a patient that their personhood is not forgotten in the search for the body’s cure". Forty-nine percent of the writings reflected detached concern. One physician writes "If we let our messy and muddy sentiments rise to the forefront during the patient encounter...how can we effectively focus on the patient’s emotions...?" One writing was categorized as ‘unable to discern’ and was excluded from analysis. No relationship was found across sessions among the frequencies of compassionate solidarity in the writings ($\chi^2 (5) = 8.73; p=0.12$), see Table 1.

The reflective writings were also coded for exploration of positive and negative emotions. Those exploring nega-
tive emotions outnumbered the pieces exploring positive ones (see Table 2). One physician described a difficult situation with a two different family members of a patient, "Both expected understanding ... and both were angry".

<table>
<thead>
<tr>
<th>Session number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compassionate solidarity</td>
<td>3</td>
<td>14</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>42</td>
</tr>
<tr>
<td>Detached concern</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>11</td>
<td>3</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>24</strong></td>
<td><strong>19</strong></td>
<td><strong>6</strong></td>
<td><strong>17</strong></td>
<td><strong>7</strong></td>
<td><strong>81</strong></td>
</tr>
</tbody>
</table>

One positive writing describes a difficult case diagnostically about a patient who was admitted with a neurologic finding, “I think I might have sent the patient out dismissing as 'not stroke will get better' category.  But her patient trust took me to the next step”. Perspectives taken in the writings most often described a medical system problem or a situation occurring with a patient in whose care the narrator was involved. Describing a situation that the narrator personally experienced first-hand as patient or with a family member as patient was less frequent (see Table 3).

The settings in the writings were primarily designated as either inpatient or in the outpatient settings. The remaining described other settings such as medical school program or indeterminate setting.

<table>
<thead>
<tr>
<th>Perspectives in narrative</th>
<th>Session</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal story*</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Patient (witnessed)*</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Medical system*</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Missing*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total perspectives coded</strong></td>
<td><strong>8</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

Written comments from the final session included “This course has given me the courage to reflect and write about subjects I do not usually share,” or "...given me a new perspective to my own experiences and has broadened my ability to view healthcare from the patient (or family) perspective,” and “finding that others share these trials and feel similarly disenchanted by these daily rigors has provided solace and reassurance”. Another physician wrote, “I have taken time to view my biases, to notice stereotyped prejudices I carry and to hopefully grow from this reflection”. One physician commented “though it is not a 'billable amount' I think this kind of work is very important maintenance, self-preservation work (in) the medical profession,” and finally "writing it down formalizes and finalizes things in the mind".
offering a safe time and place to gather and focus on empathic communication. It is important to note that these teaching sessions were approved for continuing medical education credit and were conducted on weekday mornings. The small group leaders and course participants were not paid additionally for their participation.

Table 4. Total participants (matched and unmatched) who completed the Jefferson Scale of Empathy before the course (pretest), shortly after (Posttest1) and at the completion of the course (posttest 2)*

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>Pretest M(SD)</th>
<th>n</th>
<th>Posttest1 M(SD)</th>
<th>n</th>
<th>Posttest2 M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental (E)</td>
<td>18</td>
<td>117.0 (12.8)</td>
<td>15</td>
<td>120.7 (15.6)</td>
<td>15</td>
<td>124.6 (10.7)</td>
</tr>
<tr>
<td>Control 1 (C1)</td>
<td>8</td>
<td>114.6 (8.7)</td>
<td>6</td>
<td>116.2 (10.4)</td>
<td>5</td>
<td>110.8 (10.9)</td>
</tr>
<tr>
<td>Control 2 (C2)</td>
<td>10</td>
<td>118.7 (12.1)</td>
<td>10</td>
<td>116.2 (8.4)</td>
<td>9</td>
<td>118.9 (9.1)</td>
</tr>
<tr>
<td>Van der Waerden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>χ²(1)</td>
<td></td>
<td>p=0.59</td>
<td></td>
<td>p=0.35</td>
<td></td>
<td>p=0.02</td>
</tr>
<tr>
<td>Group differences</td>
<td></td>
<td>E=C1=C2</td>
<td></td>
<td>E=C1=C2</td>
<td></td>
<td>E&gt;C1=C2</td>
</tr>
</tbody>
</table>

* Physicians in the experimental group reviewed assigned reading materials on narrative skills and participated in the narrative skills training program. Physicians in control group 2 neither reviewed the reading materials, nor participated in the narrative skills training program. Group differences were determined by Duncan post hoc mean comparison using analysis of variance.

It is plausible that the value of the faculty development program may not be specifically explained by the act of writing itself, or appropriately measured by the slight improvement of quantitative empathy scores over time, but more importantly linked to the basic allowance of time and space to reflect with peers. The positive comments from participants outlined above support the perceived value of this program. Although this type of space is more easily built into schedules of medical trainees, the competing demands in a practicing physician’s work and non-work life make this type of time a precious commodity. This time with a peer group may be the true factor that differentiates our intervention group from the comparison groups. Both the reflection on personal behavior and the act of writing and sharing with peers lends itself to core reflection as defined by Korthagen and Vasalos which is different from the usual and more superficial assessment and reflection related to specific competencies /quality indicators experienced by most practicing physicians. Levine et al have described the value of prompted narrative writing on reflection and self-awareness among interns. Indeed Mamede and Schmidt have noted a negative correlation between reflective practice and a physician’s age and number of years of clinical practice. However, Mann et al note that in practicing professionals, ”the process of reflection appears to be multifactorial...In addition to reflection both on and during experience, it appears that the anticipation of challenging situations also stimulates reflection”. It is interesting that the number of reflective pieces written in a “detached concern” format and exploring “negative” emotional tone were significant yet our quantitative empathy scores increased. This may suggest that the processing of previous experiences in a peer group setting may lead to greater empathic understanding in the future in the “anticipation of challenging situations”. Thus a focus on allowing reflection for practicing physicians could be of great value in affecting future behavior and enhancing empathic understanding in the context of patient care.

Study limitations
Our study is limited because it occurred at a single institution with a small sample of volunteer physicians. We also acknowledge the issue of selection bias in this group of volunteer physicians who likely had an interest in reflection and empathic communication. Regarding the observed JSE results, we used a nonparametric test (van der Waerden) because of our small sample size and the analysis of variance for post-hoc mean group comparisons. Additional studies are needed with a larger sample of physicians in the intervention and matched comparison groups to allow more powerful differences to be detected. It will also be important to examine not only the short-term, but also long-term effects of narrative skill training and reflective writing on physicians’ empathic engagement in patient care.

Finally, we must question whether enhancing empathy may, over and above improving physician – patient communication, also improve clinical outcomes. A recent study in which a significant association was found between physician empathy scores and tangible clinical outcomes in diabetic patients (e.g., metabolic control measured by hemoglobin A1C and LDL-cholesterol test results) suggests that empathy in patient care can lead to optimal patient outcomes. In addition, the specific effect of writing or storytelling - as an exercise to improve empathy- on clinical outcomes should be explored. A link between storytelling by patients and blood pressure control has been observed.

Conclusion
These findings above combined with our research outcomes are promising and should encourage medical educators to design strategies for enhancing reflection and empathic behavior in medical students, residents, and specifically practicing physicians who can role model these behaviors to achieve the ultimate goal of medical practice: improving the quality of patient care. The opportunity to stop and think and also write about how our behaviors are viewed by patients is not afforded to practicing physicians routinely. Our findings suggest that creating a space for this type of experience appears to be a worthwhile endeavor for the well-being of physicians and most likely for improved patient outcomes.
Acknowledgments

We sincerely thank Ms. Alison Rollenhagen, Department Coordinator, and Dr. Caryl A. Hess, Director, Cleveland Clinic Academy & Samson Global Leadership Academy as well as Ms. Ann Honroth, Cleveland Clinic Lerner College of Medicine for their invaluable assistance with the logistics of this project. This study was supported by funding from the American Board of Internal Medicine Foundation “Putting the Charter into Practice” Grant Program.

Conflict of Interest

The authors declare that they have no conflict of interest.

References

Appendix #2

Coding form

A. Conceptual Framework
1. Detached concern (shows cognitive awareness)
2. Compassionate solidarity
3. Unable to discern

B. Emotional tone

Negative
1. Anger
2. Avoidance
3. Demeaning
4. Disappointment
5. Disgust
6. Embarrassment
7. Fear
8. Guilt
9. Humiliation
10. Loss of control
11. Loss of modesty
12. Neglect
13. Pain (either physical or emotional)
14. Sadness
15. Surprise (-)
16. Exhaustion

Positive
1. Admiration
2. Happiness
3. Surprise (+)
4. Pleasure
5. Hope
6. Respect

C. Perspective

Personal story (experienced firsthand)
1. Self - narrator is experiencing the event as the patient
2. Narrator’s family member is experiencing the event as the patient

Tells the story of a patient (witnessed)

Describes the medical system
1. Complications impeding empathy
2. Culture of training/education
3. Medical error
4. Culture of the practice of medicine

D. Setting of the narrative
1. Inpatient
2. Outpatient
3. Medical School
4. Unclear
5. Other [describe]
6. Emergency Department

E. Writing style

1. Case presentation
2. Academic critique
3. Empathy thwarted
4. Allegory - life lesson story
5. Training center
6. Unclear
7. Detached opinion

Appendix #3

Frequency distribution of narratives coded by writing style by session number

<table>
<thead>
<tr>
<th>Writing style</th>
<th>Session</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Case presentation</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Academic critique</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Empathy thwarted</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Allegory-life lesson story</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Detached opinion</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Total writing styles coded</td>
<td>8</td>
<td>26</td>
</tr>
</tbody>
</table>