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## **ABSTRACT**

### **Medical Students' Experiences and Expressions of Unlimited Love toward Patients**

**Introduction and Aims.** Physician love for patients is a concept rarely mentioned in contemporary medical education circles. Drawing on existing spiritual and sociological models of love, this project will investigate the nature of, and factors determining, the capacity of medical students to experience, express, and sustain unlimited love (UL) toward patients. Specifically, we intend to investigate whether the ability of medical students to express UL toward patients deteriorates as students move from the preclinical to the clinical years of training. We will also determine the relative contributions of selected personal, educational, and demographic variables to students' expression of UL; and investigate the intercorrelations among various purported measures of core components of UL. Finally, we expect to demonstrate that a brief, focused educational intervention can effectively increase students' expression of unlimited love.

**Design and Methods.** This study employs a combined quantitative/qualitative methodology. In the quantitative data analysis, we will obtain self-report measures from students, including assessments of unlimited love, empathy, dysphoria, spirituality, and exposure to a range of formal and informal spiritual, reflective, and altruistic practices, activities, and role-modeling. We will supplement student self-reports with data collected from patients and clerkship directors regarding student humanism and expressions of unlimited love. Qualitative interviews of both students and patients will explore the meaning, role, value, and purpose of UL in patient care, how skilled students are in its expression, and what helps or hinders them in this effort.

In Year 1, the study team will first develop and pilot-test both quantitative and qualitative measures of UL. We will then recruit up to 50 2<sup>nd</sup> year students. Quantitative student data will be obtained at 4 collection points throughout the year. We will supplement student self-reports with data collected from patients and clerkship directors. We will also conduct qualitative interviews with a subset of students and patients.

In Year 2, the project team will design and implement a brief unlimited love educational intervention, based on Year 1 data and existing literature and resources. Approximately 50 2<sup>nd</sup> year students will be recruited to participate in the study as they proceed through their third year of training. The intervention will be offered over a 6 month period to all participants as they rotate through the Internal Medicine Clerkship. Study participants who do not rotate through this clerkship during the study period will serve as a comparison group. We will administer the quantitative battery to both intervention and comparison students at the beginning and end of the intervention period. A final administration will occur at the conclusion of the study to measure carry-over effects. As in Year 1, we will obtain patient and clerkship director assessments. Qualitative interviews along the lines of Year 1 will also be conducted with a subset of both experimental and comparison group subjects, as well as with nominated patients.

**Implications.** The study team is committed to a vision of rehumanizing medical education as an end in itself and as a means of promoting more compassionate and patient-centered healthcare. Findings from the proposed study will provide a basis to

introduce curricular activities, both within this institution and elsewhere, that promote humanism, compassion, altruism, and unlimited love among medical students.

**Introduction:** Folk medicine traditions generally train their practitioners to honor the importance of emotional and spiritual connections between healer and patient. Medical education in the West, on the other hand, historically has emphasized a physician stance of scientific objectivity and detachment as essential to delivering “impartial” patient care. Despite the fairly recent introduction of courses in communication skills and ethics, the vast weight of the “informal curriculum” comes down on the side of maintaining emotional distance from the patient.

Yet much evidence exists that patients want physicians who care about them, not just as diseases but as human beings. Some research is also suggestive that patients in caring relationships with their physicians are more likely to be satisfied, to adhere to medical regimens, and to follow-through with medical care. Therefore, rather than admonishing medical students “not to get emotionally involved” with patients, perhaps we should be teaching them how to move emotionally closer to their patients. Rather than modeling emotional refuge in denial and distance, perhaps we should be helping students learn to develop an “agape” love for the people they have committed to care for.

**Research Aims:** The purpose of the proposed study is to evaluate what personal and institutional educational activities in which medical students participate are associated with greater presence of core components of unlimited love, specifically altruism, empathy, compassion, spirituality, and salutogenic agency. Specifically, the study aims to determine whether

- 1) Each or all of the following is associated with increased unlimited love in medical students:
  - a) Regular involvement in personal choice activities such as reflective journaling, creative/expressive writing, meditation and/or prayer
  - b) Participation in community service projects to aid indigent patient populations
  - c) Exposure to literature and medicine and other elective humanities courses
- 2) Certain components of unlimited love are more likely to increase than others through exposure to these various activities

**Methodology:** This proposal is designed as a two-year project that focuses on the experience of medical students transitioning from the preclinical to clinical years. This period has been selected because research indicates that the third year of training is associated with increased cynicism and decreased communication skills in learners. Thus, it seems a key point to target for intervention. The study will utilize an interdisciplinary team consisting of a psychologist with 25 years experience working with medical students and primary care residents (PI); a medical ethicist; a physician who serves as Associate Dean of Medical Education and directs all communication courses; a psychiatrist; and a statistical consultant/medical educator.

The first year of the project will be descriptive in nature. At two time points (beginning and end of third year), we will survey the entire class of 92 third year students to assess their past and present participation in both extra-curricular, personal choice activities (ie., reflective journaling, prayer, meditation, and meaningful interpersonal relationships) and optional formal curricular opportunities (ie., community service, humanities electives) which we believe might promote qualities of unlimited love. As

part of this survey, we will also administer the Interpersonal Reactivity Index (a measure of cognitive and emotional empathy), the Mehrabian Empathy scale, an Altruism measure, a Compassion measure, and the Personal Beliefs Questionnaire. In addition, a subset of students will be selected to participate in focus groups and/or in-depth individual interviews at the beginning and the end of the third year experience to understand their views towards unlimited love, its perceived relevance to patient care, how it can be cultivated, and how these views might change over time. Throughout the year, as students proceed through their clerkships, 3 patients for each student will be asked to complete a satisfaction rating and a short form of the LaMonica Empathy scale, which measures perceptions of empathy in others. Faculty preceptors and fellow students will also be asked to rate students on each clerkship on dimensions of unlimited love. These data will give us independent assessments of qualities of unlimited love in students. By the conclusion of year 1, we will be able to analyze, both quantitatively and qualitatively, which formal and informal educational activities are associated with greater unlimited love, as well as students' views of this concept.

Year Two of the study will be used to design and implement a pilot curriculum incorporating those practices and teachings demonstrated to be most strongly associated with promoting unlimited love. This curriculum will be administered to a self-selected group of volunteer students. As in Year One, student formal and informal educational activities will be assessed, student attitudes toward unlimited love will be qualitatively probed, and patient, faculty, and peer perceptions of students' ability to demonstrate unlimited love will be obtained. Although volunteer participants could be criticized on the grounds of self-selection, we believe that choosing a highly motivated population for the initial introduction of this experimental curriculum has the highest likelihood of demonstrating that a curriculum designed to promote unlimited love will be successful.

**Significance and Potential Impact of Work:** The results of this study will help us better understand both formal and informal educational factors that influence the development of unlimited love in medical students. Also we will have an indication as to which components of unlimited love are most effected by exposure to which types of training. This sort of evidence properly disseminated will support efforts nationally to 1) expand admissions criteria to encourage selection of students who show a predisposition to engage in activities demonstrated to be related to unlimited love 2) encourage development of curricular opportunities to assist students in nurturing and expanding their own capacity for unlimited love.

**Approximate Cost:** The budget for this project will be approximately \$45,000 per year, for a total of \$90,000. This cost will be expended primarily in project personnel: 10% support for the PI (10% contributed in-kind); 5% bioethicist (5% in-kind); 10% statistical consultant (5% in-kind); 5% communication training director (5% in kind); 25% research associate (10% in kind); \$3000/year for data coding and statistical analysis; \$2,000 supplies (xeroxing; food for focus groups)

**Research Program Areas:** Human Development (question #8 "What do we know about how we can teach altruistic behavior and empathy?"); and Public Health and Medicine (question #2.2 "Is love a salutary component of the patient-provider relationship?")

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