

Are We Treating The Patient or the Disease?

Eleanor Vogt RPh, PhD, Professor, School of Pharmacy, University of California San Francisco

Patricia Shane PhD, MPH, Professor, College of Pharmacy, Touro University California

Henry Kahn MD, Professor, School of Medicine, University of California San Francisco

Key Words: Stress, psychosocial factors, emotional distress, whole patient care, integral care, mind-body, pharmacist care.

The authors have no conflicts of interest to disclose.

Abstract

The evidence abounds. A compelling body of research estimates that psychosocial stressors play a role in a significant number of patient complaints seen in primary care. In addition to the challenges faced by primary care clinicians who must consider their patients' psychosocial stressors, these factors can also affect pharmacists' care. Patient stress, through a number of mechanisms, can limit the efficacy of medicine as well as our efforts to achieve optimal medication management, and adds a poorly examined complexity to patient care practices. A landmark Institute of Medicine report calls for "whole patient" care, addressing psychosocial health needs, not as an embellishment, but as part of routine care. Whole patient care requires a fundamental shift, with patient needs at the center of healthcare delivery, and psychosocial-linked distress considered as integral to that model. These considerations place this topic squarely within the pharmacists' scope of practice and urgently call for an expanded approach to patient care and an opportunity for pharmacists to address that need. To parallel this discussion, the contributing role of practitioner stress is briefly reviewed.

Introduction

Evidence-based practice demands that we acknowledge the contributing factor of stress to the breakdown of the body. Chronic stress often stems from ongoing and unaddressed psychosocial issues in our patients' lives that factor into and complicate the etiology of ill-health, signs and symptoms of illness, and the development of disease states. For example, excess cortisol levels seen during a stress response may elevate blood pressure, or aggravate glucose regulation in a diabetic patient, or partially suppress the immune system. Elevated catecholamines may exacerbate cardiac arrhythmias and coronary artery disease. Stress can also interfere with medication management for patients, whose habits and coping responses to stress may include a higher vulnerability to forgetfulness, competing demands for attention, more limited capacity for adherence, a disturbed sleep pattern, smoking, alcohol and/or drug use/abuse, lack of exercise, poor nutrition, and obesity. Stress can occur when an individual's perceived challenges exceed his or her adaptive capacity. Chronic stress has been shown to either lead to or exacerbate depression, cardiovascular disease, HIV/AIDS progression, and cancer initiation, growth, and metastasis of some tumors. (1) Emerging evidence also

exists for stress being a significant factor in many other conditions including upper respiratory infections, asthma, herpes viral infections autoimmune diseases, and wound healing. (2)

A compelling body of research estimates that approximately 70% of the common presenting complaints in outpatient primary care are either directly caused or indirectly complicated by psychosocial stressors. (3) Even more prevalent are patients with sub-threshold psychosocial problems that are often unrecognized and untreated. Nearly 90% of these patients present with medically unexplained symptoms. For 67% of these patients, the unexplained symptoms are the only manifestation of their psychosocial problem. The physical symptoms lead primary care providers to seek and treat medical conditions that are not the true source of these patients' complaints. (4) In addition, although a review of non-adherence is beyond the scope of this article, there is a growing awareness of the connection between non-adherence to medical treatment and the complicating contribution of psychosocial and behavioral factors. (5) (6) (7)

The Emerging Field of Mind -Body Research

The research demonstrating the physiological impact of emotions continues to grow as we grapple with the all-too-obvious mind-body connection. For example, over the past 20 years researchers at the Institute of HeartMath have demonstrated the physiological effects that the feeling of

Corresponding author: Eleanor M. Vogt RPh, PhD
Health Sciences Clinical Professor; University of California San Francisco; School of Pharmacy; Office 415-502-7515
Email: eleanor.vogt@ucsf.edu

appreciation (to counter the feelings of stress) can have on heart rate coherence and the resulting entrainment on reductions in cortisol production and blood pressure with corresponding increases in DHEA, the “anti-aging hormone,” and Immunoglobulin A. (8). University of California San Francisco’s Elizabeth Blackburn, 2009 Nobel Prize winner for her research on telomeres and the enzyme telomerase, has demonstrated that psychological stress can reduce telomerase activity (TA), resulting in shortened telomere length (TL), an effect similar to that seen in aging. (9). More recent work indicates that high telomerase activity in combination with shorter leukocyte telomere length has an association with chronic stress in men, and is associated with reduced social support, lower optimism, early life adversity, and higher hostility. (10) In her 2013 top selling book, *Mind Over Medicine*, Lissa Rankin, M.D., presents peer-reviewed medical literature over the past 50 years attesting to the mind-body interplay, and the body’s innate ability to self-repair. (11) Dr. Rankin follows in the footsteps of a long line of physician pioneers and medical researchers who, while lauding the advances of medicine, especially in acute care, also point out the powerful “medicine” we all innately have by addressing our thoughts, feelings, beliefs and the stories we tell ourselves.

The Shift into Holistic Care

Over the past twenty years, parallel research in the emerging field of positive psychology has identified critical factors that help us live better; i.e., physical wellness research has moved into understanding the factors underlying emotional and behavioral thriving. Major academic research and medical centers now have focused initiatives exploring positive wellbeing and holistic care. Examples include: the University of Pennsylvania’s Positive Psychology Center, internationally recognized for their empirical studies in positive psychology and resilience (12), the University of Massachusetts Medical School’s Mindfulness Center for Medicine, Healthcare, and Society (13), the University of California San Francisco Osher Center for Integrative Medicine (14), and the Osher Institute, a collaboration between Harvard Medical School and Brigham and Women’s Hospital, which is focused on enhancing human health, resilience and quality of life. “We believe that by increasing our fundamental scientific understanding of human health, we are moving toward a new model of wellness and healing”. (15) To address this mind-body connection, the Columbia University School of Medicine offers a Masters in Science for physicians in Narrative Medicine, reminding all, as the school says, that the care of the sick unfolds in the stories of both the patient and the practitioner. (16) This humanistic approach incorporates wellbeing care alongside traditional sickness care. The

Master Scholars Program in Humanistic Medicine at New York University School of Medicine is dedicated to promoting humanistic values in medical education among young physician scholars to explore these mind-body relationships. (17) In addition, there are a growing number of foundations devoted to promoting humanism in medicine such as the Arnold P. Gold Foundation and the Healthcare Foundation Center for Humanism and Medicine at the New Jersey School of Medicine at Rutgers University. (18) (19)

Implications for Pharmacist Patient Care

An expanded scope of practice for pharmacy brings with it the opportunity to broaden the framework for patient care and acknowledge the implications for an enhanced role in addressing the myriad manifestations of stress. Pharmacists bring a wealth of expertise and professional skills to medicine-related health care delivery and clinical practice. However, they can also make significant contributions in fostering greater awareness regarding stress-linked ill-health, and encourage an array of stress reducing health behaviors and techniques. The Institute of Medicine (IOM) undertook a year-long study to develop better ways to improve patient care, specifically for cancer patients who often experience high levels of stress and distress. (20) The study resulted in a landmark report calling for “whole patient” care that addresses psychosocial health needs, not as an embellishment, but as part of *routine* care. The recommendation, developed from a compelling evidence base, is further evidence that integrating psychologic and pharmacologic interventions improves the patient experience and potentially has a powerful effect on the course of treatment. (21) Incorporating assessment of emotional well-being is a key part of shifting the focus to the whole person, rather than the disease. This has led to a growing awareness that we need to assess the “sixth vital sign” of emotional distress as a core indicator of a patient’s health and wellbeing. The implication is that monitoring of emotional distress should be undertaken as routinely as monitoring of the other vital signs. It is altogether reasonable to conclude that compassionate, patient centered care requires a fundamental shift, with patient needs at the center of healthcare delivery, and psychosocial-linked distress considered as integral to that model.

Given the emerging evidence it appears worthwhile to reexamine foundational aspects of medication therapy management (MTM), and consider the exhortation attributed to Hippocrates. “*It is more important to know what sort of person has a disease than to know what sort of disease a person has.*” Within a more humanistic framework that embraces the narratives, hopes, aspirations and fears of our patients and acknowledges the critical role that

psychosocial stressors play in illness and disease, MTM has the potential to go beyond pills and potions. Not all disease is amenable to medication. But the healing properties of human interaction, while sometimes difficult to quantify through the microscope of scientific methods, are nonetheless powerful and persistently evident in the human experience. As the evidence grows for the clinically important role of the patient experience, the quality of human interaction in delivery of health care, and holistic patient approaches, it is conceivable that payers will recognize and incentivize interventions rooted in whole patient models. Nevertheless, there is an intrinsic reward and deep satisfaction for the practitioner in providing the best possible, evidence-based, patient care.

Techniques and Tools for Pharmacist Coaching and Patient Motivation

As in all problem-solving, *awareness* of the problem is a key. Pointing out that ignoring stress (particularly chronic stress) might play a role in aggravating physical symptoms or disease states, or complicate adherence to therapy, could be a pivotal insight for a patient and takes minimal time for the pharmacist. For example, to measure the 6th vital sign of distress, asking the patient to indicate a score on a “distress thermometer” could be a rich “teachable moment.” This simple paper and pencil tool asks the patient to circle a number on the thermometer that describes how much distress they have been experiencing in the past week. The second section asks the patient to indicate on a checklist what areas of their life have been a problem during the past week. The patient can complete this at home or in the pharmacy in just a few seconds. (22) This provides an opportune motivational moment to recommend a variety of interventions such as a follow up with their primary care provider and/or recommendations for any of the multiple and widely available self-help books, programs and resources on de-stressing. In addition, there are a number of simple, well-documented and well-researched stress reducing techniques that do not require professional expertise to teach, or to learn, that the pharmacist, in an appropriate setting, can also recommend. For example, some de-stressing techniques include taking two or three deep breaths; actively generating a feeling of appreciation; telling a positive story (narrative reframing); developing a gratitude induction practice (i.e., “counting your blessings”) or a reminder to take short mindfulness breaks to figuratively or literally go out and smell the roses. These techniques could prove to be extremely potent medicine for the patient when suggested by the pharmacist in a caring and trusting exchange. (For resources see 8, 12, 13, 14, 15, 22, 23).

Implications for the Pharmacist Practitioner and Student

An exploration of the implications of stress on patient care must include the practitioner. Professional pharmacists (like many health professionals) are not immune to the effects of chronic stress. When asked the most *unfavorable* part of being a pharmacist today in the U.S. they are most likely to indicate issues related to workload, working conditions, bureaucracy and insurance contracts. (24) Working within stressful conditions has the potential to be deleterious on multiple levels. It can contribute to system breakdown and medication errors. It can distract from attentive listening and patient engaged consultations. It can disrupt the communication exchanges that rely on empathy and engendering trust, and unwittingly lead to failures in disclosure of patient narratives.

In fact, our students are already showing signs of stress as measured in PharmD students HRQOL (Health Related Quality of Life). Third-year PharmD students report relatively high levels of stress and low mental HRQOL. Mental HRQOL scores were significantly below US mean score for individuals aged 20-34 years (p,0.0001). As stress increased, mental HRQOL decreased and a significant negative correlation was found between the 2 measures (p,0.001). In another study of medical, pharmacy, nursing and dentistry students, results showed that a higher than expected percentage of students (27.5%) were currently experiencing psychiatric levels of distress. (25) (26)

Perhaps this is a facet of a national trend indicating a “precipitous decline in empathy” among U.S. college students. Since 1980 scores have dropped 34 percent on “perspective taking” (the ability to imagine others' points of view) and 48 percent on “empathic concern” (the tendency to feel and respond to others' emotions). (27) Importantly, studies assessing empathy among pharmacy students operationalize the construct as a) understanding patients' concerns; b) having the capacity to communicate this understanding, and c) having an intention to help. (28) Clearly, these trends in declining empathy represent a reason for concern.

Conclusion

It is imperative that patient care evolves to achieve a fundamentally more integrated framework that recognizes the psychosocial responses to chronic stress. The research and growing awareness of psychosocial-linked distress to disease and treatment adherence places this issue front and center within the pharmacists' scope of practice. The urgent call for an expanded approach to patient care provides an opportunity for pharmacists to make a unique and “game changing” contribution to whole patient care. What could be

achievable if we more successfully integrate medication therapy with the healing capacity of a whole patient model combined with empathic pharmacist care?

References

1. National Cancer Institute Fact Sheet. Available at <http://www.cancer.gov/cancertopics/factsheet/Risk/Stress>. Accessed October 20, 2014.
2. Cohen S, et al., Psychological Stress and Disease, JAMA October 10, 2007; 298 (14): 1685-1687.
3. Beek K, et al., Counseling and Wellness Services Integrated with Primary Care: A Delivery System That Works, The Permanente Journal, Fall 2008; 12 (4): 20-24
4. Smith R. et al., Addressing mental health issues in primary care: An initial curriculum for medical residents. Patient Education and Counseling. 2014; 94, 33-42.
5. Kronish I. Adherence to Cardiovascular Medication: Lessons Learned and Future Directions. Progress in Cardiovascular Diseases. 2013; 55(6): 590-600.
6. Aggarwal B and Mosca L. Lifestyle and Psychosocial Risk Factors Predict Non-Adherence to Medication. Ann Behav Med. Oct 2010; 40(2): 228-233.
7. Zeber J, et. al., A Systematic Literature Review of Psychosocial and Behavioral Factors Associated with Initial Medication Adherence: A Report of the ISPOR Medication Adherence & Persistence Special Interest Group. Value in Health 16 (203) 891-900.
8. Refer to www.Heartmath.org. See extensive library on the heart-brain connection and the measureable effects on the body and emotions. Accessed October 18, 2014.
9. Puterman E, Lin J, Krauss J, Blackburn EH, Epel ES. Determinants of Telomere Attrition Over 1 Year in Healthy Older Women: Stress and Health Behaviors Matter. Mol Psychiatry. 2014; Jul 29. Also see <http://www.ucsf.edu/news/2011/02/9353/aging-telomeres-linked-chronic-disease-and-health> for an overview of Blackburn and Epel's research on telomeres, stress, aging and health. Accessed October 18, 2014.
10. Zalli A, Carvalho LA, Lin J, Hamer M, Erusalimsky J, Blackburn E, Steptoe, A. Shorter Telomeres with High Telomerase Activity Associated with Raised Allostatic Load and Impoverished Psychosocial Resources. PNAS, March 25, 2014; 111(1), 4519-4524.
11. Rankin L. Mind Over Medicine; Scientific Proof That You can Health Yourself. Carlsbad, CA: Hay House, Inc.; 2013.
12. University of Pennsylvania Positive Psychology Center. Available online: <http://www.positivepsychology.org/> Accessed October 18, 2014.
13. University of Massachusetts Center for Mindfulness in Medicine, Healthcare and Society. Available online: <http://www.umassmed.edu/cfm/> Accessed October 18, 2014
14. University of California San Francisco Osher Center for Integrative Medicine. Available online: <http://www.osher.ucsf.edu/> Accessed October 18, 2014
15. Harvard University Osher Center for Integrative Medicine. Available online: <http://oshercenter.org/> Accessed October 18, 2014
16. Columbia University School of Medicine Master's Degree in Narrative Medicine. Available online: <http://ce.columbia.edu/narrative-medicine>. Accessed October 18, 2014. .
17. New York University School of Medicine, Humanistic Medicine. Available online: <http://school.med.nyu.edu/humanisticmed>. Accessed October 18, 2014.
18. Arnold P. Gold Foundation. Available online: <http://humanism-in-medicine.org>. Accessed on October 18, 2014.
19. The Healthcare Foundation Center for Humanism and Medicine. Available online: <http://njms.rutgers.edu/education/humanism>. Accessed October 18, 2014.
20. Institute of Medicine Report on Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs. Washington DC: . National Academies Press; 2008. The full report is also available online at <http://www.nap.edu>.
21. Lowery, AE and Holland, JC. Screening Cancer Patients for Distress: Guidelines for Routine Implementation. Community Oncology, 2011; 8(11), 501-505.
22. Distress Thermometer. Published by Hillingdon Oncology and Palliative Team. The Hillingdon Hospital, Hillingdon, U.K., U B83NN. Available online at: <http://www.nwlc.nhs.uk/Downloads/Specialist-and-palliative-care/The%20Distress%20Thermometer%20leaflet%20draft.pdf>. Accessed November 25, 2014.
23. Emmons R. Thanks! How Practicing Gratitude Can Make You Happier. New York: Houghton Mifflin Books; 2008. Also see <http://emmons.faculty.ucdavis.edu/>. Accessed October 19, 2014.

24. An International Survey on Pharmacists' Views On Their Changing Roles. Grant from Pfizer in collaboration with International Pharmaceutical Federation. August 30, 2010. (Press Release Online at <http://www.fip.org/files/fip/news/FIP%20Pfizer%20Survey%20Data.pdf>. Accessed November 25, 2014.
25. Henning K., Ey, S. and Shaw D. (1998), Perfectionism, the Impostor Phenomenon and Psychological Adjustment in Medical, Dental, Nursing and Pharmacy Students. *Medical Education*, 32: 456–464.
26. Marshall L. et al. Perceived Stress and Quality of Life Among Doctor of Pharmacy Students
27. *Am J Pharm Educ.*, 2008; 72(6) Article 137.
28. Konrath S, O'Brien E and Hsing, C. Changes in Dispositional Empathy in American College Students Over Time: A Meta-Analysis. *PersSocPsychol Rev*, August. 5, 2010.
29. Fjortoft N, Van Winkle L, and Hojat, M. Measuring Empathy in Pharmacy Students. *Am J Pharm Educ.*, 2011; 75(6) Article 109, 1-6.