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Just a spoonful of humanities makes the medicine go down: introducing literature into a family medicine clerkship

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BACKGROUND This project introduced medicine-related poetry and prose to a Year 3 family medicine clerkship with the purpose of determining students' perception of the usefulness of such materials to enhance empathy, improve patient management, and reduce stress. Although humanities are represented in the curricula of many medical schools, we need more information on how best to incorporate them during the clinical years.

METHOD In 2000, we used a needs assessment survey to identify learner perceptions of medical humanities. Using this information, in 2001–03 we developed and implemented a humanities-based curriculum consisting of readings linked to clinical vignettes, comments about humanities reading in required clinical Subjective, Objective, Assessment, Plan (SOAP) notes, and either station-specific or general poetry accompanying student end-of-clerkship objective structured clinical examinations. We collected both quantitative and qualitative data assessing student reactions and examined the data using non-parametric statistics and content analysis, respectively.

RESULTS Students showed moderate interest in incorporating humanities in medical education as a way of enhancing empathy, improving understanding and reducing frustration. Assessment of the clerkship humanities curriculum suggested a positive influence on students in terms of empathy for the patient's

perspective, and a lesser, but still positive, impact on patient management.

DISCUSSION Responses from this group of learners suggest that there is receptivity toward introducing medical humanities into family medicine curricular venues and that such effort can have a generally positive effect on learner empathy, awareness and understanding toward patients and doctors.

KEYWORDS education, medical, undergraduate/*methods; humanities/*education; clinical clerkship/*methods; curriculum

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INTRODUCTION

Three-quarters of US medical schools report the existence of material in medical humanities in their curricula,^{1,2} and both theoretical models^{3–5} and anecdotal evidence^{6,7} provide justification for this inclusion. The professional literature further attests to the potential for medical humanities to increase learner empathy for and insight into patients.^{8,9} These goals seem especially important during Year 3 of medical school, when both anecdotal reports and empirical studies document negative shifts in student empathy and communication skills.^{10,11} Yet little information exists¹² on how to introduce the humanities at various levels of training, such as during a clerkship setting.

This project used small amounts of medicine-related poetry and prose to determine students' perception of the various uses of such materials to enhance empathy, improve patient management

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Overview

What is already known on this subject

Although the humanities have been a part of medical education for years, we have little information about how to adapt these materials to specific settings such as clerkships.

What this study adds

This study describes qualitative and quantitative results from a programme introducing literary readings into a Year 3 family medicine clerkship. We conclude that humanities exposure positively influenced student empathy, and had a lesser, but still positive, impact on attitudes toward patient management.

Suggestions for further research

Future research should develop better evaluation methods for assessing the impact of the humanities, as well as investigate the relationship between exposure to literature and student behaviour in actual clinical settings.

and reduce stress. We decided to make our humanities exposure required, but limited, by dusting an entire class with a sprinkling of humanities, at a level that would be neither overwhelming nor baffling, but which would provide an enjoyable supplement and change of pace for stressed and overburdened students. Like most other efforts to incorporate the humanities into medical education, we did so with the goals of improving student empathy for the patient's experience¹³ and helping students 'understand more fully what it means to be human, and develop moral wisdom'.¹⁴ We also wanted to see whether reading a poem or an essay written in the first person might have an effect not only on attributes such as empathy, but also practically in terms of how students developed a treatment plan. Finally, we were interested in exploring whether reading poetry and prose might be useful in helping students understand not only serious, life-threatening situations but also common problems like rashes and colds. This project was reviewed and approved by our institutional research board as part of a series of curricular interventions instituted in 1999–2002.

METHODS

Subjects and procedures

Subjects were 180 Year 3 medical students at a public school of medicine in California who participated in the family medicine longitudinal clerkship in 2000–02, and 46 Year 3 students who participated in the second half of a bloc clerkship introduced in 2002–03. Changes in the bloc clerkship made it impossible to use poetry during the beginning of that academic year.

Needs assessment survey

In 2000, we conducted a survey of all Year 3 students ($n = 92$) to assess their level of interest in incorporating humanities into the clerkship curriculum. The survey was conducted by e-mail, with provisions for anonymous return if desired. The survey consisted of 16 items. Responses to statements in the first 14 items were rated on a 1–7 scale (1 = not at all interested, 7 = greatly interested). Three of these items assessed student interest in using literature in the clerkship to increase empathy, improve understanding, and reduce frustration in relation to patient care, and 9 items assessed interest in learning more about selected patient care issues. The last 2 rating items asked about personal enjoyment in reading literature and poetry.

Adding humanities to 2 paper cases

In 2001–02, we provided brief humanities readings linked to all 20 paper cases that students were expected to review with their preceptors, initially as part of the longitudinal clerkship and the following year as part of a newly devised bloc clerkship (see Appendix). Students were required to write standard clinical SOAP notes about 1 of 2 cases, either a child with a rash or middle-aged woman with an upper respiratory infection (URI). As part of the SOAP notes, students were asked to address in an open-ended, but brief, narrative essay:

- 1 how the humanities reading influenced the formulation of the student's treatment plan, and
- 2 what the student learned from the humanities reading that might be helpful in the care of the vignette patient.

Humanities readings about depressed and difficult patients

One of 5 small group discussions during both the longitudinal and bloc clerkships was devoted to the

diagnosis and management of depressed and difficult patients. To help students access their emotional responses to these patients, we included humanities readings that considered depressed patients and difficult patients from the point of view of the treating doctor. In 2003, we asked students ($n = 46$) to complete SOAP notes about a depressed and a difficult patient they encountered on the clerkship, and to note whether the accompanying literary selections increased student empathy and/or influenced the diagnosis and management of these patients.

Poetry introduced in the objective structured clinical examinations

We also asked students to read 4 poems in association with standardised patient (SP) encounters on different objective structured clinical examination (OSCE) stations or as an interstation exercise (a student task performed between SP station encounters) as part of their final clerkship evaluation. In 2001–02, 88 students read the poem *Female*, by Ingrid Hughes, about a woman facing a probable diagnosis of breast cancer, linked to an OSCE station on breaking bad news to an SP with a suspicious breast lump. After reading the poem and completing the bad news station, students responded on a 5-point rating scale (1 = not at all, 5 = a great deal) to whether reading the poem had influenced the way they formulated a ‘treatment plan’ (which in this case involved presenting the patient with the clinical findings of the breast examination), and whether the poem had helped them empathise with the patient.

The following year, 2002–03, the clerkship added a poem to the monthly OSCE administered at the end of each bloc. A total of 16 students read the poem *Dear Left Knee* by John Davis, linked to a station requiring examination of an SP presenting with an injured knee. Fifteen students read the poem *Back Pain*, by the first author, linked to a station in which an SP presented with chronic lower back pain. After each of these stations, students answered questions about whether the poem had made them feel more empathetic toward the patient or helped them with the treatment plan. Fifteen students read *Night on Call*, by Rita Iovino MD, as an interstation exercise designed to lower student stress levels, and answered questions regarding whether the poem put the OSCE in perspective or made them feel more relaxed. Student responses to these poems were recorded on a 5-point rating scale (1 = not at all, 5 = a great deal).

Data analysis

Quantitative data were analysed using sspS Version 11.5 (SPSS, Inc., Chicago, Illinois, USA). We first computed descriptive statistics for each item on the needs assessment survey and for each item where students rated their reactions to reading poetry. Wilcoxon signed rank tests compared the paired poetry item ratings for each group that read 1 of the 4 OSCE poems. We used non-parametric exact tests because the sample sizes were relatively small and corresponding parametric tests could not reasonably be assumed to be robust to violations of distributional assumptions. We used the 2-tailed, nominal $P < 0.05$ level for statistical significance.

Qualitative data were analysed by performing a content analysis of students’ narrative comments in the 2001–02 SOAP notes on either rash or URI, and the 2003 SOAP notes on depressed and difficult patients. The first author identified initial themes in the narratives, based on the content of specific statements. For example, a statement such as ‘Reading the poem helped me understand where the patient was coming from’ was coded as an example of the theme ‘empathy’. These themes were then reviewed, confirmed and modified by the second author. After this process, the themes were then counted for the number of times they occurred in the various student SOAP note assignments.

RESULTS

Survey results

The response rate to the student survey was 89.1% (82/92). The level of student interest in integrating the humanities into the family medicine clerkship was fairly high and fairly indiscriminating (in other words, student interest by topic did not show much range). Students enjoyed reading literature more than poetry (Table 1).

SOAP notes results

A total of 72 of the 88 students completing this exercise provided comments about the humanities readings, 37 in the rash condition and 35 in the cold condition (Table 2). Almost a third of the students writing the rash SOAP notes commented that the reading increased the likelihood that they would express empathy for the patient, while almost 2 thirds noted they would be more likely to

Table 1 Results of survey assessing level of student interest in uses of literature on the family medicine clerkship

I would be interested in using literature (poetry and prose) to:	Items Mean†	Rated* (SD)
Increase empathy for patients	4.5	(1.9)
Improve understanding of patient experience	4.7	(1.9)
Reduce work-related frustrations	5.0	(1.9)
Learn more about:		
Doctor–patient relationship	4.8	(2.0)
Difficult patients	5.0	(1.8)
Cross-cultural issues	5.3	(1.7)
Minor acute illnesses	4.3	(1.6)
Geriatrics	4.9	(1.7)
Domestic violence	5.2	(1.7)
Chronic illness (diabetes, hypertension)	4.9	(1.7)
Alcohol/substance abuse	4.6	(1.7)
Depression/anxiety	4.9	(1.5)
Enjoyment derived from reading literature		
I enjoy reading literature	5.5	(1.3)
I like poetry	4.5	(1.8)

* Rating scale: 1 = not at all, 4 = moderately, 7 = a great deal.

† $n = 82$.

Table 2 Summary of content analysis of student narrative comments about humanities readings in the rash and the cold conditions

Rash ($n = 37$)	n^*	Percentage*
Non-responders	7	15.9
Express empathy	11	29.7
Incorporate psychosocial insights and issues	24	64.9
Recommend counselling	7	15.9
Cold ($n = 35$)		
Non-responders	9	20.5
Express empathy	29	82.9
Patient perspective	(16)	(45.7)
Effects daily living	(7)	(20.0)
Patient frustration/doctor	(6)	(17.1)
Take patient seriously/focus on symptom relief	21	60.0
Educate and reassure	12	34.3
Consider differential more carefully	4	11.4

* Numbers add up to more than 37/35, respectively, and percentages add up to more than 100% because students often wrote comments that were able to be coded in more than 1 category.

take into consideration psychosocial insights as a result of the reading. Among students in the cold condition, over 80% reported the reading increased some dimension of empathy for the patient. A total of 60% wrote that reading the poem would help them take the patient more seriously, while about a

third noted that they would be more likely to educate and reassure after reading the literary selection. The vast majority of comments were extremely positive. Only 2 students in the rash condition and 1 student in the cold condition wrote negative comments.

Difficult/depressed patient humanities readings results

Out of the 46 students asked to write SOAP notes for a depressed patient and a difficult patient, only 28 (60.9%) turned in the assignment. Of those who did respond, only 15 (53.6% of responders; 32.6% of all students) also recorded narrative comments about the readings. The majority of respondents felt that, after reading the depression selection, they would be more likely to either consider a diagnosis of depression in patients and/or manage their depressed clerkship patient somewhat differently. Fewer students felt that their diagnosis and/or management of a somatising patient would be influenced by the humanities readings. In general, the readings seemed to give students permission to acknowledge the frustrations and emotional fatigue that can result in caring for challenging patients.

Results of reading poetry as part of OSCE examinations

Table 3 shows the results generated by poetry reading. Roughly a third of students reported that reading the poem *Female*, about a woman with a breast mass, either had little or no effect on how they presented bad news, had a moderate effect, or influenced them quite a bit or a great deal,

respectively. In terms of empathy levels, about 30% reported that the poem increased their empathy for the patient a moderate amount, while almost 60% reported the poem increased their empathy quite a bit or a great deal.

After reading the poem *Dear Left Knee*, about a third of the students felt it had little or no influence on their treatment plan, while 56% thought it had a moderate influence, with the remainder reporting it was quite influential. About a quarter indicated that the poem had little or no effect on increasing empathy, about a third thought it had a moderate effect, and the remainder rated the poem as either helping quite a bit or a great deal.

After reading the poem *Back Pain*, less than a fifth reported it helped only a little with their treatment plan, 44% thought it moderately helped, and 37% reported it helped quite a bit or a great deal. As to whether the poem made students feel more empathic toward their standardised patient, approximately a third each said it helped somewhat, quite a bit, or a great deal.

Of the students who read *Night on Call*, about a quarter said it helped only slightly or not at all to gain perspective, 40% reported it helped moderately, and the remainder said it helped either quite a bit or a

Table 3 Descriptive statistics of results of students' reactions to poetry during OSCEs, and comparison of ratings of 2 questions about the influence of poems read by each poem group

Poem read during OSCE	% rating scale responses*					Item score		Comparison Q1 versus Q2†	
	1 Low	2	3 Mid	4	5 High	Mean	(SD)	Z†	P
<i>Female</i> (breast mass) (n = 88)									
Q1 Helped with treatment plan	10.9	23.6	38.2	18.2	9.1	3.11	(1.09)	- 3.70	> 0.0005
Q2 Increased empathy for patient	3.6	9.1	29.1	29.1	29.1	3.84	(1.04)		
<i>Dear Left Knee</i> (knee pain) (n = 16)									
Q1 Helped with treatment plan	25.0	6.3	56.3	12.5	0.0	2.56	(1.03)	- 2.50	0.02
Q2 Increased empathy for patient	12.5	12.5	31.3	37.5	6.3	3.13	(1.15)		
<i>Back Pain</i> (n = 15)									
Q1 Helped with treatment plan	0.0	18.8	43.8	31.3	6.3	3.25	(0.86)	- 2.97	0.002
Q2 Increased empathy for patient	0.0	0.0	31.3	37.5	31.3	4.00	(0.82)		
<i>Night on Call</i> (n = 15)									
Q1 Helped put OSCE in perspective	6.7	20.0	40.0	26.7	6.7	3.07	(1.03)	- 2.53	0.02
Q2 Helped me feel more relaxed in OSCE	6.7	6.7	20.0	53.3	13.3	3.60	(1.06)		

* Rating scale: 1 = did not help at all, 2 = helped very little, 3 = helped moderately, 4 = helped quite a bit, 5 = helped a great deal.

† Paired comparison of poem Q1 versus Q2 by Wilcoxon signed ranks test for each poem group.

great deal. A fifth of students indicated the poem moderately helped them feel more relaxed, 2 thirds said it helped quite a bit or a great deal, and less than 14% reported that reading the poem either helped them only slightly or not at all.

Comparison of empathy and treatment ratings for all poem groups

Students who read the 3 station-specific poems (*Female*, *Dear Left Knee* and *Back Pain*) rated the poems' ability to increase empathy significantly higher than their helpfulness in influencing treatment plans (Table 3). Students who read *Night on Call* reported that reading the poem made them significantly more relaxed more than it helped them maintain perspective.

DISCUSSION

Our sprinkling of the humanities into a family medicine clerkship met with qualified success, and provided much food for thought in terms of how to refine and build on this experiment. In terms of the effects of our interventions, the qualitative data allowed us to gather information about why some students were enthusiastic about the readings. Qualitative data also provided specific insights into the possible value of the humanities from the students' point of view. For example, students' comments regarding the influence of the literary selections on their SOAP notes about rash and URI revealed a consistent effect of increased attention to the patient's perspective, greater sensitivity to the human dimension of diagnosis and treatment, and more concern with how treatment could be integrated with the patient's lifestyle and values. Similarly, those students who provided written narratives about the depressed and difficult patient readings provided explicit details about how the literary readings might expand and humanise the treatment of their patients. In all conditions where written comments were obtained ($n = 87$ over the course of the study), many students also confirmed that literature could be helpful in improving their feelings of empathy toward patients. The content analysis showed that between 30% and 85% of students reported that the readings increased empathy, while between 40% and 100% reported that the readings would positively influence their treatment plan.

The quantitative data presented a picture of more limited success. For example, the survey data indicated that Year 3 medical students had a reasonably, but

not overwhelmingly, high level of interest in how the humanities might be used to facilitate their professional development. Regarding the use of poetry in OSCE situations, approximately a fifth to a third of students reported little or no effect of the poems used in the OSCEs in terms of influencing treatment, increasing empathy, or improving stress levels. Of course, this finding also means that 2 thirds to 3 quarters indicated either a moderate or a high influence of the readings.

We also discovered significant differences in terms of the relative strength of effects of the OSCE-related poetry on empathy, treatment plan, perspective and stress reduction. Students reported that empathy was affected more strongly than was the treatment plan, and that the poem about the joys of doctoring was significantly more effective in reducing stress than in providing perspective on the examination process itself. Taken together, these findings suggest that, although effects of poetry can occur in all spheres assessed, the stronger effects are likely to be in the areas of empathy and stress management.

Limitations

This study, like much medical education research, had certain limitations in its design, sample, instruments and follow-up. One unavoidable complication was the change from a longitudinal to a bloc clerkship. This may have compromised the study in the sense that we were unable to implement the humanities intervention for the first half of the year, thus reducing our sample size. The change might also have influenced the outcomes of the study in unpredictable ways, by making students either more or less amenable to the interventions. Further, the study was limited by being restricted to a single medical school and by the absence of a control group, another common challenge in medical education research, where curricular innovation can often only be introduced for an entire group of students. An additional limitation was that the assessment tools used in the OSCE components consisted of only 2 rating items. While they had face validity, these measures may not have had a degree of reliability sufficient to yield consistent findings. Finally, we were unable to collect reliable follow-up data, although in June 2003, we did attempt to survey graduating Year 4 students to assess the longterm effects of the poems and literary readings to which they had been exposed the previous year. However, the response rate was so low (18%) as to make interpretation and generalisation of findings impossible. Perhaps most seriously, this study

suffered from a shortcoming common in medical education research: the practical difficulty of separating out and/or controlling for the multiple variables that influence student attitudes and behaviour in clinical settings so that it becomes extremely difficult to demonstrate a meaningful dose–response effect.

CONCLUSIONS

Overall, this project suggests some possibilities for introducing humanities into a family medicine clerkship. We conclude that while there is openness to literature-based teaching approaches, such programmes should be developed cautiously, with careful attention to learner responses, especially given that a significant number of learners might not perceive much benefit from this kind of curriculum. The information provided from the qualitative data in particular suggests that, upon reflection, some students may benefit from exposure to literature. More research needs to investigate the relationship between exposure to literature and student behaviour in actual clinical settings. Better assessment and evaluation methods are also needed.

Contributors: JS and AD contributed substantially to the conceptualisation and design of this project. JS identified all the materials used in this project, carried out preliminary analysis of all qualitative data, reviewed all quantitative data and took the major responsibility for writing the manuscript. AD oversaw the implementation of the project and reviewed the data and the final manuscript. JB provided design guidance for the project, carried out statistical analyses, described the statistical procedures in the paper and reviewed the manuscript. CSA implemented the OSCE poetry section of the project, collected the data at the relevant sites, and reviewed the manuscript.

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Conflicts of interest: none.

Ethical approval: this study was approved by the University of California Irvine Institutional Review Board.

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APPENDIX

Family medicine clerkship vignettes and corresponding humanities readings

- 1 *Adolescent pregnancy*
Rubbers and Foam, Vincent Hanlon MD
- 2 *Alcohol abuse*
The Spiritis Funnel, Mladen Seidl MD
- 3 *Anaemia*
The Bleeding Girl, Frank Huyler MD
- 4 *Asthma paediatric*
Wheezers from Baby Doctor, Perri Klass MD
- 5 *Prostate disease*
Intoxicated by my Illness, Anatole Broyard

- 6 *Depression*
A Measure of my Days, David Loxterkamp MD
Manuel, Rafael Campo MD
- 7 *Diabetes*
Diabetes, James Dickey
- 8 *Difficult patient*
Second Thoughts, Tillman Farley MD
- 9 *Domestic violence*
Dr Harris's Residence, Gillian Kendall
Keeping Secrets, Suzanne Summers
Rose, Andre Dubus
- 10 *Elevated blood pressure*
Renascence, Margaret Robison
Relearning to Speak, Gerry Sloan
Five Months after my Stroke, Margaret Robison
Stroke, Arthur Ginsberg
- 11 *Failure to thrive*
Failure to Thrive, Ron Charach MD
- 12 *Headaches*
Doc in a Box, Robert A Burton MD
- 13 *Lower back pain*
Back Pain, Johanna Shapiro Ph.D
- 14 *Obesity*
The Six Hundred Pound Man, Jack Coulehan MD
Fat Lady, Irving Yalom MD
The Fat Girl, Andre Dubus
Walking the Dog, John Wright MD
- 15 *Polypharmacy in the geriatric patient*
My Weekend (4 days) with my Mother, Anon
- 16 *Principles of family planning*
I Hear the Cries of Women, Cortney Davis RN, NP
- 17 *Rash*
Psoriasis, Kathleen Newroe
- 18 *Smoking cessation*
Antonio, David Watts MD
July 16th, David Watts MD
Black Lung, Erick L Dyer DO
- 19 *Sports medicine: knee*
Dear Left Knee, John Davis
On Losing my Anterior Cruciate Ligament, B Cooker
- 20 *Upper respiratory infection sinusitis*
Stricken by Flu, Mladen Seidl MD
Mid-Winter Flu, Brian Cronwall
The Common Cold, Ogden Nash