

Designing and implementing a resiliency program for family medicine residents

Julie Brennan¹ and Angele McGrady²

The International Journal of

Psychiatry in Medicine

2015, Vol. 50(1) 104–114

© The Author(s) 2015

Reprints and permissions:

sagepub.com/journalsPermissions.nav

DOI: 10.1177/0091217415592369

ijp.sagepub.com



Abstract

Family medicine residents are at risk for burnout due to extended work hours, lack of control over their work schedule, and challenging work situations and environments. Building resiliency can prevent burnout and may improve a resident's quality of life and health behavior. This report describes a program designed to build resiliency, the ability to bounce back from stress, in family medicine residents in a medium sized U.S. residency training program. Interactive sessions emphasized building self-awareness, coping skills, strengths and meaning in work, time management, self-care, and connections in and outside of medicine to support resident well-being. System changes which fostered wellness were also implemented. These changes included increasing the availability of fresh fruits in the conference and call room, purchasing an elliptical exercise machine for the on call room, and offering a few minutes of mindfulness meditation daily to the inpatient residents. Results to date show excellent acceptance of the program by trainees, increased consumption of nutritious foods, more personal exercise, and self-reported decreased overreactions to stress. Resiliency programs can effectively serve to meet accreditation requirements while fostering residents' abilities to balance personal and professional demands.

Keywords

Medical resident, wellness, resiliency, burnout

¹Department of Family Medicine, University of Toledo, OH, USA

²Department of Psychiatry, University of Toledo, OH, USA

Corresponding author:

Julie Brennan, University of Toledo, 3333 Glendale Toledo, OH 43614, USA.

Email: Julie.brennan@utoledo.edu

Conceptual background

Medical residency is a high stress period during which resident physicians work long hours, have high responsibility and little control over their day.¹ Taken together these stressors predispose residents to an elevated risk for decreased well-being, distress and burnout, the triad of emotional exhaustion, depersonalization and cynicism, and a reduced sense of personal accomplishment resulting in significant psychological distress.² Distress and burnout are associated with absenteeism, medical errors, and may lead to the emergence of mood and anxiety disorders.^{1,3,4} Factors in residency training that may increase the risk for burnout in resident physicians include competing time demands, lack of control, high responsibility, low team support, excessively challenging work situations and environments, low confidence, and interpersonal conflict.^{1,5-7}

The prevalence of burnout in resident physicians has been described as higher than medical students and practicing physicians, ranging from 27% to 75%.^{5,8} Internship year is a particularly high-risk time for burnout especially during high demand rotations and in the latter half of the year.^{1,6} Parenting and being female have been considered factors that elevate the potential for burnout but recent research suggests that parenting may provide a protective factor, and women may not be at as high of a risk as previously found.⁷ Residents from U.S. medical schools have higher risk of burnout from depersonalization and emotional exhaustion when compared with international medical graduates.⁷

The implementation of duty hour limitations appears to have lowered symptoms of burnout; however, this intervention does not address all sources of distress and burnout.⁵ In a study of family medicine residents following the implementation of duty hours, 14%–24% scored high in elements of burnout and 23% scored in a range consistent with a risk for clinical depression.⁹ Burnout correlated with high levels of perceived stress, depression, and alcohol use, whereas behaviors associated with well-being were restful sleep and physical activity. Unfortunately, wellness behaviors (physical activity, restful sleep, healthy eating) were uncommon (20%–25%).

A critical question facing medical educators is whether the focus of intervention with resident physicians is to prevent burnout or to promote wellness and resilience. This report strongly advocates the latter while recognizing that the culture of medicine emphasizes selflessness and deferral of personal needs for the good of patients. For example, the United States Accreditation Council for Graduate Medical Education (ACGME) requires resident physicians achieve competence in six major domains: Medical Knowledge, Patient Care, Practice-based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, and System Based Practice. One requirement included in professionalism is that “residents are expected to demonstrate responsiveness to patient needs that supersedes self-interest.”¹⁰

Specific milestones included in the family medicine competencies include the expectation that resident physicians engage in activities that support their “emotional, physical, and mental health” and that residents are expected to “pursue continual personal and professional growth.”¹¹ Residents are expected to acquire the skills and abilities to balance their well-being with those of the patient, recognize signs of fatigue and impairment in oneself and others, and apply the principles of physician well-being to their patient care. These accreditation requirements signify the emergence of a culture shift in the institutional structure of medical education.

Nedrow et al.¹² created a framework for linking the cultural norms of medicine that lead to burnout with potential interventions that promote resiliency. One example in their framework addresses the cultural norm of providing service which can result in compassion fatigue. They suggest that teaching skills of cognitive reframing, appreciation, and gratitude may help the physician avoid burnout and promote resiliency. Other medical cultural norms identified in their model are excellence, curative competence, and compassion, all of which can lead to emotional exhaustion, ineffectiveness, cynicism, and depersonalization when overemphasized. Intervention strategies that balance overinvestment in those norms and foster resilience include mindful self-compassion, self-awareness, listening, connection with others, and periods of silence.

A fundamental component of wellness is resiliency, the “ability of an individual to respond to stress in a healthy, adaptive way such that personal goals are achieved at minimal psychological and physical cost.”¹³ It once was thought of as an inherited, stable personality trait, but recent research suggests that this characteristic can be enhanced through the acquisition of specific skills.^{12–16} Practicing physicians who demonstrate resilience have a better sense of well-being, provide a better quality of care, and contribute to an overall decrease in health-care costs.⁴

Resiliency has three essential components: insight, self-care, and values.¹² The component of insight includes learning to be self-aware, to accept limits and errors, to acknowledge uncertainty, and to problem solve. Additionally, developing insight means to self-regulate, identify physiological reactions and learn to manage them in order to diminish the effects of stress. Self-care begins with engagement and finding ways to nourish the self in the midst of tough situations. It includes learning to set boundaries and obtaining support both from individuals within and outside the health-care system where the resident is employed. The component of values addresses finding meaning and purpose in one’s work and personal life, appreciating the good things in medicine and in life, and, for some resident physicians, nurturing their spiritual life.

Curriculum development

Few outcome studies focus on interventions to prevent burnout and promote resiliency during residency training. This report describes a curriculum designed

to improve resident physicians' resiliency skills, quality of life, and health behavior while decreasing burnout and general psychological distress. It describes the initial results of an investigation of intervention efforts to improve resident resiliency and well-being. The study was completed at the University of Toledo Family Medicine Residency which has 12 family medicine resident physicians and serves a suburban patient population in the Midwestern United States. The study was approved by our university Institutional Review Board and was identified as an expedited study.

Residents were required to attend educational sessions but could opt out of the data collection portion. The resiliency program was created based on a literature search related to major risk factors associated with physician burnout and characteristics of well and resilient residents and physicians. Additionally, the authors relied on seven years of experience implementing a wellness program for medical students.^{17,18}

A preassessment was conducted through group discussion in order to best understand the residents' needs to support their well-being on an individual and systems level. On an individual level, residents identified wanting to build self-awareness, learn specific stress management skills, improve their health behavior (particularly nutrition and physical activity), and learn effective time management. On a system level, the residents wanted increased support and social activities, a team approach to problem solving, and redistribution or increased resources related to wellness-related activities. From this assessment, the resiliency curriculum became more than a curriculum; it was about building a professional culture of wellness and resiliency.

A series of interactive, experiential sessions were designed based on a review of the resiliency/well-being literature specific to residents and physicians.¹²⁻²² The authors designed each session to be congenial and supportive. Table 1 lists the session topics and provides a brief description for each section.

The sessions emphasized concepts such as identifying personal and professional values, improving self-awareness, balancing and prioritizing professional and personal time, using values to improve time management, maintaining supportive professional and personal relationships, and learning effective relaxation strategies. Positive psychology and mindfulness principles formed a foundation for the culture of wellness and included increasing positive connections, perceived control, finding meaning in work and personal life, acceptance of challenges and changes, and slowing down to be present in the moment.

Prior to the first session residents completed a confidential health risk appraisal (HRA) which was scored off site. This tool was utilized to focus on the self-care element of resiliency. The HRA provided each resident physician a Wellness Score and described their strengths and areas of potential growth related to their physical and emotional health. Preventive physician visits and screens were a large part of the HRA, and caring for their own medical needs was emphasized. Additionally, residents and faculty were paired with peer health partners to help

Table 1. List and description of activities resiliency sessions.

| Topic | Description |
|---|--|
| Introduction to Wellness and Resiliency | <p>Introduce resilient habits to incorporate throughout the year</p> <p>Increase awareness of optimal functioning and the balance between activation and performance</p> <p>Discuss warning signs of being overloaded</p> <p>Use Health Risk Appraisal data to assess strengths and areas for improvement and set a personal goal for the year</p> <p>Participate in meditation exercise</p> |
| Family Session and Life Maps | <p>Discuss importance of spending time with family and balancing work and home</p> <p>Share faculty life maps and meet their families</p> <p>Create a life map starting with medical training and continuing 5 years in the future</p> <p>Reflect on patterns and holes in personal life map</p> |
| Positive Psychology | <p>Conduct values survey and identify strengths</p> <p>Create a mission statement for life using core values</p> <p>Cultivate positive perspective and gratitude even during negative experiences</p> <p>Teach and practice savoring past, present and future events/emotions</p> <p>Participate in relaxation exercise using imagery to practice gratefulness</p> |
| Mindfulness | <p>Increase understanding/awareness of mindfulness</p> <p>Practice mindful eating meditation</p> |

(continued)

Table 1. Continued

| Topic | Description |
|---|--|
| Time Management/ Stress coping | Apply mindfulness to work, personal life through experiential exercises Participate in mindfulness meditation Develop cognitive strategies to manage time and stress Discussing how to create a sense of control in residency Create plan for improving time management and reducing stress Participate in relaxation/coping exercise |
| Outdoor Team Building | Participate in an outdoor activity Incorporate team building exercises within activity Practice teamwork and apply to personal and professional life |
| Balancing Personal and Professional Life | Question and answer time to physician role models Bringing it all together Discuss about their experience with finding balance Revisit Health Risk Assessment (HRA) data Compare past and present health behavior |

them achieve any goal that they set for the year. The HRA was also given at the end of the academic year to allow the residents to determine if they have made improvements.

System changes that occurred on an ongoing basis included a daily 1- to 2-min mindfulness meditation for those on the inpatient rotation before table rounds. These meditations were prerecorded by the authors onto an mp3 player and kept in the conference room at the hospital. Additionally, meditations were included before didactic sessions when the author was presenting at conference time.

Meetings with the resident physicians included resiliency and wellness topics such as how to schedule residents' medical appointments, changes in rotation schedules that would decrease resident stress, and methods for focusing on gratitude and positive events. A jumbo wall calendar of the two upcoming months was updated for all residency social events, community and personal events. Additionally, residents and faculty created and presented a personal or family life map during a monthly residency meeting. Each life map ended with the vision of the ideal self.²³ The ideal self is what each resident imagined how their medical practice and personal life would become followed by an honest assessment of how far their current day-to-day life is from the dream.

Health needs were addressed by placing an elliptical machine in the call room to make physical activity more available particularly to residents while on call. Fruits and vegetables were also provided on most weeks in the Family Medicine Center conference room or the hospital call room to make healthier options available. A healthy cooking session occurred where the residents all created two meals for themselves and were given helpful hints about healthy, quick cooking ideas by a chef and registered dietitian. Furthermore, e-mails, phone applications, and texts were used throughout the year to reinforce the principles learned and discussed during the sessions.

Building a resiliency program consists of acknowledging what each resident brings to the residency and that they are capable people. Each resident physician comes to the program as an individual from diverse parts of the world and they become part of the family medicine residency. Resident physicians bring their skills, work ethic, dedication to patients, motivation, self-discipline, and their goals and dreams. Building a resiliency program assumes that a foundation already exists so what will be taught builds on present capacity.

For a first year resident coming to a new clinical environment and geographic region, a reassessment of personal strengths and liabilities is necessary and each were encouraged to identify their strengths as part of a personal and professional growth process. It was important to determine what kept them grounded and healthy during medical school and what skills and resources they rely on in times of stress. Residents identify the essential elements of their well-being but must be prepared to make adjustments in order to maintain emotional health.

Performance to date

Two family medicine residency programs are currently involved in this program, an intervention group with 10 residents and a control group with 13 residents. The control group residents are receiving the LIFE Curriculum²⁴ mandated by the family medicine residency. The effectiveness of the resiliency program is ongoing and undergoing evaluation through standardized, validated psychological inventories and data from the HRA. The psychological inventories include the Connor-Davidson Resilience Scale,²⁵ the Professional Quality of Life Scale,^{26,27} the Maslach Burnout Inventory.² All instruments have proven psychometric properties, have been used in intervention studies, and assess health behavior, resiliency, quality of life, and burnout. Data was collected at the beginning of the academic year and quarterly with the final assessment at the end of the academic year.

The majority of the resident physicians at both sites are international medical school graduates. Their initial scores on the Maslach Burnout Inventory revealed that 22% rated themselves high in emotional exhaustion, 9% had levels of depersonalization in the high range, and 48% rated themselves low in personal accomplishment. About half rated themselves as being low in perceived competence or having little success in their work. Compared to most Americans, the residents scored lower on a resiliency scale and approximately the mean on scales of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress (2).

Strengths identified among their health behaviors were that most did not smoke cigarettes or drink alcohol regularly, most reported having strong relationships in their life, and most ate high fiber foods multiple times a day. Health behaviors that were of concern included obtaining less than 6 h of sleep a night and exercising less than once a week. Many did not know their blood pressure or cholesterol levels, and most ate fatty food every day. Overall, resident physicians in this investigation put their learning and patient needs above their personal well-being, sacrificing sleep, health-care appointment keeping, good nutrition, and regular exercise.

The residents in the intervention group have evaluated the resiliency sessions as very useful with an average rating of 9.25 on a 1–11 ascending scale. Indications of the success of the program included resident physicians emailing photos of the inpatient group meditating, boasting about their progress in increasing their physical activity, and asking for further mindfulness meditation training. Qualitative feedback about the program includes comments such as, “It just feels nice to know that the faculty really cares about our well-being,” “We really appreciate the fruit and veggies and exercise machine,” “Being more relaxed helps me think better,” and “I plan to try to memorize good moments and use them for difficult times.”

The support of the entire residency team, program director, coordinator, faculty, and residents has been critical to the success of this resiliency program.

A supportive atmosphere is conducive to growth on a psychological and educational level. Further, it is critical to tailor and adapt recommendations from the literature to meet unique program characteristics. The major challenge to implementing our wellness and resiliency interventions has been the difficulty scheduling all residents at the experiential sessions. While these sessions are mandatory, residents miss sessions due to rotations, vacations, and sickness. It has been necessary to schedule alternative sessions for those residents but logistical barriers are significant.

Generalization

The wellness and resiliency curriculum described in this report is sufficiently broad and universal that it can be adapted in most family medicine and other specialty residencies. Current ACGME requirements strongly support the development of such programs.

System-based and individual interventions must be addressed if wellness and resiliency programs are to be effective.^{5,22} System-based interventions begin with a supportive, congenial, and positive team culture that openly values resiliency practices. Availability of healthy food and exercise equipment, increasing opportunities for rest, specifically addressing workload concerns, increased control, mentoring, adopting an employee assistance program, and providing opportunities for building resiliency are some strategies that systems can support.^{5,6,22}

Key elements for building individual resiliency programs include fostering self-awareness, mindfulness and acceptance, value identification, spirituality, balance, time/energy management, setting limits, engagement, and learning effective communication strategies.^{5-9,12-22} Self-awareness and mindfulness can be enhanced through formal or informal mindfulness exercises, Balint Groups, journaling, and reflective questioning. Acceptance training teaches an attitudinal shift that can be modeled by supervising physicians who acknowledge that physicians are human, have limits, face uncertainty, and make medical errors. Identifying one's values, including spiritual values, and balancing one's life by prioritizing these values is essential to teach resident physicians how to manage time and energy effectively. Setting limits and boundaries, finding time to sleep, eat well, play, and exercise is a struggle for many resident physicians but can be role modeled by practicing physicians. Teaching resident physicians how to communicate effectively and mindfully can improve their ability to process and cope with difficult situations.

A needs assessment is critical before adapting any of the above-noted components of a wellness-resiliency program. It is important to design a curriculum which is guided by the literature but remains flexible and personalized to meet the needs of the residency setting. Without assessing the specific needs of a resident physicians group, it may be difficult to engage residents or prevent minimization or resistance.

Authors' note

This article was presented at the 35th Forum for Behavioral Science in Family Medicine, Chicago, IL, 20 September 2014.

Acknowledgments

The authors would like to thank the Academy of Educators Grant at the University of Toledo Medical Center for their generous support of this project. The authors would also like to thank Linda Myerholtz, Ph.D., and Mercy Health Systems.

Conflict of interest

None declared.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

1. Thomas NK. Resident burnout. *JAMA* 2004; 292: 2880–2889.
2. Maslach C, Jackson SE and Leiter MP. *Maslach burnout inventory manual*, 3rd ed. Palo Alto, CA: Consulting Psychologist Press, 1996.
3. McCray LW, Cronholm PF, Bogner HR, et al. Resident physician burnout: is there hope? *Fam Med* 2008; 40: 626–632.
4. Walsh K. An economic argument for investment in physician resilience. *Acad Med* 2013; 88: 1196.
5. Ishak WW, Lederer S, Mandilj C, et al. Burnout during residency training: a literature review. *J Grad Med Educ* 2009; 1: 236–242.
6. Hurst C, Kahan D and Ruetalo M. A year in transition: a qualitative study of examining the trajectory of first year residents' well-being. *BMC Med Educ* 2013; 13: 96.
7. Woodside JR, Miller MN, Floyd MR, et al. Observations on burnout in family medicine and psychiatry residents. *Acad Psychiatry* 2008; 32: 13–19.
8. Martini S, Arfken DL and Churchill A. Burnout comparison among residents in different medical specialties. *Acad Psychiatry* 2004; 28: 240–242.
9. Lebensohn P, Dodds S, Benn R, et al. Resident wellness behaviors: relationship to stress, depression, and burnout. *Fam Med* 2013; 45: 541–549.
10. Accreditation Council for Graduate Medical Education (ACGME). Common program requirements, http://www.dconnect.acgme.org/acWebsite/navPages/commonpr_documents/IVA5e_EducationalProgram_ACGMECompetencies_Professionalism_Documentation.pdf (accessed 7 January 2015).
11. The Family Medicine Milestone Project. A joint initiative of the accreditation for graduate medical education and the American Board of Family Medicine, <http://www.acgme.org/acgmeweb/Portals/0/PDFs/Milestones/FamilyMedicineMilestones.pdf> (2013, accessed 15 January 2015).
12. Nedrow A, Steckler NA and Hardman J. Physician resilience and burnout: can you make the switch? *Fam Pract Manag* 2013; 20: 25–30.

13. Epstein RM and Krasner MS. Physician resilience: what it means, why it matters and how to promote it. *Acad Med* 2013; 88: 301–303.
14. Jensen PM, Trollop-Kumar K, Waters H, et al. Building physician resilience. *Can Fam Physician* 2008; 54: 722–729.
15. Zwack J and Schweitzer J. If every fifth physician is affected by burnout, what about the other four? Resilience strategies for experienced physicians. *Acad Med* 2013; 88: 382–389.
16. Lee FJ, Brown JB and Stewart M. Exploring family physician stress. *Can Fam Physician* 2009; 55: 289–289e6.
17. McGrady A, Brennan J, Lynch D, et al. A wellness program for medical students. *Appl Psychophysiol Biofeedback* 2012; 37: 253–260.
18. Brennan J, McGrady A, Whearty K, et al. Emotional status of third year medical students and their response to a brief intervention. *Ann Behav Sci Med Edu* 2012; 88: 10–14.
19. Beckman H, Wendland M, Mooney C, et al. The impact of a program in mindful communication on primary care physicians. *Acad Med* 2012; 87: 815–819.
20. Krasner M, Epstein R, 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.
21. Fortney L, Luchterband C, Zakletskaia L, et al. Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: a pilot study. *Ann Fam Med* 2013; 11: 412–420.
22. Place S and Talen M. Creating a culture of wellness: conversations, curriculum, concrete resources and control. *Int J Psychiatry Med* 2013; 45: 333–344.
23. Rogers C. A theory of therapy, personality and interpersonal relationships as developed in the client-centered framework. In: Koch S (ed.) *Psychology: a study of a science. Vol. 3: formulations of the person and the social context*. New York, NY: McGraw Hill, 1959.
24. Andolsek K and Cefalo R. *Learning to Address Impairment and Fatigue to Enhance Patient Safety (LIFE) Curriculum*. Durham, NC: Duke University School of Medicine, 2005.
25. Windle G, Bennett K and Noyes J. A methodological review of resilience measurement scales. *Health Qual Life Outcomes* 2011; 9: 8.
26. Stamm BH. *The concise ProQOL manual*, 2nd ed. Pocatello, ID: ProQOL.org, 2010.
27. Figley CR and Stamm BH. Psychometric review of compassion fatigue selftest. In: Stamm BH (ed.) *Measurement of stress, trauma and adaptation*. Lutherville, MD: Sidran Press, 1996.