

Enhancing Clinicians' Well-Being and Patient-Centered Care Through Mindfulness

Patricia Lynn Dobkin, PhD; Nicolò Francesco Bernardi, PhD; Corinne Isnard Bagnis, MD, PhD

Introduction: Mindful clinicians are resilient and more likely to provide patient-centered care. We aimed to enhance clinicians' well-being by offering a Mindfulness-Based Stress Reduction (MBSR) course that teaches mindfulness and stress management and then determine whether this impacted their subsequent medical encounters.

Methods: In a longitudinal cohort study with 27 clinicians, MBSR was taught by a certified instructor. Pre-MBSR and post-MBSR online questionnaires assessed burnout, depression, stress, meaningfulness, and mindfulness. Patients independently rated their clinicians using the Rochester Communication Rating Scale (RCRS) after a clinical encounter before and after their clinician took the MBSR course. Nine medical doctors audiorecorded the consultations before and after MBSR; the tapes were coded and analyzed by an independent team using the Roter interaction analyses system.

Results: Significant reductions in stress and burnout were found, and increases in mindfulness and meaningfulness. The decrease in stress was correlated with less judgmental attitudes and less reactivity—facets of mindfulness. The decrease in emotional exhaustion was correlated with more acting with awareness and less judgmental attitudes—facets of mindfulness. Patients' perceptions of the clinical encounter suggested that patient-centered care improved after MBSR. Decreased depersonalization was significantly associated with the RCRS subscale, "understanding of the patient's experience of illness." At both time points, doctors dominated the exchange and were patient-centered.

Discussion: Mindfulness has a direct and positive impact on clinicians' well-being. When clinicians' experienced less depersonalization, their patients reported being better understood.

Keywords: mindfulness, burnout, stress management, meaningfulness, quality improvement, communication skills, profession-physician, reflective practice

DOI: 10.1097/CEH.0000000000000021

There are numerous sources of stress for clinicians; some are external, such as a heavy patient load, time pressures, interpersonal staff conflict, lack of autonomy in the work environment, record-keeping requirements, potential for litigation, and financial concerns. Other stressors are internal, such as personality characteristics (eg, perfectionism), harsh self-judgment, poor emotional regulation, and vicarious trauma. The need to address these issues was recognized by Irving et al.¹ who, in 2009, concluded that mindfulness helped health care professionals cope with the challenges they confront daily.

Since then, studies from around the world substantiate this conclusion. Asuero et al.² working with primary care physicians in Spain, Moody et al.³ working with pediatric oncologists in Israel and New York, Lovas et al.⁴ working with dentists in

Canada, all point to the benefits of training physicians to be able to handle stress and their emotions better and also to communicate with more awareness. For example, a modified and extended Mindfulness-Based Stress Reduction (MBSR) program for primary physicians offered by Krasner et al.⁵ resulted in self-reported improvements on mindfulness, burnout, empathy and responsiveness to psychosocial aspects of patients' problems, mood disturbance, conscientiousness and engagement at work, and more emotional stability.

Hick and Bien⁶ describe how mindfulness can enhance the therapeutic relationship by cultivating unconditional positive regard and empathetic understanding. An example of this is found in Irving et al.⁷ who ran focus groups on a subset of the clinicians who completed a Mindfulness-Based Medical Practice program. Regular meditation practice enabled clinicians to be more open minded and compassionate toward themselves and others (including their patients). They were better able to regulate their emotions by focusing on the breath in stressful situations, and they were able to circumvent acting impulsively or automatically.

In a multisite, observational study of 45 clinicians (mostly physicians) caring for HIV+ patients, Beach et al.⁸ asked clinicians to complete a mindfulness scale and then audiotaped their medical visits. The audiotapes were coded by independent raters blinded to the mindfulness scores. Patients independently rated the encounter after the medical visit. Data from the audiotapes indicated that clinicians who scored high on mindfulness were more likely to engage in patient-centered communication

Disclosures: The authors report that this study was funded through a grant from the Chair for Patient Education, Pierre and Marie Curie University, Paris, France.

Dr. Dobkin: Associate Professor, Department of Medicine, Programs in Whole Person Care, McGill University, Montreal, Quebec, Canada. **Dr. Bernardi:** Postdoctoral Fellow, Department of Psychology, McGill University, Montreal, Quebec, Canada. **Dr. Bagnis:** Professor, Department of Nephrology, Groupe Hospitalier Pitié-Salpêtrière et Chaire de Recherche en Education Thérapeutique du Patient, Université Pierre et Marie Curie, Paris, France.

Correspondence: Patricia Lynn Dobkin, PhD, Programs in Whole Person Care, McGill University, Strathcona Anatomy & Dentistry Building, Room: M/5, 3640 University Street, Montreal, Quebec H3A 0C7, Canada; e-mail: patricia.dobkin@mcgill.ca.

Copyright © 2016 The Alliance for Continuing Education in the Health Professions, the Association for Hospital Medical Education, and the Society for Academic Continuing Medical Education

(eg, discussed psychosocial issues, built rapport), and they displayed more positive emotional tone with patients. Patients reported better communication with the more mindful physicians, and they were more satisfied with their care. Although promising, the results are based on a cross-sectional data which cannot determine causality.

The present study went one step further by measuring mindfulness, stress, burnout, depression, and a sense of life being meaningful before and after clinicians took a MBSR course⁹ and used independent ratings to substantiate self-reports. The standard MBSR course teaches mindfulness and stress management. Using similar methods as Beach et al., the medical visits were audiotaped and coded, and patients independently rated their clinical encounter to assess whether there were changes before and after MBSR. Our main goal was to determine whether an increase in mindfulness would positively impact the therapeutic relationship.

We hypothesized that

1. Clinicians would be less stressed and experience improvements on burnout and mindfulness after MBSR;
2. Clinicians' reduced stress, and depersonalization (one aspect of burnout) scores would correlate with improved patient ratings of medical encounters after MBSR;
3. Specific facets of mindfulness—nonjudgmental attitudes, acting with awareness, and nonreactivity—would increase and be related to patient-centered care.

METHODS

Participants

Physicians and allied health care professionals were invited to participate through an email throughout the hospital where the MBSR course was taught. Inclusion criteria were clinicians treating patients with chronic illness, willing to commit to attending the 8-week course, and completing before and after MBSR assessments. None met exclusion criteria (eg, substance abuse) outlined in Dobkin et al.¹⁰

Procedures

We conducted the study at the Pitié-Salpêtrière Hospital in Paris from September 2014 to December, 2014. Clinicians signed an informed consent form approved by the local ethics committee. Online encrypted questionnaires were completed before and after MBSR. The patients who rated the medical encounter before and after MBSR were recruited by their clinicians. A research assistant asked each one to sign a consent form and ensured that the questionnaire was completed and placed in a sealed envelope that the clinician would not have access to. Audiotapes were made during 18 consultations before and after MBSR in nine doctors' offices during a scheduled medical visit. The patients included in this aspect of the study were the same at both encounters.

Measures

We used validated French versions of seven measures, which were selected based on their good psychometric properties and previous use in research on mindfulness.

Online Questionnaires

The following surveys were completed online by the clinicians before and after the MBSR course.

The Perceived Stress Scale-10¹¹ (PSS): This 10-item scale was developed to measure the extent to which respondents appraise situations in their life to be stressful during the past month. Each item is scored from 0 to 4. A global score is computed ranging from 0 to 40 with higher scores indicating greater perceived stress.

Beck Depression Inventory II (BDI)¹²: This 21-item self-report measure of depression reflects DSM IV criteria. Item responses range from 0 to 3; a total score is calculated by summing across items. A score of 14–19 indicates mild, 20–28 moderate, and 29–63 severe depression.

Sense of Coherence¹³: This 29-item questionnaire assesses three subscales: comprehensibility, manageability, and meaningfulness. It has been used extensively in the study of health and well-being; those high in this characteristic are viewed as stress resistant. Only the meaningfulness subscale was used because as Remen states, "Meaning is a human need. It strengthens us, not by numbing our pain or distracting us from our problems, or even by comforting us. It heals us by reminding us of our integrity, who we are, and what we stand for. It offers us a place from which to meet the challenges of life."¹⁴

The Maslach Burnout Inventory¹⁵ (MBI): This 22-item questionnaire measures three components of burnout: emotional exhaustion, cynicism or depersonalization from patients, and sense of lowered personal accomplishment. The inventory is the most widely researched measure of workplace burnout and has been used in numerous studies of health care professionals. Subscale scores were calculated and analyzed separately.

Five Facet Mindfulness Questionnaire¹⁶ (FFMQ): This 24-item questionnaire measures mindfulness according to a 5-factor structure: nonreactivity, observe, act with awareness, describe, and nonjudgment. Act with awareness, nonreactivity, and nonjudgment were used as these are most relevant to patient-oriented care.

Rochester Communication Rating Scale¹⁷: This 19-item questionnaire was filled out by the patients before and after their clinicians took the MBSR course. Each patient rated their clinician across four domains of patient-centered communication that have been found to have a positive effect on health outcomes: (1) physician interest in the patient as a person, (2) understanding patient's experience of illness, (3) attention to context, and (4) participation in care. Summing items yields total and subscale scores.

Roter Interaction Analysis System (RIAS)^{18,19}: This coding system is reliable with predictive validity in assessing patient and clinician communication during medical encounters. Raters assign one of 37 categories to each thought expressed by the clinician and patient. These categories can be combined to reflect broad types of exchanges, such as task-focused, socio-emotional exchanges. One determines whether the encounter was patient centered or doctor centered by examining the ratio of patient-centered categories of talk/doctor-centered categories of talk. A value greater than one denotes a more patient-centered encounter. Number of speech acts and verbal dominance (ratio of clinician to patient talk during the visit) were calculated according to a standardized manual by an independent team with expertise coding the audiotapes in French. Average reliability of the RIAS has been estimated as 0.85 for both patient and physicians categories, based on Pearson correlation coefficient.¹⁹

Intervention: MBSR

MBSR is a systematic approach to group mindfulness training.²⁰ The course is delivered in a structured yet flexible manner such that the instructor can respond to what is occurring in the class. Although MBSR is offered in a group format, it is neither a group therapy nor a support group; it is a program intended to draw on the group's shared experiences to facilitate the development of mindfulness. Class sizes vary with an average of 15–20 per group and are 2.5 hours in duration. The program is offered on a weekly basis for eight consecutive weeks, with a silent retreat day in between classes 6 and 7. This day involves a series of guided meditations with an emphasis on transitions serving as opportunities for deepening mindfulness. Except for the first class, each opens with a meditation practice. Mindful movement (ie, hatha yoga and walking meditation) is taught in addition to sitting and body scan meditations. Classes include specific exercises (eg, identifying mind/body links); these are extended as homework and are discussed in the subsequent class. This allows for continuity in practice and a unique opportunity to work with informal mindfulness (eg, being aware while emailing). Two classes focus on stress management and three include exercises to enhance communication skills. The instructor aims to embody a mindful stance in the way she conducts inquiry into participants' experiences. Whole and small group discussion supports this process.

The MBSR instructor (PLD) holds certification from the University of Massachusetts Center for Mindfulness in Medicine, Health Care and Society, and he had, at the time of this study, 9 years of MBSR teaching experience with patients and professionals.

Statistical Analyses

Data from the online questionnaires were downloaded directly into an Excel file. Pre-MBSR and post-MBSR scores were analyzed to determine whether there were changes in stress, depression, burnout, meaningfulness, and mindfulness (subscales: nonreactivity, nonjudgment, and act with awareness).

Analyses were performed using SPSS software, version 19 (IBM, Armonk, NY). Variables were preliminary tested for normality distribution at pre-MBSR and post-MBSR by means of Shapiro–Wilk test. As several variables showed to be non-normally distributed, even after Box-Cox transformation, we opted for a nonparametric statistical approach. Changes were assessed by means of Wilcoxon Signed-Rank test for paired data. Estimates of the 95% confidence intervals for the median change from pre-MBSR to post-MBSR were calculated using the Hodges–Lehmann procedure.²¹ Estimates of effect size were calculated by means of a nonparametric analog of Eta squared ($\eta^2 = z^2/N$).²² Change scores for the three mindfulness facets were correlated with changes in stress and burnout subscale scores by means of Spearman correlation coefficient (two-tailed). Cronbach's alpha was used as a measure of reliability and was calculated in our sample for each subscale from the MBI, FFMQ, RCRS, and SOC questionnaires, and also a single score for the PSS and BDI questionnaires.

RESULTS

Clinicians' Descriptive Data

Twenty-seven clinicians: 12 physicians, 8 psychologists, 3 nurses, 2 dieticians, 1 osteopath, and 1 research coordinator

participated. Their average age was 46.7 years ($SD = 11.5$); 76% were women. One physician dropped out (he attended four of the nine classes), and 1 psychologist did not complete the post-MBSR questionnaires. These two participants were excluded from the sample, and therefore, the sample size for the online questionnaires was 25. The sample size for the RCRS was 18 because 7 patients did not return for follow-up. Nine medical doctors (seven women and two men) provided audiotapes for pre-MBSR and post-MBSR encounters with their patients for analysis using the Roter interaction analysis system. Their specialties varied (cardiologist, addiction, internal medicine, oncologist, pediatric psychiatrist, and family doctor). Three other physicians provided pre-MBSR but not post-MBSR audiotaped data because their patients were discharged and did not return to the hospital.

Online Questionnaires

Changes in the online questionnaire data are summarized in TABLE 1. After program completion, clinicians showed significant reductions in stress (PSS: $z_{(24)} = -3.46$, $P = .001$, $\eta^2 = 0.48$). Examination of the MBI subscales revealed a significant decrease in depersonalization ($z_{(24)} = -2.31$, $P = .021$, $\eta^2 = 0.21$) and a significant increase in the sense of accomplishment ($z_{(23)} = 2$, $P = .046$, $\eta^2 = 0.16$). In addition to decreased burnout, depression scores also showed a significant reduction post-MBSR (BDI: $z_{(23)} = -3.78$, $P < .001$, $\eta^2 = 0.57$); the scores were in the nonclinical range both times. The three subscales of mindfulness significantly improved (nonreactivity: $z_{(25)} = 4.04$, $P < .001$, $\eta^2 = 0.65$; nonjudgment: $z_{(24)} = 3.51$, $P < .001$, $\eta^2 = 0.49$; and acting with awareness: $z_{(23)} = 2.68$, $P = .007$, $\eta^2 = 0.29$) as did sense of meaningfulness ($z_{(24)} = 2.96$, $P = .003$, $\eta^2 = 0.35$) from the Sense of Coherence questionnaire. All questionnaires showed adequate reliability (Cronbach's alpha for MBI–emotional exhaustion = 0.89, MBI–sense of accomplishment = 0.70, MBI–depersonalization = 0.75, PSS = 0.80, BDI = 0.78, FFMQ–acting with awareness = 0.87, FFMQ–nonjudgment = 0.86, FFMQ–nonreactivity = 0.84, SOC–meaningfulness = 0.80).

Correlations between the changes in mindfulness subscales with stress and burnout are found in TABLE 2. As can be seen, there were significant negative correlations, showing an increase in two facets of mindfulness and a decrease in stress. Similarly, there were significant negative correlations between emotional exhaustion and two facets of mindfulness.

Patient Rochester Communication Rating Scale

At baseline, 92.6% (25/27) clinicians' patients completed the questionnaire (one was eliminated because the doctor read it to the patient); 72% of questionnaires were completed post-MBSR (18/25). An analyses of the changes over time revealed significant increases in the subscales “interest in the patient as a person ($z_{(10)} = 2.15$, $P = .032$, $\eta^2 = 0.26$),” “understanding of the patient's experience of illness ($z_{(10)} = 2.46$, $P = .014$, $\eta^2 = 0.34$),” “attention to context ($z_{(13)} = 2.52$, $P = .012$, $\eta^2 = 0.35$),” and a significant increase in the total RCRS score ($z_{(16)} = 2.38$, $P = .017$, $\eta^2 = 0.32$). All subscales showed moderate to adequate reliability (Cronbach's alpha for “interest in the patient as a person” = 0.62, “understanding of the patient's experience of illness” = 0.68, “attention to context” = 0.49, “participation in care” = 0.60, and total RCRS score = 0.90) (TABLE 3).

TABLE 1.
Online Questionnaire Results

Clinicians (n = 25)	Pre-MBSR	Post-MBSR	95% CI	Effect Size	P
Stress	19.6 ± 4.1	14 ± 4.8	−8.5 to −3	0.48	.001*
Depression	8.0 ± 5.3	3.4 ± 4	−6.5 to −2.5	0.57	<.001*
MBI–exhaustion	23.7 ± 10.2	21 ± 12	−5 to 1	0.08	.165
MBI–accomplishment	37.9 ± 5.7	40.2 ± 6.3	0–3.5	0.16	.046*
MBI–depersonalization	6 ± 5.3	4 ± 4.9	−3.5 to −0.5	0.21	.021*
FFMQ–act with awareness	27.4 ± 4.6	30.1 ± 4.9	1–4.5	0.29	.007*
FFMQ–nonreactivity	19.7 ± 4	25.1 ± 4.4	3.5–7.5	0.65	<.001*
FFMQ–nonjudgment	28.1 ± 5.1	32.8 ± 6.1	2.5–7	0.49	<.001*
SOC–meaningfulness	43.7 ± 5.3	46.5 ± 6.5	1–4.5	0.35	.003*

Values represent mean ± SD. P values and 95% confidence intervals (CI) are relative to the difference between pre-MBSR and post-MBSR scores.

*Indicates statistically significant differences.

FFMQ indicates Five Facet Mindfulness Questionnaire; MBI, Maslach Burnout Inventory; MBSR, Mindfulness-Based Stress Reduction; SOC, Sense of Coherence.

We investigated whether changes in communication were correlated with changes in burnout subscales. An increase in the RCRS score for “understanding of the patient’s experience of illness” was significantly correlated with a decrease in the depersonalization subscale of the burnout inventory ($\rho_{(18)} = -0.626, P = .005$).

Roter Interaction Analyses System

Nonparametric statistics were run on the global scores but only one was found to be statistically significant (data not shown). These results may be viewed as descriptive. They show that it is feasible to conduct this part of the study.

Language Analyses

Patients

The total number of language acts increased from pre-MBSR to post-MBSR with more biomedical information (eg, I have pain in my lower back) and fewer non-medical-related statements (eg, I was on vacation).

Doctors

The number of language acts decreased from pre-MBSR to post-MBSR, with less paraphrasing and orienting the patient to the encounter (eg, I will take your blood pressure now). There were more statements reflecting agreement/understanding (eg, Yes, that is right), providing information pertaining to the therapeutic intervention (eg, Your blood pressure is stable now that you are taking your medications), medical advice (eg, No

salty foods), and “back channeling” ie, *indicating sustained interest* (eg, “Go on. . .”) and *encouragement*. This latter change reached statistical significance (change score = 3.10; $z_{(9)} = 2.56, P = .011$). According to Roter and Larson,¹⁹ back channeling does not imply agreement or acceptance of the ideas being expressed; rather it reflects *attentiveness*.

Doctors and Patients Together

Agreement and mutual understanding increased as did transitions (eg, Let me see. . .; Ah, wait a minute now. . .). Paraphrasing/verifying information decreased. Giving medical and psychosocial advice (eg, It would be helpful if you went out socially more often) increased, whereas other information giving decreased (eg, This interview will be recorded).

Global Scores

Verbal dominance is the ratio of clinician to patient talk. The pre-MBSR to post-MBSR scores indicated a slight decrease (mean values [SD] = 1.36 [0.37] and 1.29 [0.42], respectively). A score over 1.0 indicates that the physician was dominant.

The percentage of task-focused exchanges (eg, I want you to see the nutritionist next week) decreased slightly (mean values [SD] = 65.12 [10.27] and 63.93 [7.29], respectively).

The percentage of socioemotional exchanges (eg, You seem upset) increased slightly (mean values [SD] = 34.88 [10.27] and 36.07 [7.29], respectively).

The ratio of patient-centered categories of talk divided by the physician-centered categories of talk showed that pre-MBSR and post-MBSR scores were almost identical (mean values = 1.69

TABLE 2.
Correlations Between Changes in Facet of Mindfulness, Stress, and Burnout

Clinicians (n = 25)	Stress (PSS)	Exhaustion (MBI)	Depersonalization (MBI)	Accomplishment (MBI)
FFMQ–act with awareness	−0.254	−0.444*	−0.314	0.264
FFMQ–nonreactivity	−0.485*	−0.304	−0.297	0.152
FFMQ–nonjudgment	−0.651†	−0.512‡	−0.333	0.112

Values represent the nonparametric correlation coefficients for the correlations between changes in mindfulness scores (FFMQ) and changes in stress (PSS) and burnout (MBI) after MBSR. Increased mindfulness shows significant correlations with decrease in stress and burn out (emotional exhaustion). For the two subscales of nonjudgment and nonreactivity, a higher score indicates lower attitudes.

*P < .05.

†P < .001.

‡P < .01.

FFMQ indicates Five Facet Mindfulness Questionnaire; MBI, Maslach Burnout Inventory; PSS, Perceived Stress Scale.

TABLE 3.
Rochester Communication Rating Scale

	MDs (n = 7)		Clinicians (n = 18)				
	Pre-MBSR	Post-MBSR	Pre-MBSR	Post-MBSR	95% CI	Effect Size	P
Interest in patient as person	33.0 ± 5.1	34.0 ± 3.1	32.5 ± 4.2	34.4 ± 2.2	0–4	0.26	.032*
Understanding patient's experience of illness	26.6 ± 3.7	28.3 ± 2.4	26.8 ± 2.9	28.6 ± 2.2	0–3	0.34	.014*
Attention to context	6.9 ± 4.8	9.5 ± 2.0	7.7 ± 4.0	10.4 ± 1.9	0.5–4.5	0.35	.012*
Participation in care	28.6 ± 6.4	29.6 ± 8.0	26.7 ± 9.1	27.3 ± 12.0	–2 to 4.5	0.08	.233
Total score	95.1 ± 16.0	101.4 ± 12.6	93.7 ± 16.5	100.7 ± 14.7	1.5–13.5	0.32	.017*

P values and confidence intervals (CI) are relative to the difference between pre-MBSR and post-MBSR scores for the sample of 18 clinicians.

*Indicates statistically significant differences. N = 7 for the doctors because the Rochester Communication Rating Scale (RCRS) data of 2 MDs were missing.

MBSR indicates Mindfulness-Based Stress Reduction.

(0.59) and 1.68 (0.33), respectively), indicating that at both times, the physicians were patient centered using the same formula to construct this variable found in Beach et al.⁸

DISCUSSION

Consistent with reports from other countries (eg, Spain,² the United States of America,⁵ and Canada²³), French clinicians experienced decreases in stress and burnout and increases in mindfulness. Less stress correlated with less judgmental attitudes and reactivity. Less emotional exhaustion was correlated with increased acting with awareness and decreased judgmental attitudes. The course teaches participants how to cope with stressors and learning to be less reactive to them is a part of that process. When one is more aware of beliefs, emotions, and body sensations that indicate that a situation is challenging, one can pause to choose the most appropriate way to proceed. We hypothesized that when less stressed, burned out, and more mindful, clinicians would communicate better with their patients.

We asked patients to independently rate their clinicians' communication after a consultation. Three of four subscales (as well as the total score) of the RCRS increased post-MBSR: interest in the person as a patient, understanding the patient's experience of illness, and attention to context. Importantly, increases in understanding the patient's experience of illness were significantly correlated with decreases in depersonalization (ie, treating the person as a case with some degree of cynicism). These findings are in line with the significant change from the doctors' audiotapes, namely an increase in attentiveness reflected in the back-channel responses.

The audiotape data suggest that doctors spoke less; when they did speak, it was with more agreement, encouragement, and relevant medical advice. Patients spoke more. Together, there seemed to be mutual understanding and more discussion pertaining to psychosocial issues. At both time points, the doctors were patient oriented, even while verbally dominant. Although preliminary, the results are consistent with those from the cross-sectional study of Beach et al.⁸

The quantitative (from patients) and descriptive data (from the audiotapes) pertaining to the consultation converge implying that patients believed their doctors made an effort to understand their emotions, allowed them to tell their stories, checked to see if they were willing, and able to follow through with the treatment plan. Although apparently a positive outcome, other factors such as personality or severity of illness may

have influenced how the patients perceived their doctors rather than physicians engaging in mindful medical practice per se.

According to Antonovsky,¹³ having a sense of meaning contributes to being stress resistant, and this increased post-MBSR. With awareness, one is able to reappraise an event; for example, rather than labeling a patient as “difficult,” one may see the person as “interesting” and bring an open, curious mind to the medical encounter. In doing so, the motivation underlying the choice of profession—to relieve suffering—is revived, and this infuses work with meaning. What is meaningful it is less draining.²⁴

This study taught us some lessons. First, it is feasible to record and code medical encounters before and after MBSR. Second, it would be best to work with a relatively homogeneous type of clinicians whose consultations are similar in type and duration. We recorded but did not code data from other clinicians because they were too different. For instance, a psychologist guided a patient through hypnosis for an hour. Third, not only a larger sample size is needed for clinicians, but more patients per clinician are required to control for patient effects. This was performed by Beach et al⁸ where 10 consecutive patients were included for each physician. Clinicians knew that they were being rated, and it is possible that they altered their behaviors during recordings, but they would first need to be aware to modify them (eg, interrupting patients is common during consultations). Those who choose to take an MBSR course may be different (eg, more patient oriented) from those who do not, thus limiting the generalizability of the findings. Finally, we were not able to account for social desirability in either the clinicians' or patients' responses.

Although we focused on clinicians, it is important to keep in mind that they are not the only member of the dyad. Patients, especially those with chronic illness, need to be empowered to take responsibility for their health, be assertive with their caregivers, and be conscious of how they influence the doctor–patient relationship.²⁵ Zoppi and Epstein²⁶ (p. 320) refer to this as “intersubjectivity,” which includes the creation of shared meaning. “It is a process by which we understand others and are understood by them. The degree of intersubjectivity in communication can be marked by the degree to which both parties share the same goals, beliefs, and intentions concerning their work together.²⁶” This may ultimately contribute to better patient outcomes—the true intention of this work.

In conclusion, this study shows one way clinicians may become more resilient and offer excellent service without succumbing to compassion fatigue, burnout, or vicarious trauma

when working with chronically ill people. As apparent from the stories recently published in Dobkin's edited book, *Mindful Medical Practice: Clinical Narratives and Therapeutic Insights*, mindful clinicians are compassionate caregivers.²⁷ Future research may build on the methods used herein with larger samples of clinicians and patients to ensure statistical power to detect significant changes.

Lessons for Practice

- Mindfulness training has a positive impact on clinicians' well-being as seen in lowered stress and burnout levels, and increases in life being seen as meaningful.
- Patients' ratings of the clinical encounter suggested that patient-centered care increased when their clinicians were more mindful, less stressed, and burned out.

ACKNOWLEDGMENTS

The authors thank colleagues who supported us throughout the study: Pascale Pradat-Diehl, Maria Etchevers, Juliette Blanche, and Fabienne Jouanneau. The authors are grateful to the patients who accepted to have their medical encounter taped. The authors wish to thank Ms. Angelica Todoreanu for her administrative and technical support.

REFERENCES

1. Irving J, Dobkin PL, Park J. Cultivating mindfulness in health care professionals: a review of empirical studies of mindfulness-based stress reduction (MBSR). *Complement Ther Clin Pract*. 2009;15:61–66.
2. Asuero AM, Queraltó JM, Pujol-Ribera E, et al. Effectiveness of a mindfulness education program in primary health care professionals: a pragmatic controlled trial. *J Contin Educ Health Prof*. 2014;34:4–12.
3. Moody K, Kramer D, Santizo RO, et al. Helping the helpers: mindfulness training for burnout in pediatric oncology—a pilot program. *J Pediatr Oncol Nurs*. 2013;30:275–284.
4. Lovas JG, Lovas DA, Lovas PM. Mindfulness and professionalism in dentistry. *J Dent Educ*. 2008;72:998–1009.
5. Krasner MS, Epstein RM, Beckman H, et al. Association of an educational program in mindful communication with burnout, empathy, and attitudes among primary care physicians. *JAMA*. 2009;302:1284–1293.
6. Hick SF, Bien T, eds. *Mindfulness and the Therapeutic Relationship*. New York, NY: The Guilford Press; 2008.
7. Irving JA, Park-Saltzman J, Fitzpatrick M, et al. Experiences of health care professionals enrolled in Mindfulness-Based Medical Practice: a grounded theory model. *Mindfulness*. 2014;5:60–71.
8. Beach MC, Roter D, Korhuis PT, et al. A multicenter study of physician mindfulness and health care quality. *Ann Fam Med*. 2013;11:421–428.
9. Blacker M, Meleo-Meyer F, Kabat-Zinn J, et al. *Stress Reduction Clinic Mindfulness-based Stress Reduction (MBSR) Curriculum Guide*. Worcester, MA: University of Massachusetts Medical School; 2009.
10. Dobkin PL, Irving JA, Amar S. For whom may participation in a Mindfulness-Based Stress Reduction program be contraindicated? *Mindfulness*. 2012;3:44–50.
11. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *J Health Soc Behav*. 1983;24:385–396.
12. Beck A, Steer RA, Carbin MG. Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clin Psychol Rev*. 1988;8:77–100.
13. Antonovsky A. The structure and properties of the sense of coherence scale. *Soc Sci Med*. 1993;36:725–733.
14. Remen RN. Recapturing the soul of medicine: physicians need to reclaim meaning in their working lives. *West J Med*. 2001;174:4–5.
15. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav*. 1981;2:99–113.
16. Bohlmeijer E, Klooster PM, Fledderus M, et al. Psychometric properties of the Five Facet Mindfulness Questionnaire in depressed adults and development of a short form. *Assessment*. 2013;18:308–320.
17. Epstein RM, Dannefer EF, Nofziger AC, et al. Comprehensive assessment of professional competence: the Rochester experiment. *Teach Learn Med*. 2004;16:186–196.
18. Roter D. The enduring and evolving nature of the patient-physician relationship. *Patient Educ Couns*. 2000;39:5–15.
19. Roter D, Larson S. The RIAS: utility and flexibility for analysis of medical interactions. *Patient Educ Couns*. 2002;46:243–251.
20. Kabat-Zinn J. *Full Catastrophe Living*. New York, NY: Bantam Dell; 1990.
21. Lehmann EL. *Nonparametrics: Statistical Methods Based on Ranks*. San Francisco, CA: Holden Day; 1975.
22. Fritz CO, Morris PE, Richler JJ. Effect size estimates: current use, calculations, and interpretation. *J Exp Psychol*. 2012;141:2.
23. Irving JA, Dobkin PL, Williams G, et al. Mindfulness-Based Medical Practice (MBMP): a mixed-methods study exploring benefits for physicians enrolled in an 8-week adapted MBSR program. AMA-CMA-BMA International Conference on Physician Health (ICPH); 2012 Oct 25–27; Montreal, Quebec, Canada.
24. Shanafelt TD. Enhancing meaning in work. A prescription for preventing physician burnout and promoting patient-centered care. *JAMA*. 2009;302:1338–1340.
25. Dobkin PL. Mindfulness and whole person care. In: Hutchinson TA, editor. *Whole Person Care. A New Paradigm for the 21st Century*. New York, NY: Springer; 2011:69–82.
26. Zoppi K, Epstein RM. Is communication a skill? Communication behaviors and being in relation. *Fam Med*. 2002;34:319–324.
27. Dobkin PL, editor. *Mindful Medical Practice: Clinical Narratives and Therapeutic Insights*. Switzerland: Springer International Publishing; 2015.