From burnout to balance

-an attainable journey?

Break-out session III April 12th, 2017 Bhavana Kandikattu, MD Associate Professor of Clinical Pediatrics Department of Pediatrics University of Illinois College of Medicine, Peoria

Objectives

- To define burnout and depression amongst healthcare providers and recognize the need to make it a part of our conversation
- To discuss the impact of burnout on various levels of training in physicians
- To introduce Cognitively-based compassion training (CBCT ®) as a technique towards long-term stress relief
- To discuss CBCT ® opportunities in Peoria
- Financial interest: I have no financial interests to disclose







What is burnout?

BURNOUT = To burn-out : estar quemado ó consumido.

- Otros: - Síndrome de Cansancio Emocional (Civetta, M. 1980)
- Síndrome del Quemado
 (De la Torre, M. V & otros, 1998)



Herbert Freudenberger 1974

Burnout is a syndrome of a triad of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity



Burnout

- According to psychologists, signs of burnout include:
 - Decreased enthusiasm for work
 - Growing cynicism
 - Low sense of personal accomplishment
- Individuals suffering from burnout feel as though a fire that once burned inside them has dwindled, and perhaps even been entirely extinguished.
- In many cases, they report a sense of having "run out of fuel," feel as though they "have nothing left."







Why do we need to talk about this?

- Of nearly 7,300 physicians who participated in the Archives of Internal Medicine's national survey, 46% reported at least one symptom of burnout, and the overall rate of burnout among physicians was 38%, as opposed to 28% among other US workers. The highest rates of burnout were reported among primary care physicians, including family physicians, general internists and emergency medicine physicians.
- It is now well demonstrated that optimal patient engagement, satisfaction and clinical outcomes are inextricably linked to the health and well-being of healthcare providers; one cannot exist without the other

- Early predictors of job burnout and engagement. Maslach C, Leiter MP. J Appl Psychol. 2008 May; 93 (3): 498-512





Burnout exists at all levels of training

Medical students:

- Depression rates 20-30%
- Anxiety and burnout rates > 50%
 Residents:
- Burnout rates 60-75% and higher

Practicing physicians:

- Depression and suicide
- Burnout
- 60-90% would not recommend the field to their children

Although it is a well-known fact that physicians are at higher risk for suicide, it only makes sense that nurses are at risk, as well. Nurses are at the bedside for longer hours, putting them on the front lines of patients' struggles and frustration















Dr.BD 25 years old August 22nd, 2014









How does burnout affect our nurses?

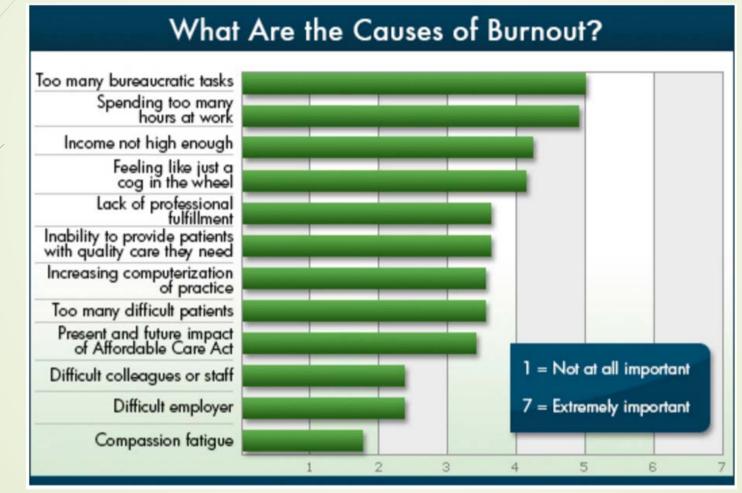
- Nurses now take care of more patients per shift which has led to burnout amongst nurses
- Many hospitals routinely require nurses to work unplanned or mandatory overtime and to "float" to departments outside their expertise. Over 60 percent of RNs report being "forced to work voluntary overtime."
- One study found that 49 percent of RNs under the age of 30 and 40 percent of RNs over 30 experienced high levels of burnout
- According to a study in the Journal of the American Medical Association, each additional patient per nurse carries a 23 percent risk of increased burnout and a 15 percent decrease in job satisfaction

Affect of cardiovascular health

Nurses' cardiovascular health suffers from working long, irregular shifts and overtime. A study in 2012 found that shift workers, such as nurses, face increased risk for heart problems. The study found that shift workers were 23 percent more likely to have a heart attack than their traditional "9 to 5" counterparts. Night-shift workers were found to be at even greater risk; they were 41 percent more likely to have a coronary problem as the result of working abnormal hours.

-Marianna Virtanen, et al., "Overtime work and incident coronary heart disease: the Whitehall II prospective cohort study," European Heart Journal, 31 (14), March 2010. http://eurheartj.oxfordjournals.org/content/31/14/1737

Causes for burnout among Pediatricians



TTY OF I







Outside of a Southern California hospital, an ER doctor is crouched down against a concrete wall grieving the loss of his 19-year-old patient. A paramedic snaps a photo of the tender scene. His coworker, a close friend of the doctor, posts the photo (with permission) online.

Minutes after the photograph, the doctor returns to work "holding his head high."



Burnout during residency training

- Has gained significant concerns secondary to concerns regarding job performance and patient safety
- Time demands, lack of control, work planning, work organization, inherently difficult job situations and interpersonal relationships
- Potential interventions include workplace-driven and individual-driven methods

Educators need to develop an active awareness of burnout and ought to consider incorporating relevant instruction and interventions during the process of training resident physicians

-Burnout during residency training: a literature review. Ishak et al. JGME 2009: December 236-242





Burnout in Pediatric residents

TY OF

The onset of burnout occurs early in training, increases during residency, an individual may phase in and out of burnout, persistent in many

- Mahan et al, Nationwide Children's wellness curriculum- Centile conference

- 20% of Pediatric residents were depressed- nearly double the depression rates in the general population and 75% were experiencing burnout
 - Nearly half of the depressed participants appeared to be unaware of their depression and only a few were receiving treatment
 - Depressed residents made six times as many medication errors as their non depressed peers

Rates of medication errors among depressed and burnt out residents: prospective cohort study. BMJ 2008 Mar 1; 336 (7642) 488-91. Fehrenkopf AM, Sectish TC et al

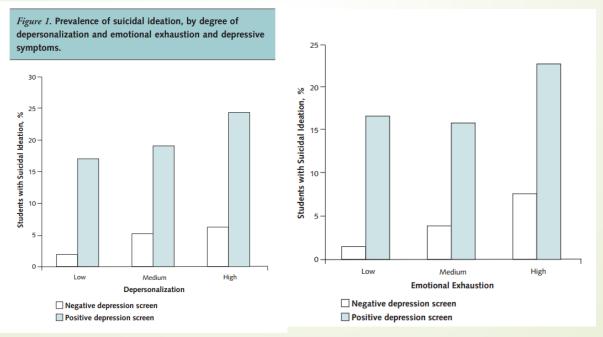


Effects of burnout

Decreased productivity

ITY OF II

- Decreased job satisfaction
- Depression*, suicidal ideation, plans and attempts**





*Martin F et al. Depression and burnout in hospital health care professionals. Int J Occup Environ Health.

**Dyrbye LN et al. Burnout and suicidal ideation among US medical students. Ann Intern Med. 2008; 149 (5): 334-341

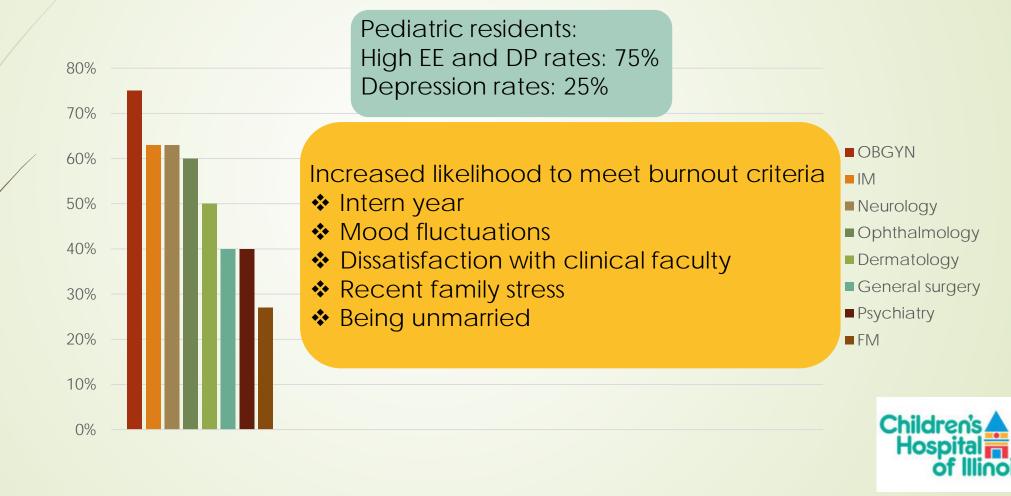
Effects of burnout (continued)

- Cardiovascular disease
- Increased bio-inflammatory markers
- Insomnia, appetite changes, fatigue, cold or flu, headaches, GI distress
- Irritable mood, cynicism, decreased concentration
- Depersonalization aspect was associated with lower patient satisfaction and longer post discharge recovery time (acc to a 2008 study)
- Daydreaming while with patients, excessive cancellations, procrastination, delaying paperwork and vocational tasks
- Substance abuse





Burnout rates by residency specialty



TY OF

Martini S. Burnout comparison among residents of different medical specialties. 2004; 28 (3): 240-242

MBI (Maslach Burnout Inventory)

- General (MBI-GS)
- Human Services (MBI-HSS)
- Educators (MBI-ES)



Christina Maslach Professor of Psychology Univ of California, Berkeley





MBI- Human Services Survey

Christina Maslach & Susan E. Jackson Copyright c 1981 Christina Maslach & Susan E. Jackson. Used with permission

The purpose of this survey is to discover how various persons in the human services, or helping professionals view their job and the people with whom they work closely

Instructions: On the following pages are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, type the number "0" (zero) in the space before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

How Often	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

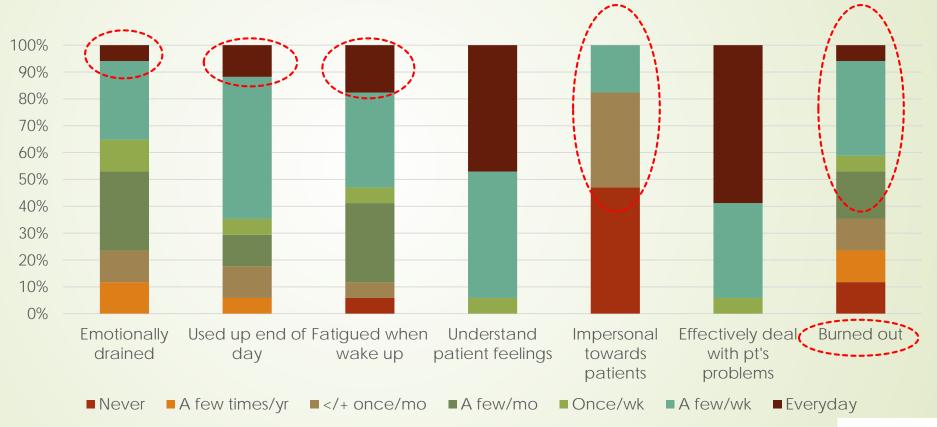
How Often	Statements:
0-6	
1	I feel emotionally drained from my work
2	I feel used up at the end of the workday
3	I feel fatigued when I wake up in the morning and have to face another
	day on the job
4.	I can easily understand how my recipients feel about things
5.	I feel I treat some recipients as if they were impersonal objects
6.	Working with people all day is really a strain for me
7	I deal very effectively with the problems of my recipients
8	I feel burned out form my work
9	I feel I'm positively influencing other people's lives through my work
10.	I've become more callous toward people since I took this job
11	I worry that this job is hardening me emotionally
12	I feel very energetic
13	I feel frustrated by my job
14	I feel I'm working too hard on my job
15	I don't really care what happens to some recipients
16	Working with people directly puts too much stress on me
17	I can easily create a relaxed atmosphere with my recipients
18	I feel exhilarated after working closely with my recipients
19	I have accomplished many worthwhile things in this job
20	I feel like I'm at the end of my rope
21	In my work, I deal with emotional problems very calmly
22	I feel recipients blame me for some of their problems
	Copyright c 1981 Christina Maslach & Susan E. Jackson. Used with permission All right reserved in all media. Published by Mind Garden. Inc., www.mindearden.com



All right reserved in all media. Published by Mind Garden, Inc., <u>www.mindgarden.com</u>



MBI- UICOMP Peds/Med-Peds residents



TTY OF



MBI-UICOMP Peds/Med-Peds residents

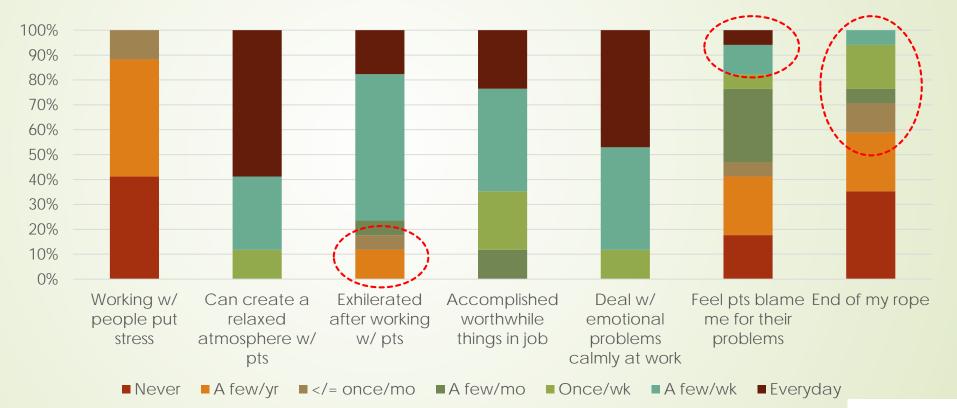


■ Never ■ A few/yr ■ </= once/mo ■ A few/mo ■ Once/wk ■ A few/wk ■ Everyday

EITY OF I



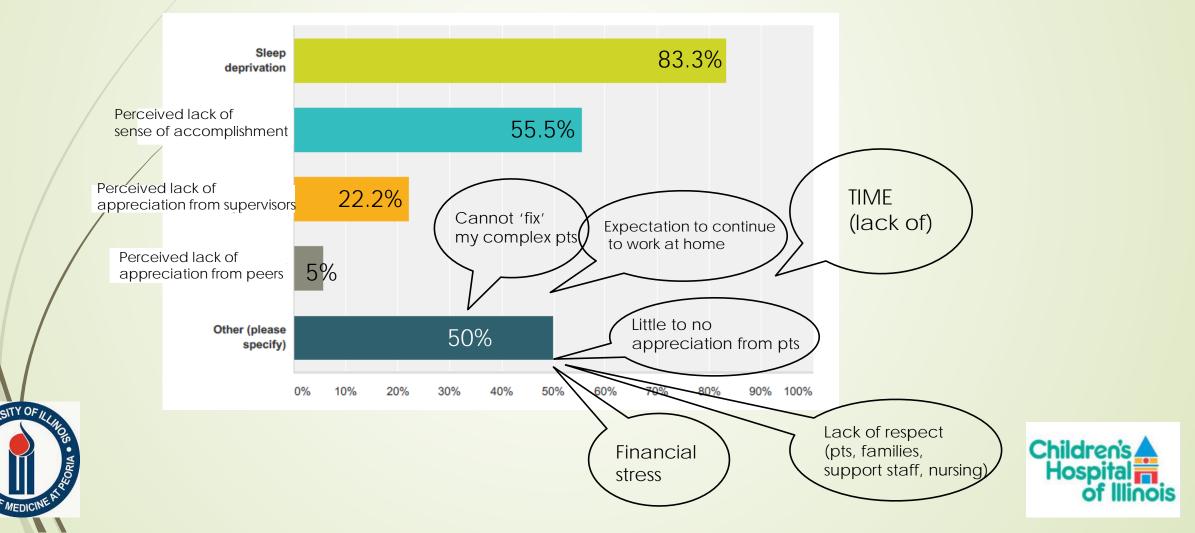
MBI- UICOMP Peds/Med-Peds residents







Biggest stressor(s) affecting work (residents)



Felt especially good about their job (residents)

- Good patient outcomes
- Making a difference in a patient's life
- Lessening child's anxiety
- When a child goes home better than they came in
- Thanked by a family
- Praise from senior providers
- Performing a procedure well
- Celebrating no more Chemo for a patient
- Making connections with families and nursing
- Accurately diagnosing a patient and treating them
- Getting 'thank you's instead of complaints





Felt especially bad about a job (residents)

- Missed diagnosis
- Being the middle man with communication being lost
- Patient died
- Missing family events
- Getting home late
- Comments made towards them by a senior resident
- Patients with NAT
- Overtired, emotionally exhausted
- Making a mistake
- Too much workload, thus not being able to pay attention the pts needed
- Getting blamed
- Getting scolded by multiple people
- Not feeling supported
- Patients not understanding how overworked residents are





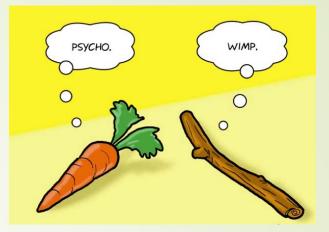
Most and least enjoyable aspects

- Helping patients and families, seeing them get better, etc were the biggest motivation factor and the most enjoyable aspects of the job
- Paperwork, complaining colleagues, exhaustion- physically and mentally were the least enjoyable aspects of the job





Negativity bias



- To pursue a carrot or to duck a stick?
- The body generally reacts more intensely to pain
- Negative stimuli produce more neural activity than equally intense positive ones
- The amygdala uses 2/3 of its neurons to look for bad news: it's primed to go negative
- Physicians tend to remember negative outcomes
- We remember our mistakes, we do not celebrate our victories
- 3 positives





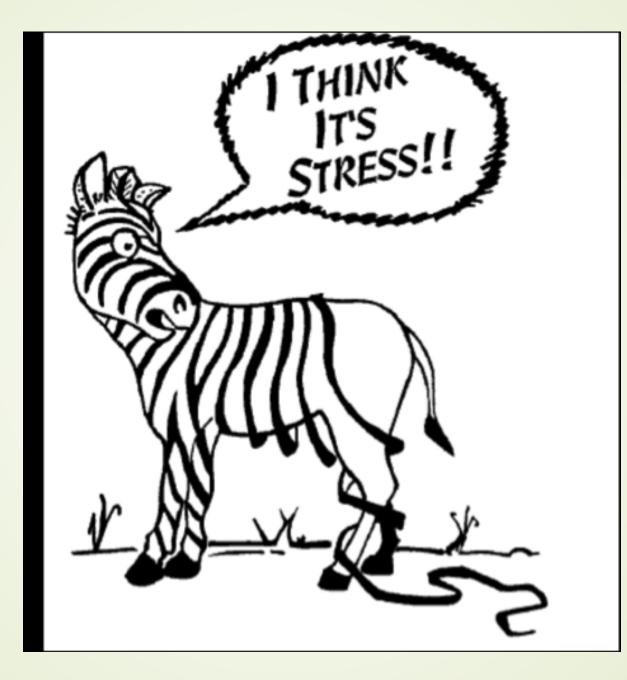
Resident survey- negative interactions

- I deal with negative interactions by blaming myself
- I dwell on it and let it sour my mood all day
- I take negative interactions more personally that I should
- I bottle them up and deal with them in one cathartic episode
- I internalize it and replay it over and over again in my head
- I might review them in my mind, but don't dwell on them
- I hit the gym to get my frustration out
- I strive to make changes positive

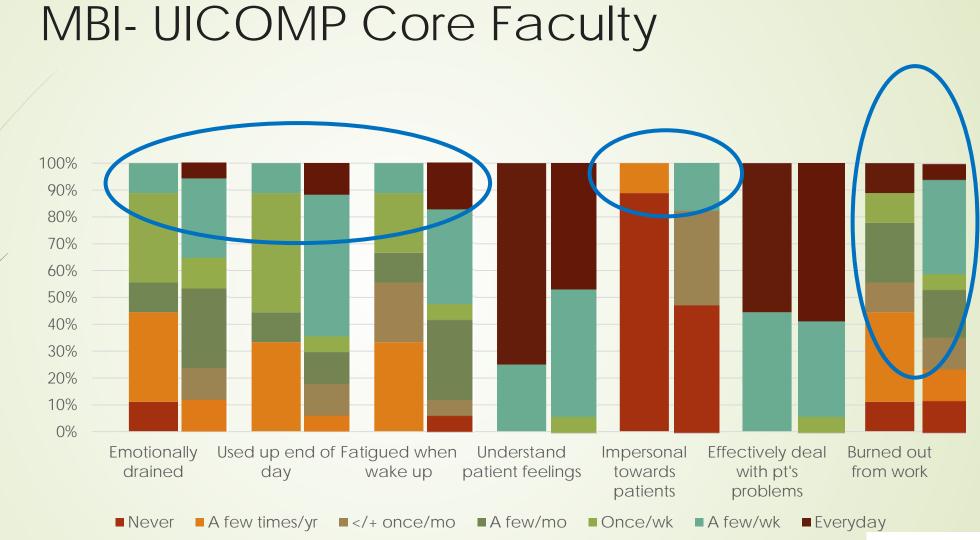










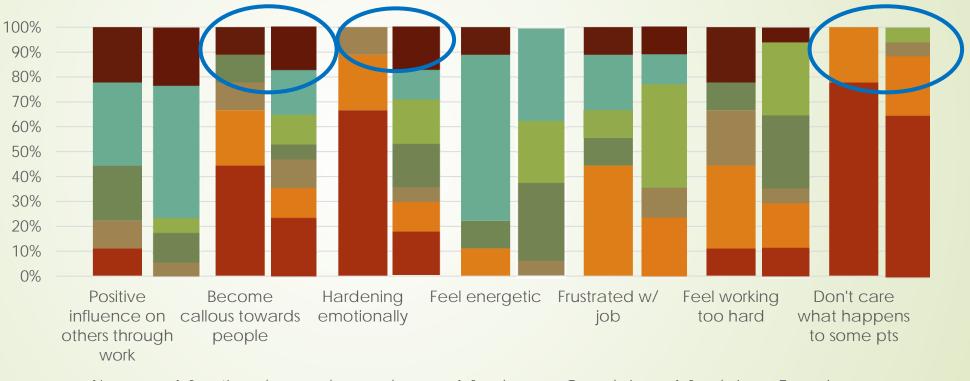


EITY OF I



MBI-UICOMP Core Faculty

TY OF



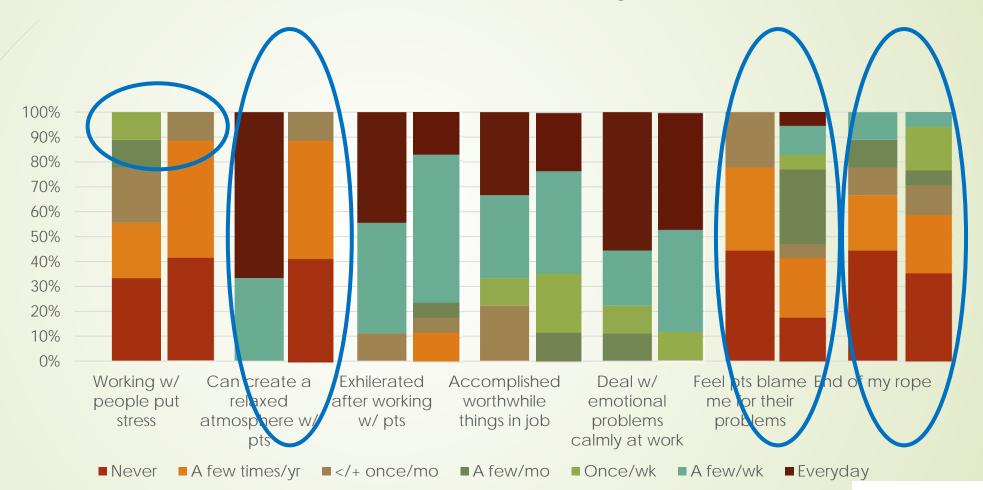
■ Never ■ A few times/yr ■ </+ once/mo ■ A few/mo ■ Once/wk ■ A few/wk ■ Everyday

Childre



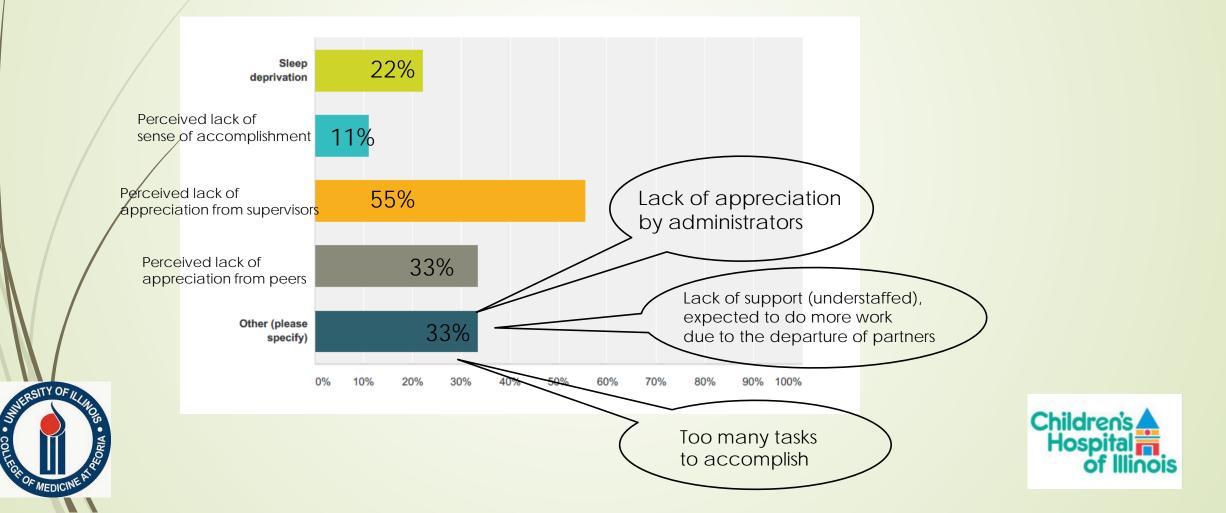
MBI-UICOMP Core Faculty

EITY OF I





Biggest stressor(s) affecting work (Core Faculty)



Felt especially good about their job (Core Faculty)

- Positive experiences teaching with good feedback
- Feeling engaged, being allowed to contribute
- Feeling work was appreciated
- Taking care of patients, partnering with patients
- Improving the quality of care
- Accomplishing mentorship
- Having the opportunity to help someone else
- Work being acknowledged





Felt especially bad about their job (Core Faculty)

- Feeling unappreciated or undervalued
- Disagreement with supervisor
- Lack of peer support
- Not feeling included
- Working with leaders who didn't have healthcare mission as a priority
- Nursing/ admin not involved in improving care
- Loss of faculty
- Bureaucracy- supervisors not understanding the job needs



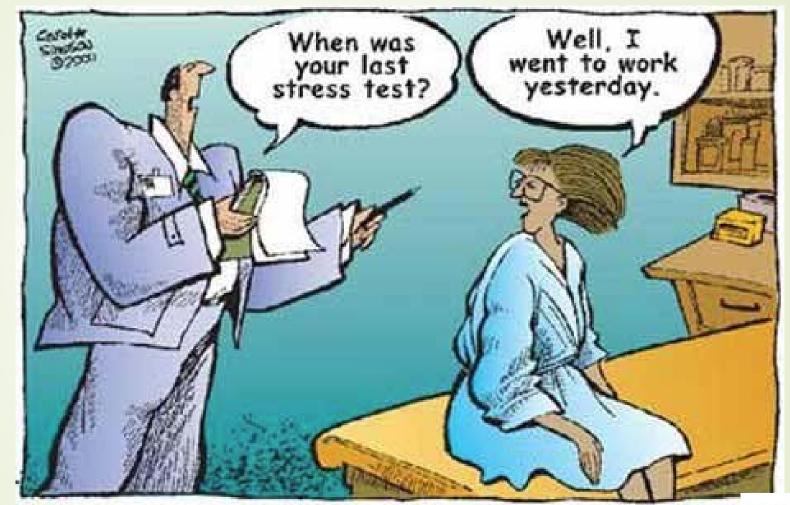


Most and least enjoyable aspects

- Most enjoyable- helping patients and families, teaching residents, learning new medical information, helping learners become better doctors, mentoring students, residents and faculty
- Least enjoyable- lack of respect and appreciation, pointless meetings, answering to admin that doesn't have understanding of one's job, paperwork, administrative tasks, lack of support staff











Our attempts at addressing burnout:

- Wellness day
- Retreats
- UICOMP wellness curriculum
- Yoga sessions x 2/year
- Advisor system
- Buddy system
- Resident hang-outs
- Monthly resident business meetings, Program director meetings, open door policy, biannuals, advisor meetings
- Halloween!

Required to be a part of the curriculum during residency training as of July 2017





Pediatric Class of 2017 Med-Peds Class of 2018











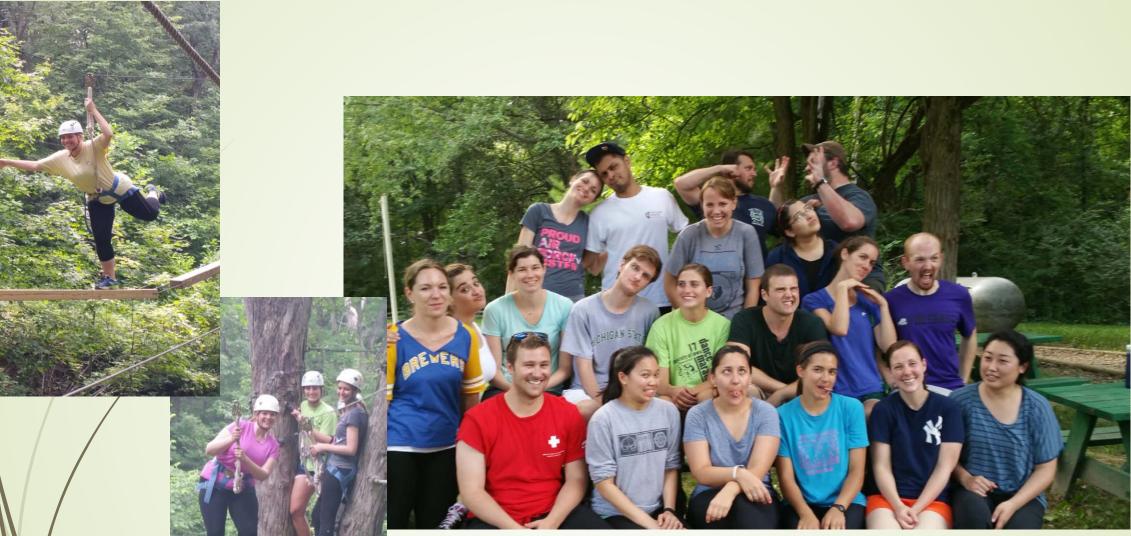












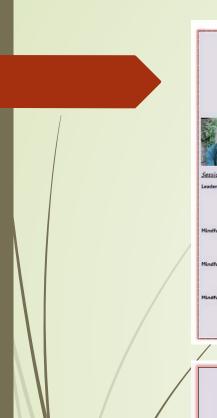
RSITY OF IL

OF MEDICIN

Mn • co

Pediatric Class of 2018 Med-Peds Class of 2019





ERSITYOFIL

OF MEDICIN

UICOMP Wellness Series

Faculty, Resident & Student Development

WELLNESS FRIDAY, NOVEMBER 20th, 2015

Bev Klug, MA LMFT, Director of Mindfulness, University of Iowa Hospitals and Clinics



UICOMP Wellness Series

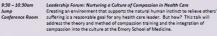
Faculty, Resident & Student Development

Wednesday April 20[®] 2016 Timothy Harrison, B.S.E., M.Arch. Director for Cognitively-Based Compassion Training Emory-Tibet Partnership, Emory University



nothy Harrison coordinates Emory University's Cognitively Based Compassionate Training (CBCTTM) program, its mplementation for research, and the CBCT instructor certification program. Tim has taught CBCT to medical students, public school teachers, hospital chaplains, college students, incarcerated women, and adolescent foster boys. He has resented CBCT widely, including at Stanford's Center for compassion and Altruism Research and Education. San Francisco State University, Atlanta's Grady Hospital Ethics Grand Rounds, and the Georgetown University School of Medicine.

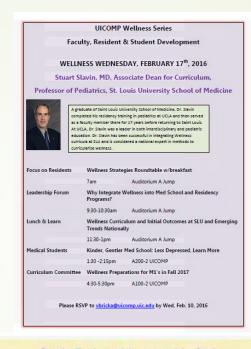
7am - 8am Resident Session: The Critical Link between Self-Care and Care for Others Strengthening compassionate motivation can relieve a number of difficulties Conference Roo emic to practicing medicine. This talk will explain Cognitively-Based Compass Training, CBCT's systematic approach to buffer against stress, reduce emotional numbing, and find ongoing inspiration - rather than depletion - in the work of alleviating suffering.



- 12pm 1:30pm Lunch & Learn: Cognitively-Based Compassion Training (CBCT): An Education-Base Approach to Sustaining Compassion in Health Care Compassion is the natural product of a set of identifiable skills that can be trainer and strengthened by individuals across a lifetime. This talk will explain CBCT as one method to counter adverse outcomes of workplace stress - such as burnout and
- Research results and a brief contemplative practice will be included. Student Session: Training in Compassion -- Preparing for a Life of Care 3pm - 4pm UICOMP A100-2 CBCT teaches inner skills to inoculate young physicians against future stressors and decrease the common negative outcomes of burnout and empathetic fatigue. This talk will cover the key components for developing a compassionate motivation that can sustain a lifetime of caring for others.

empathetic fatigue - which are all-too-common in health care environment

UICOMP Wellness series



Swain Endowed Lectureship Series

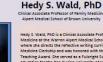
Internal Medicine Grand Rounds: "Order and Disorder in the Emotional Brain"

Wednesday, May 11 7:30 - 8:30 a.m.

Jump Trading Simulation & Education Center 1306 N. Berkeley Ave., Peoria



UICOMP Wellness Series Faculty, Resident & Student Development Thoughtful Thursday, April 14 2016



Hedy S. Wald, PhD is a Clinical Associate Professor of Family Medicine at the Warren Alpert Medical School of Brown Universit where she directs the reflective writing curriculum in the Family Medicine Clerkship and was honored with the Dean's Excellence in Teaching Award. She served as a Fulloright Scholar in medical education for the Ben Gurion University of Health Sciences Faculty of Medicine in Israel and is a Gold Humanism Foundation Harvard-Macy Scholar

ence and Vitality

8:30 – 9:30am	Leadership Forum: Dialogue on the Wellness Imperative	- Jump Auditorium B
10-11am	Available for Individual/Programmatic Consultation	- lumn Boardroom

11:30am - 10 GRAND ROUNDS PRESENTATION: The Becomina: Craftina a Story of You for Res

Health care professions practitioners, faculty, and students are at risk for stress and burnout, which can impact well-being and optimal patient care. Within "The Becoming," the dynamic lifelong process of professional formation, "3R's" – Reflection, Relationships, Resourcefulness – can inspire, enrich, and fortify us as we creft our own story for resilience and vitality. Reflective writing-enhanced reflection, in particular, can serve as a "Resiliency Workout" and help us reconnect to our own heart, values, passion, and humanity. Dr. Hedy Wald will discuss how we can effectively serve as our own "reflective coach," utilizing a "3R" wellness "toolkit" approach to enhance resiliency. A "GPS" or a Roadmap to Renewal, helping us Survive and Thrive.

Presentation for Residents and Students: - Jump Auditorium B Interactive Reflective Writing for Fostering Awareness and Meaning-Making to Boost Resiliency - An Experiential Session 2-3:30pm

Interactive Reflective Writing can foster awareness in health care practitioners, educators, and trainees and Intersective Relative wrong can have awareness in resin, care presculators, exactors, and variates and heip them identify and connect with what they value and find meaningful in their work. Engaging in interactive reflective writing may thus serve as a "protective factor," promoting wellveing and resiliency for vitality and ideally promoting contemplative leadership and humanistic practices within patient care and education. This experiential session will provide an opportunity for writing and sharing within a "community of practice" for collaborative reflection and meaning-making, helping to sustain and renew.



Well-being is a Skill Change your Brain and Change the World



Renowned neuroscientist an one of the world's leading

experts on the impact of

contemplative practices, such

as meditation on the brain,

Madison.

Tuesday, May 10 6:30 - 7:30 p.m.

Jump Simulation Auditorium 1306 N. Berkeley Ave. adjacent to OSF Saint Francis Medical Center

Dr. Davidson is the founder of FREE AND OPEN TO THE PUBLIC the Center for Investigating Healthy Minds at the Waisma Center, University of Wisconsi

Join Dr. Davidson as he talks about scientific evidence that suggests we can change our orains by transforming our minds and cultivating habits th improve well-being.



William James and Villas Research Professo of Psychology and Psychiatry, Director of the Walsma Laboratory for Brain Imaging and Bahavior and Foundar of the Center for Investigating Healthy Minds at the Waisman Center University of Wisconsin-Madison: Dr. Davidson received his Ph.D. from Harvard University in Psychology, has published more than 320 articles, numerous chapters and reviews and edited 14 books. He is the author (with Sharon Begley) of "The Emotional Life of Your Brain." His resear a broadly focused on the neural bases of emotion and emotional style and mathods to promote human flourating including mediation and related contemplative practices

liaturing

Richard J. Devidson, Ph.D.



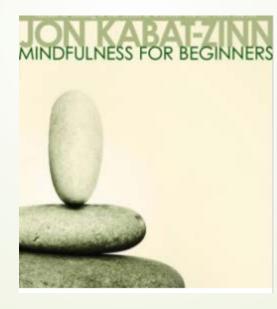






Mindfulness means paying attention in a particular way;
 On purpose, in the present moment, and nonjudgmentally

-Jon Kabat-Zinn







Self care/self compassion and mindfulness strategies

Residents

- Prioritizing sleep
- Spend free time with family
- Exercise
- De-stress with friends
- Exercise/ gym
- Hiking
- Reading
- Yoga
- Breathing exercises
- Prayer

TY OF I

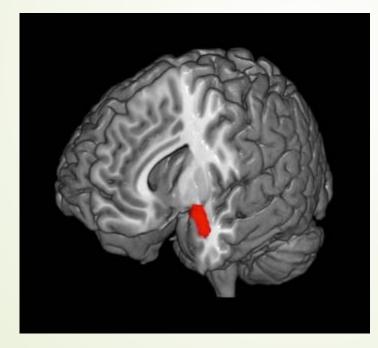
Faculty

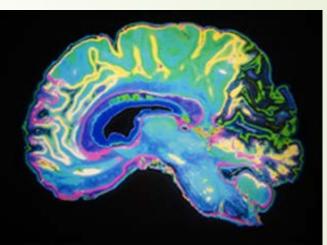
- Reflection
- Prayer
- Deep breathing
- Meditation
- Sabbatical
- Sports
- Decompressing with family
- Trying to avoid working from home
- Cooking
- Running



How does mindfulness change the brain?

Eight-week mindfulness-based stress reduction (MBSR) program on the brains of patients with GAD at MGH showed the amygdala shrinking





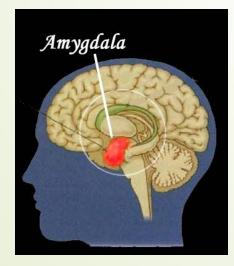
MRI brain scans confirm how the brain actually changes in 8 weeks when practising Mindfulness.





The Amygdala

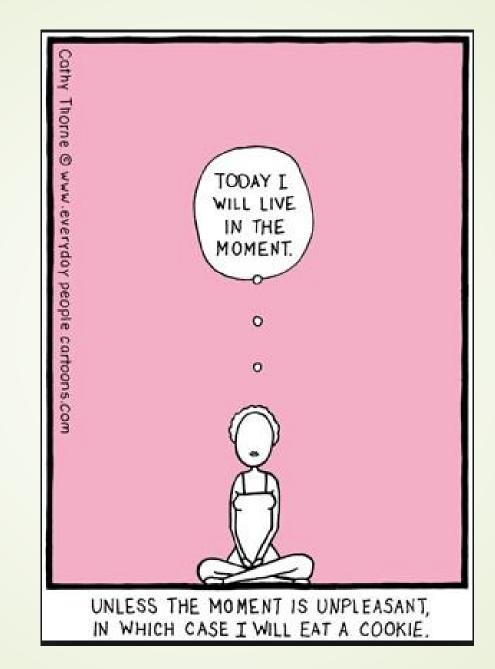
- Located within the temporal lobe
- Controls social and sexual behavior
- Controls emotions like aggression and fear
- Adds positive and negative feelings to long term memory for later use



TY OF I

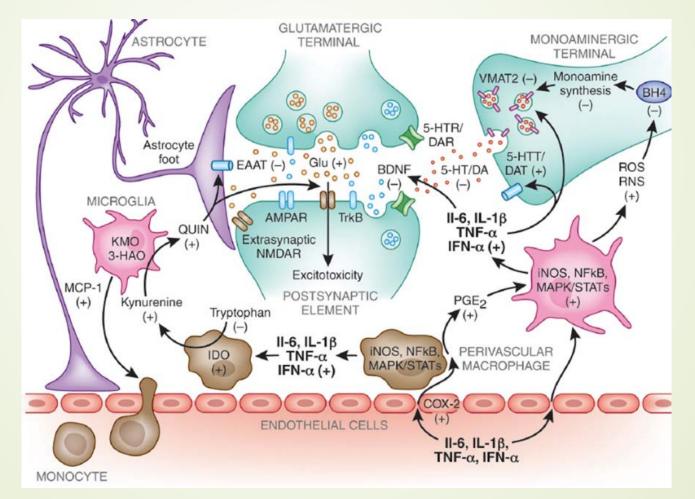








Potential mechanisms of inflammatory cytokine effects on brain monoamine, glutamate, and BDNF neurotransmitter systems







Compassion Vs Empathy Vs Altruism



SITY OF I







What is Compassion?



aSITY OF I

co



What is Compassion?

At its most fundamental level, compassion is the wish to alleviate the suffering of another.







Biologic Basis



It can be traced to other primates and mammals. They are able to set aside their own interests to take care of another.



Benefits of Acting Compassionate

- Activates pleasure circuits in the brain
- Increases self-reported happiness
- Reduces risk of heart disease by boosting Vagus Nerve activity
- Lowers stress hormones and strengthens the immune response
- Less rumination about what has gone wrong or might go wrong
- Activates neural systems that support parental nurturance
- More optimistic and supportive in communication style
- Decreases vindictiveness toward others
- Increases empathic accuracy

Sources: Greater Good Science Center, UC-Berkeley, and Pace et al., 2008, and Gilbert, McEwan, Matos, Rivis, 2010



4 aspects of compassion

- a) A cognitive aspect (an awareness of suffering)
- b) An emotional aspect (an empathic concern in which one is moved by perceived suffering)
- c) An intentional aspect (a wish to see that suffering alleviated)
- d) A behavioral aspect (a readiness to help to relieve suffering)





Compassion Cultivation training

- Research has shown that people who feel compassion in a given situation help more often than people who suffer from empathic distress
- Very importantly, the capacity to feel for another person <u>can be enhanced</u> <u>by training</u>
- We don't usually think of happiness or compassion as a skill that can be developed, but – as Richard Davidson states: "Happiness is a skill. It's actually something that can be cultivated. Everything we've learned about the brain suggests it's no different than learning the violin... if you practice, you'll get better at it"





Compassion Cultivation training

- Stanford (Center for Compassion and Altruism Research and Education)
- Emory University CBCT
- Such programs have been implemented at numerous medical schools in the US and Canada





Cognitively-based Compassion Training (CBCT)

- Compassion is important to health and well-being
- Compassion meditation impacts the body's response to psychological stress
- CBC practice reduced stress-induced immune and behavioral responses that have been repeatedly shown to be risk factors for the development of both physical and mental illness
- Meditation impacts the immune and neuroendocrine systems





Cognitively-Based Compassion Training

Developed by Dr.Lobsang Tenzin Negi, Ph.D.

Emory University

ITY OF



Meditation in CBCT

- Meditation means familiarization
- There are two kinds of meditation practice in CBCT:
 - Mindfulness meditation to develop attention stability and present moment awareness
 - Analytical meditation to cultivate critical thinking leading to insights and to develop positive emotions conducive to healthy states of mind





Stages of CBCT

- 1. Developing attention and stability of mind
- 2. Cultivating insight into the nature of mental experience
- 3. Cultivating self-compassion
- 4. Developing equanimity and impartiality
- 5. Developing appreciation, affection, and empathy for others
- 6. Realizing engaged compassion





CBCT

- Decreased neuroendocrine and inflammatory (IL-6) reactivity to social stress
 Pace et al 2009, Pace et al., 2011
- Improved mental health in at-risk adolescents

- Reddy et al 2013

- Decreased C-reactive protein (CRP) in adolescents at a foster-care program

 Pace et al., 2013
- Compassion meditation enhances empathic accuracy and related neural activity

-Mascaro et al, 2012

• The effects of meditation training on emotional processing might transfer to nonmeditative states: Effects of mindful-attention and compassion meditation training on amygdala response to emotional stimuli in an ordinary, nonmeditative state

-Desbordes, et al, 2012

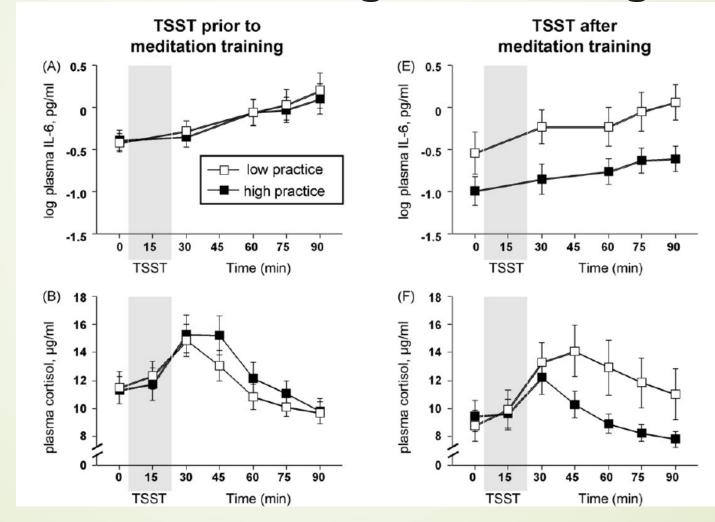




CBCT -Dr. Geshe Lobsang Tenzin Negi

SITY OF I

F MEDICIN





UICOMP and Unity-Point Methodist Faculty pursuing CBCT Teacher certification



ITY OF I

Our journey...

- Foundation course- Spring 2016
- 9 day retreat- Summer 2016
- Weekly webinars and wrap-up Fall 2016
- 8 week supervised co-teaching: offered to leadership at UICOMP and OSF, Unity Point Methodist, Bradley University, District 150 and Dunlap leadership, Peoria city management, Caterpillar, Inc: 2/13/17-4/6/17
- Future plans include continuing offering CBCT teachings to the above mentioned organizations as well as the Peoria community, continuing to pursue research in CBCT, wellness curriculum for the residents and medical students at UICOMP, etc.





CBCT Three-Level Heuristic Learning Model

intellectual / rational understanding (via reading/hearing)

intuitive realization / "aha moments" / conviction via analytical meditation / contemplation,

absorption / attunement (via absorptive/single-pointed meditation)





Future ideas/next steps...

- To include the principles of CBCT and to introduce the most basic skills for development of well-being in the core curriculum
- To offer CBCT in its entirety as an elective
- To reach students, residents, faculty and staff
- To develop a research program to assess efficacy of CBCT to reduce unconscious biases (stereotyping), burnout, depression, error rates, and to improve patient satisfaction and compliance





Happiness is when what you think, what you say, and what you do are in harmony -Mahatma Gandhi





References

- Early predictors of job burnout and engagement. Maslach C, Leiter MP. J Appl Psychol. 2008 May; 93 (3): 498-512
- US Physician burnout survey Archives of Internal Medicine in 2012
- Burnout during residency training: a literature review. Ishak et al. JGME 2009: December 236-242
- Mahan et al, Nationwide Children's wellness curriculum- Centile conference
- Rates of medication errors among depressed and burnt out residents: prospective cohort study. BMJ 2008 Mar 1; 336 (7642) 488-91. Fehrenkopf AM, Sectish TC et al
- Martin F et al. Depression and burnout in hospital health care professionals. Int J Occup Environ Health
- Dyrbye LN et al. Burnout and suicidal ideation among US medical students. Ann Intern Med. 2008; 149 (5): 334-341
- Martini S. Burnout comparison among residents of different medical specialties. 2004; 28 (3): 240-242
- Decreased neuroendocrine and inflammatory (IL-6) reactivity to social stress Pace et al 2009, Pace et al., 2011
- Improved mental health in at-risk adolescents Reddy et al 2013
- Decreased C-reactive protein (CRP) in adolescents at a foster-care program-Pace et al., 2013
- Compassion meditation enhances empathic accuracy and related neural activity -Mascaro et al, 2012
- The effects of meditation training on emotional processing might transfer to non-meditative states: Effects of mindful-attention and compassion meditation training on amygdala response to emotional stimuli in an ordinary, non-meditative state -Desbordes, et al, 2012
- JGME: Burnout Balint scoring: <u>http://www.jgme.org/doi/pdf/10.4300/JGME-D-09-00049.1</u>
- JGME: Burnout out during residency- a literature review: <u>http://www.jgme.org/doi/pdf/10.4300/JGME-D-09-00054.1</u>
- http://www.centileconference.org/2015/local/uploads/files/Centile%20Burnout%20Resilience%20Workshop%202015%20-%20MahanKemperMcClafferty%202015.10.116kk.pdf
- http://blogs.scientificamerican.com/guest-blog/what-does-mindfulness-meditation-do-to-your-brain/
- http://www.nicabm.com/mindfulness-seeing-the-impact-of-mindfulness-in-the-brain/
- Depression and suicide amongst physicians: <u>http://www.black-bile.com/resources/11+Bright+et+al+Curr+Psych+D+\$26+S+among+Physicians.pdf</u>
- Statement of the New York Nurses Association submitted to the New York State Assembly Committee on Health and Committee on Labor, May 18, 2006. http://www.nysna.org/advocacy/testimonies/shortage_and_ot.htm.
- Wendy Grove, "The Role of Emotion in Reducing Burnout among Registered Nurses," American Sociological Association, August 2006.
- Linda Aiken, Sean Clarke, Douglas Sloane, Julie Sochalski, Jeffrey Silber. "Hospital Nurse Staffing and Patient Mortality, Nurse Burnout, and Job Satisfaction," The Journal of the American Medical Assoc
- Marianna Virtanen, et al., "Overtime work and incident coronary heart disease: the Whitehall II prospective cohort study," European Heart Journal, 31 (14), March 2010. http://eurheartj.oxfordjournals







TY OF I

