Professional Formation and Deformation: Repression of Personal Values and Qualities in Medical Education

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BACKGROUND AND OBJECTIVES: During medical training, students gain professional competence but may lose elements of personal humanity. Little is known about what personal qualities or values students themselves experience to be at risk or surrendered during medical school.

METHODS: Medical students participating in the Healer’s Art elective in the United States and internationally during 2008–2009 were asked to reflect, identify, and draw a part of themselves that they were wary about revealing, not comfortable showing, or felt may be diminished in medical school and label this part with a word. Using a team-based qualitative approach, these words were categorized into common themes and the themes analyzed using descriptive and chi-square statistics.

RESULTS: Words from 673 students from 31 medical schools were analyzed. Most students were female (58.7%) and in their first year (86.3%). Eleven themes were identified: spirituality, emotional engagement, identity/self-expression, freedom/spontaneity, relationships, self-care, creativity, negative emotions, values, other, and joy/happiness. The most common individual words used were creativity, family, balance, freedom, love, peace, compassion, relationships, and reflection. There were only rare differences in distributions of themes across gender, year in school, school size, or school nationality.

CONCLUSIONS: An international cadre of Healer’s Art students identified core personal qualities and values that they may not reveal or feel may be diminished in medical school. Medical training involves not only professional formation but exposure to professional deformation as well. Educators must attend to both gains in professional competence and the personal qualities and values that are at risk in the course of professional development.

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“Something we were withholding made us weak, until we found it was ourselves”—Robert Frost

Medical education is a powerful and transformative process. As students progress through medical school, they gain clinical competence and assume professional values and attitudes. The process of developing character and commitment to the highest values of medicine has been called “professional formation.”1 However, medical students are at risk for “deformation” as well. Prior research has documented the development of depression, cynicism, and ethical erosion, as well as burnout, loss of empathy, and stunting of moral growth over the course of medical training.2-10 Students nationwide report witnessing disrespectful critical events; lacking opportunity for conflict resolution; receiving disapproval for deeply held beliefs, attitudes, and behaviors; or being expected to behave in violation of personal values. These potentially detrimental effects of professional training have yet to be adequately acknowledged or effectively addressed through curricular innovation or cultural reform. Little research has documented medical students’ own experience of suppressed values—their identification of aspects of their personhood they believe are not welcomed or valued in professional training or their concern about personal dimensions they might lose or forfeit in the process of professionalization.

Methods
The Healer’s Art is a 20-year-old elective medical school course on humanism and meaning in medicine, which focuses on the development of the physician’s humanity as a therapeutic tool.11,12 Currently, it is being
taught to students at 69 US medical schools (more than half of the medical schools in the United States) and at seven medical schools abroad. Students typically take the course during the winter quarter of their first year of medicine when they have been in school an average of 4 months. Course faculty are primarily academic and community physicians from the specialties of family medicine and general internal medicine.

In session one of the Healer’s Art five-session curriculum (“Discovering and Nurturing Your Wholeness”), students are asked to:

> Please make a drawing of a part of yourself that you are wary about showing or actually do not let show in medical school. Perhaps this is a part that you feel has no place here or a part you may not feel comfortable showing to others in a professional context. This may even be an aspect of yourself that you feel may be changed or diminished by your medical training.

> When the students are about halfway through their drawings, they are asked to pause and reflect on a second question.

> If your drawing was a symbol for a human characteristic or quality, what would that human characteristic or quality be? Please write the word for that human characteristic or quality on your drawing. Then continue until your drawing is complete.

Students then form moderated small groups to share their drawings and discuss the characteristic or quality that is symbolized by each of them.

In 2008–2009, course directors at each of the English-speaking schools offering the Healer’s Art were asked to collect the words used by their Healer’s Art students to describe their pictures. These words were compiled into an Excel spreadsheet and analyzed for common themes by the researchers who were blinded to students’ gender, class year, school size, and school name. Schools were included in the analysis if their data were in English and included responses from all enrolled students. Responses from teachers and non-medical student participants (eg, nursing students) were excluded.

Using a team-based qualitative approach, we developed and categorized the students’ words into general codes or themes. Two researchers, one with prior experience with the course (MR) and one with no prior experience with the course or familiarity with the course curriculum (CE), initially read the list in its entirety and then each independently developed a list of codes or “themes,” assigning each word to a single theme. Words not able to be assigned to one of the themes were assigned to the code “Other.” The two researchers then reconciled their identified themes, which included only a single disparity easily resolved through brief discussion (intrarater reliability of 90.9%). A preliminary codebook was developed that included the definition of the theme and exemplar words included in the theme. Reviewing the codebook and coding, a third researcher (RNR) concurred with the coding process, with the addition of dividing one of the themes into two parts and adding one other theme. All three researchers agreed on these modifications. Once the codebook was finalized, all three researchers assigned final codes to each word. Seventy words out of the total analyzed (10.4%) did not achieve immediate coding agreement among all three researchers. These contested codings were resolved without difficulty through discussion. After completion of the analysis, it was reviewed for accuracy and potential bias by an experienced qualitative researcher (Karen Hauer, MD) not involved in the course or otherwise involved in the research project.

We used descriptive statistics to summarize the data. Chi-square statistics were used to analyze differences in the words used by students based on gender, year in medical school, size of medical school, and nationality of the medical school. We used Fisher’s Exact test for any of the analyses where cells in the contingency table included fewer than five instances. Significance was taken as \( P < .05 \).

As it involved only anonymous evaluation of information routinely collected as part of the Healer’s Art curriculum, the study received exemption from institutional review from the University of California, San Francisco Committee on Human Research.

**Results**

Among the 49 schools offering the Healer's Art during the study year, 37 schools taught their course during the study’s data collection timeframe, were English-speaking, and contributed data to the study (75.5%). Thirty-one schools (63.3%) had complete data. Overall, we were able to analyze data from 31 of the 37 (83.8%) eligible schools. Medical schools included in the study varied in size from 200 to 984 students across 4 years. Slightly more than half (55.9%) of respondents were from schools with fewer than 550 students; 44.1% were from larger schools. All regions of the United States were represented, with 47.3% of the data coming from students in the Midwestern US and 27.9% from the West. Two schools were outside the United States.

Responses from 688 students were received; 15 (2.2%) were excluded due to missing or unreadable data. Ultimately, words from a total of 673 (97.8%) medical students were included in the analysis: 58.7% of the responding students were female; 86.3% were in their first year of medical school, 9.8% in the second, and 3.9% in their fourth year. A total of 29 students (4.3%) were from medical schools outside the United States.

Eleven themes were identified. Theme size ranged from 28 to 109 words (Table 1). The most common theme was spirituality, which included 16.2% of the words analyzed.
Table 1: Prevalence of Themes Among All Words Submitted

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of Instances</th>
<th>Percent</th>
<th>Examples of Words Coded Within the Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spirituality</td>
<td>109</td>
<td>16.2</td>
<td>Spirituality, hope, faith, reflection, peace</td>
</tr>
<tr>
<td>Emotional engagement</td>
<td>82</td>
<td>12.2</td>
<td>Love, empathy, connectedness</td>
</tr>
<tr>
<td>Identity/self-expression</td>
<td>82</td>
<td>12.2</td>
<td>Me, wholeness, balance</td>
</tr>
<tr>
<td>Freedom/spontaneity</td>
<td>75</td>
<td>11.1</td>
<td>Freedom, spontaneity, free spirit</td>
</tr>
<tr>
<td>Relationships</td>
<td>70</td>
<td>10.4</td>
<td>Relationships, friendship, family</td>
</tr>
<tr>
<td>Self-care</td>
<td>55</td>
<td>8.2</td>
<td>Relaxation, hobbies</td>
</tr>
<tr>
<td>Creativity</td>
<td>52</td>
<td>7.7</td>
<td>Creativity, imagination</td>
</tr>
<tr>
<td>Negative emotions</td>
<td>43</td>
<td>6.4</td>
<td>Fear, failure, vulnerability</td>
</tr>
<tr>
<td>Values</td>
<td>43</td>
<td>6.4</td>
<td>Compassion, humility, selflessness, patience</td>
</tr>
<tr>
<td>Other</td>
<td>34</td>
<td>5.1</td>
<td>Colors, life, place</td>
</tr>
<tr>
<td>Joy/happiness</td>
<td>28</td>
<td>4.2</td>
<td>Joy, happiness, laughter</td>
</tr>
<tr>
<td>Total</td>
<td>673</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Other themes that represented more than 10% of the submitted words included emotional engagement, identity/self-expression, freedom/spontaneity, and relationships.

Creativity was the most common single word submitted by students (35 students, 5.2% of the words submitted) (Table 2). Other common words included family, balance, freedom, love, peace, compassion, relationships, and reflection. Thirty-four words (5.1%) could not be classified within one of the 11 codes and were assigned to the code "Other."

Female and male students submitted similar words. There was just a single statistically significant difference in theme prevalence among genders: female students were less likely than males to submit words coded as "self-care" (6.08% versus 12.5%, respectively, P=.008).

Student responses were remarkably similar among students at different levels of training. Self-care was the only theme whose frequency differed significantly among students of different years. First-year students were more likely than second-year students to submit words coded as self-care (8.95% versus 1.51%, respectively, P=.05).

Out of the 11 themes, only two showed significant differences between small medical schools (fewer than 550 students) and large medical schools (more than 550 students). Students from small schools were more likely than students from large schools to submit words coded under the “values” theme (8.24% versus 4.04%, respectively, P=.04). Students at large schools were more likely than those at small schools to use words coded as “Other” (7.41% versus 3.29%, respectively, P=.02).

The responses of US and foreign students were notably similar. Only the code of “spirituality” differed among students from different countries. International students were twice as likely as US students to submit words coded as “spirituality” (31.03% versus 15.52%, respectively, P=.05).

**Discussion**

Medical students offer a wide variety of words to describe the aspects of themselves they feel may have no place in medical school or a part of themselves they may feel uncomfortable showing to others in a professional context. In a sample of 673 students nationally and internationally, students’ words most often concerned issues of spirituality (including words like hope, faith, and reflection), emotional engagement (including empathy and connectedness), identity/self-expression (including the words me and wholeness), freedom/spontaneity (including spontaneity and free spirit), and relationships (including family and friendships). The most common single word offered was creativity. Other common words included family, balance, freedom, love, peace, compassion, relationships, and reflection. These findings suggest a potential mechanism for the accrual of negative consequences of professional development documented in prior research.2-10 Loss of creativity, family, balance, freedom, love, peace, compassion, relationships, and reflection may be the early forerunner of the frequently reported increases in depression, burnout, loss of empathy, and alienation found as students progress through medical training.2-10

Analysis demonstrates that, with some exceptions, students’ words are remarkably similar across gender, year in school, school size, and among schools in the United States and internationally. International medical students appear to have a greater concern about spirituality. Students at smaller schools were more likely than those at larger schools to report wariness about expressing personal values. Our data on the self-care code are particularly intriguing and deserve further exploration. The finding that female students were less likely than male students to submit words coded as self-care is notable. Perhaps female
medical students are so committed to self-care that they are not as likely to fear losing this practice. More likely, perhaps, female students may be socialized many years prior to medical school to attend to the needs of others and may be more likely to accept a loss of time for self-care. Possibly, male students have less concern than male students about surrendering self-care in favor of caring for others.

Additionally, the prevalence of concern about the loss of self-care appears to decrease from first to second year. While it is possible that second-year students find self-care to be so well supported in medical school that they no longer feel at risk of losing the practice, it is also possible that a former commitment to self-care is in fact successfully suppressed via the workload or enculturation process of medical school within just the first year of training. The absence or loss of student commitment to self-care in the first 2 years of school is a key issue, especially in light of the need for sustainability in professionalism among all trainees and physicians, and the significant costs of medical student distress and burnout. 

Of note, while our results are comprised of positive personal qualities and values that students report suppressing during the process of medical training, the suppression of values during professional training is not inherently a negative development. Professional formation may also lead students to identify and suppress inappropriate values, such as prejudice or racism. Notably though, in our study of 673 words submitted by students nationally, we uncovered no such negative values. In particular, the theme of values included only positive ones such as compassion, humility, selflessness, and patience.

While this study is potentially limited by errors in accuracy of the qualitative analysis, three experienced researchers reached easy consensus in coding the data, and the analysis was reviewed and confirmed by an experienced qualitative researcher not involved in the course. Analyzing single words (rather than a narrative text) allows for a multiplicity of potential interpretations about relevant larger themes. However, the research team established clear definitions for the themes and achieved consistency in the assignments of words to the themes. While others might define our themes differently, these labels and their definitions allowed our research team to make a consistent analysis of the data. In addition, many of our conclusions stem from the commonality of particular, individual words, which has face validity and is not susceptible to variations in interpretation. For example, more than 5% of our sample used the actual word creativity, and this data could then be assigned to the code of “creativity” without interpretation or bias.

The authors acknowledge the potential bias in this research due to the role two of the authors have in developing and/or participating in the course. However, one of the three researchers was not previously involved in the Healer’s Art course and had interpretations of the data similar to that of the other researchers, with evidence of good interrater reliability. In fact, preliminary coding was done by the researcher (CE) who had no prior affiliation with the course, along with one of the researchers experienced with the course (MR). Additionally, an experienced qualitative researcher, not involved with the course or research otherwise, formally reviewed the data, codings, and results and found no evidence of such bias.

Our findings about international students must be recognized as preliminary as they are based on relatively small number of students and schools outside the United States. This issue deserves further study with a wider range of international students representing diverse cultures and schools.

Our participants were primarily first-year students, making our observations about the changes over time in student responses preliminary. While a study of initiates—first-year students—may be
particularly useful for identifying the presence of the hidden curriculum in medical school, a study of students at every level of training, or, ideally, a longitudinal study of student perceptions over time is warranted. While the students sampled here all were self-selected as participants in a popular elective course on humanism in medicine (and were at schools that chose to offer the Healer’s Art), our findings suggest that at least a significant minority of medical students nationally and internationally feel at risk of losing fundamental personal qualities as a consequence of medical training. Further study among a large, random sample of medical students is indicated to assess the generalizability of our findings. In particular, it is key to understand the role of deformation among unselected students not expressing a prior interest in humanism and professional development, as well as students who attend schools that do not offer the Healer’s Art.

Our study asked students to report on qualities they felt wary expressing or actually do not let show in medical school. However, we do not have evidence about students’ actual behavior. We asked about parts of themselves that students felt may be changed or diminished by medical training. However, it is not known whether students’ concerns about what they may lose during medical training will prove to be accurate. Further research is needed to assess whether students lose personally important qualities, characteristics, or values that they feel have no place in medical school and professional training and whether concerns early in medical training reliably predict the negative developments of depression, ethical erosion, or burnout by the end of training.

Ultimately, the conclusions from this study should prompt further research. This study sought an understanding of the meaning of individual words submitted in response to a somewhat complex query but without added context to help understand the respondents’ particular interpretation of the question itself or their intention in submitting their word. This methodology can produce consistent assignments of meaning but without the precision afforded by having access to greater context from each respondent. To better understand the students’ interpretation of the question and the context in which they submit these words, further research might include engaging a subset of the study population in detailed interviews or eliciting written narratives of students’ interpretation of the question, their choice of words, and the meaning behind their drawings. The international summary data presented here could serve as a useful framework for such a detailed study. Finally, though not elicited explicitly, our study responses focused on negative aspects of the training experience. Future research should include a simultaneous exploration into the positive elements of medical training, perhaps those influences that support a student’s best qualities and highest ideals.

Despite its limitations, this study raises important questions for medical educators. Is the message of what is acceptable or approved of in medical school (what is “professional”) at the very root of why some professionals burn out or behave inappropriately? And what has caused this cadre of humanistically oriented students to fear the loss of positive personal qualities? How is the message (about what aspects of a student’s personhood are welcomed or approved of in medical school) communicated so reliably and consistently to different students at different schools nationally and internationally? How is this social and peer pressure applied? Importantly, are there personal characteristics or curricular programs that might fortify learners against the losses that this group of students reported? While the hidden curriculum has long been recognized as a powerful and pervasive force, to remedy the situation, educators must have a better understanding about the messages delivered and the means by which they are so consistently communicated. Perhaps understanding the specific qualities and values that medical students report suppressing in response to hidden or explicit curricular influences can help medical educators design effective strategies to diminish the vulnerability and support the humanity and physicianhood of all trainees. Future research might focus on the actual pressures students experience and thereby gain a better understanding of the precursors of the cynicism and depression so frequently reported during medical training. Prevention may require identifying subtle messages and addressing the process of deformation right from the beginning, prior to the observation of critical lapses in professionalism and well-being, and before damage is irreparable.

Preliminary though it is, this study suggests that the process of professional development may diminish the person being trained in important ways. The core issues and values that new students feel wary of expressing or uncomfortable showing in medical school may be the very values they will ultimately repress or feel unable to sustain during their training. Qualities such as compassion, reflection, and emotional engagement are fundamental to the development of competence and excellence as a physician and key to ensuring that medicine itself remains socially and humanly relevant. Spirituality was the most common theme and creativity the most common quality that students reported leaving at home. If young doctors lose their sense of calling and creativity, medicine’s capacity to respond to the health challenges of the future becomes severely limited. The pressure to suppress core personal values and qualities may help explain the frequently reported growth in cynicism, depression, and stunted moral growth observed as medical students progress through their training. As Carl Jung postulated, relegating important parts of the self into the Shadow may result
in a potentially destructive perversion of talent.\(^\text{19}\) As depersonalization plays a critical role in the development of professional burnout, loss of important elements of integrity are an appropriate and central concern for medical education. Responsible medical educators need to attend not only to gains in professionalism but also to attrition in critical personal qualities and values that may occur as students progress through training.\(^\text{20}\)

Trading wholeness for competence will not enable us to maintain our service intention or allow us to achieve the goal of healing others. When physicians are not themselves whole, the wholeness of their patients becomes unseen, incomprehensible, and even irrelevant.

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Potential Conflicts of Interest: Dr Remen is the founder and director of the Healer’s Art course and the UCSF course director. Dr Rabow is a course faculty member at UCSF and director of the Center for the Study of the Healer’s Art.

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