



Reimagining our Patients and Their Care:

Simple (and not so simple) changes to improve surgical patient care

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**CHRONIC PAIN
AND FATIGUE**
RESEARCH CENTER



Premise: Perioperative Psychological Stress = Poor Outcomes

Psychological distress is associated with:

- Increased postoperative **late mortality** in cardiac surgery¹
- Increased risk for **post-transplant mortality**²
- Complications in **early surgical recovery**.³
- **Mortality in cancer** (leukemia) patients. Effect remains after adjustment for clinical prognosticators, suggesting that depression may even play a **causal role**.⁴
- Increased risk for post-surgical pain and opioid use.⁵
 - **Higher levels of pre-surgical anxiety were associated with increased post-surgical opioid consumption**.⁶



1) Takagi et al. Heart Vessels 2017;32:1458-1468; 2) Dew et al. Transplantation 2015;100:988-1003; 3) Mavros et al. Review. PLoS One. 2011;6(5):e20306. 4) Statin et al. Cancer 2009;115:5349-61; 5) Ip et al. Anesthesiology. 2009 Sep;111(3):657-77.5); 6) Larach et al. Ann Surg. 2021 Mar 1;273(3):507-515.

Premise: Addressing Psychological Stress = Better Outcomes

Premise for addressing psychological distress:

- Negative emotions are expected in certain circumstances (human)
- Positive emotions buffer negative emotions
- Building resilience can help counter feelings of helplessness and vulnerability and other negative emotions common in surgical settings.
- Optimism, self-efficacy, emotional regulation skills, and less concern about pain may improve healing¹
- Less psychological distress really can result in better patient outcomes!



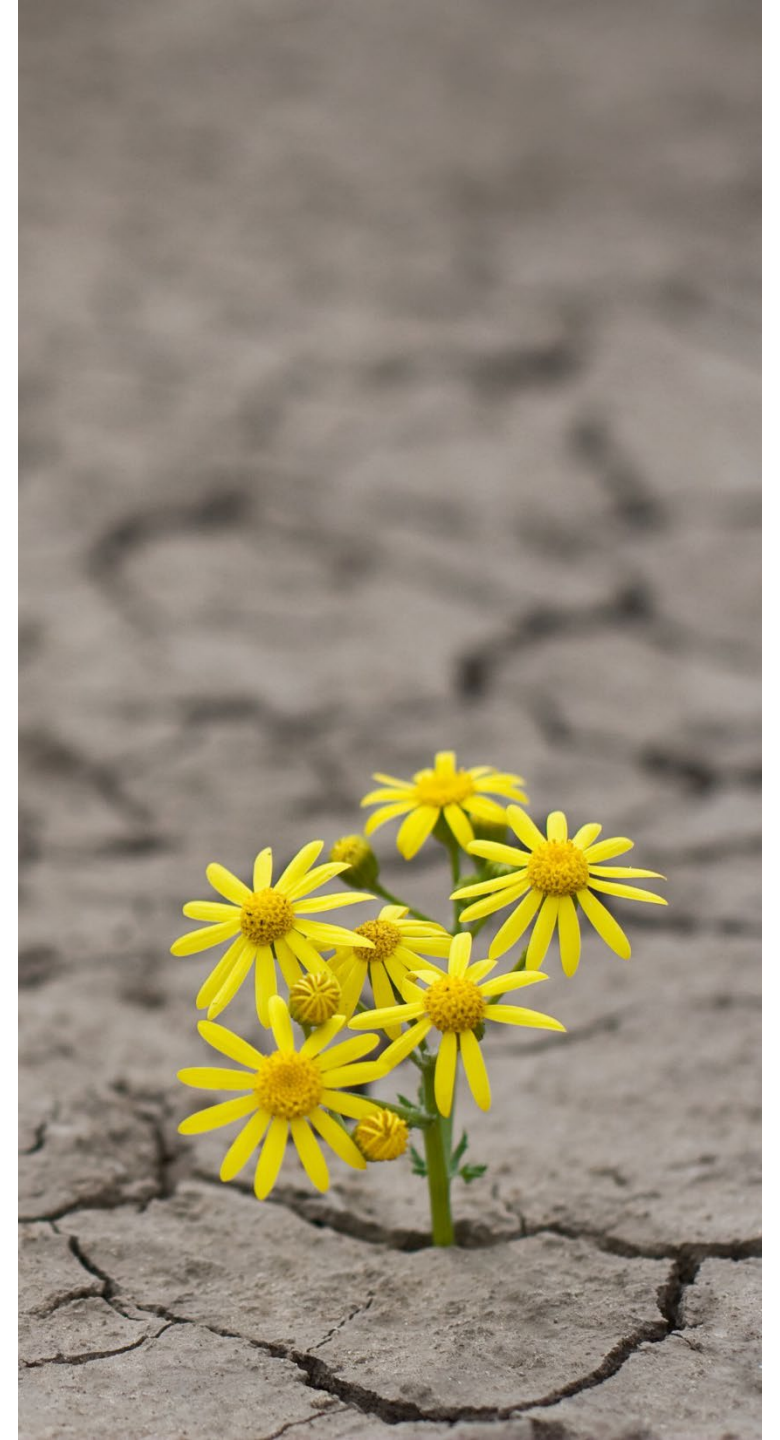
1) Mavros et al. Review. PLoS One. 2011;6(5):e20306.

Agenda

Discuss Resilience Targets More Broadly

- **Thoughts:** Enhance Optimism and Coping Beliefs.
- **Emotions:** Increase Positive Emotions
- **Connection:** Improve Social Support.
- **Competence:** Mastery, Purpose in Life.
- **Building Resilience**

Explore Application in the Perioperative Setting



Resilience

“Was mich nicht umbringt macht mich stärker.“

“That which does not kill me will make me stronger”

Friedrich Nietzsche's *Twilight of the Idols* (1888).



Adversity

Low
Resilience

Moderate
Resilience

High
Resilience

Thriving!

CAPACITY TO ADAPT AND RECOVER

THRIVING: Life is even better than before – a life that feels fuller, more meaningful, and rewarding.

Resilience strongly predicts chronic pain outcomes:

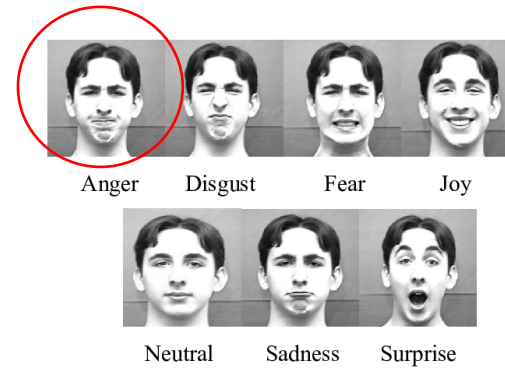
- Presence of chronic pain
- Widespread pain
- Analgesic use
- Disability and pain interference
- Quality of life and psychosocial functioning
- Sleep impairment
- Depression, anxiety, PTS symptoms
- Psychological adaptation (e.g., pain acceptance, pain catastrophizing, pain self-efficacy, active coping strategies, fear avoidance)





Why do thoughts matter?

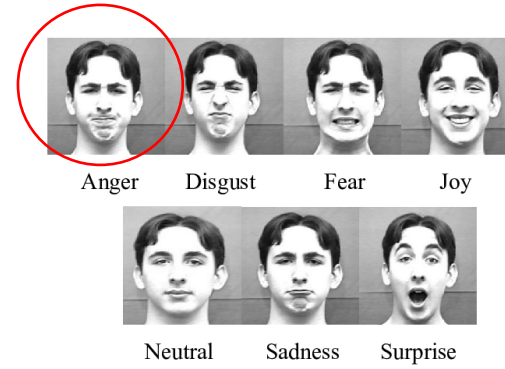
CBT: Event => Thoughts => Feelings => Behavior



Behavior



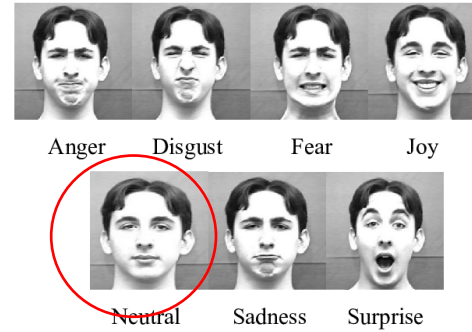
CBT: Event => Thoughts => Feelings => Behavior



Behavior



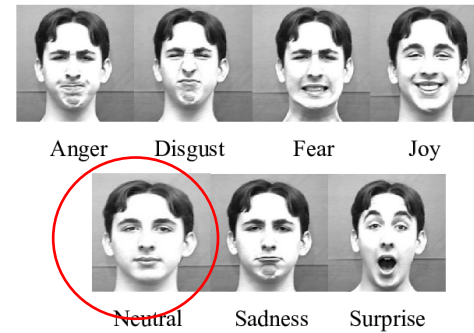
CBT: Event => Thoughts => Feelings => Behavior



Behavior



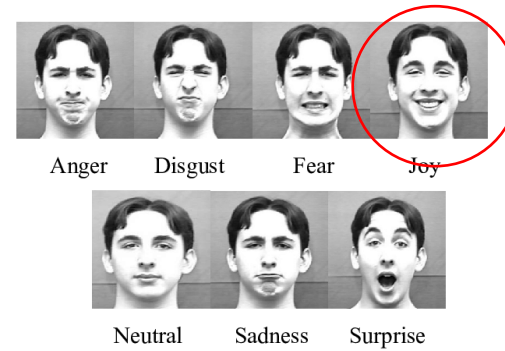
CBT: Event => Thoughts => Feelings => Behavior



Behavior



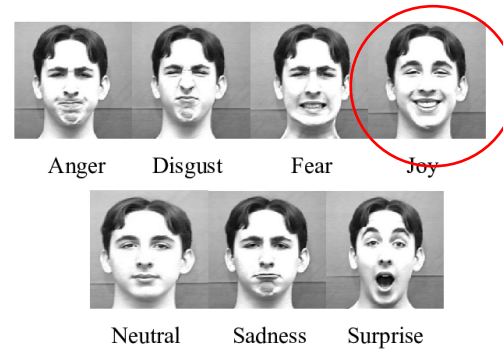
CBT: Event => Thoughts => Feelings => Behavior



Behavior



CBT: Event => Thoughts => Feelings => Behavior



Behavior



optimism

Association Between Predeployment Optimism and Onset of Postdeployment Pain in US Army Soldiers

Afton L. Hassett, PsyD; Joseph A. Fisher, PhD; Loryana L. Vie, PhD; Whitney L. Kelley, MPH; Daniel J. Clauw, MD; Martin E. P. Seligman, PhD

- 20,734 US Army soldiers assessed (CSF2), then followed over deployment(s).
- Post-deployment pain reported in at least 1 new area of the body by 37.3%.
- Tertile analysis compared to high optimism soldiers, those with low optimism had 35% greater odds of reporting new pain (odds ratio, 1.35; 95% CI, 1.21-1.50) controlling for *demographic, military and combat factors*.



Optimism and Pain Outcomes

Systematic review - optimism and pain:


- 69 studies = 70% of studies showed a beneficial association between optimism and pain outcomes.
- Greater percentage shown in experimental studies (78.6%) and those of higher quality (92.9%).



Thoughts – Periop Setting

- **Optimism** was associated with less acute post-surgical pain.
- **Pain catastrophizing, expectation of pain, neuroticism, anxiety (state and trait), negative affect and depression** were associated with greater acute postsurgical pain.
- **Anxiety** was the psychological variable most frequently measured before surgery.
- **Pain catastrophizing** was most strongly linked with acute postsurgical pain.





Why do positive emotions matter?

Negative emotions or “affect”

Negative affective states:

- Sadness (depression)
- Fear (anxiety)
- Anger
- Guilt
- Disgust
- Hatred
- Rejection



Negative affective states are associated with chronic pain.

- Numerous studies linking negative affect to key factors in chronic pain:
 - Higher clinical pain intensity
 - Higher pain report
 - Worse weekly pain
 - Lower pain tolerance
 - Increased experimental pain sensitivity
 - Less tolerance to pain
 - Hyperalgesia
 - Greater use of pain medication
 - Worse analgesia (pentazocine)
 - Pain-related disability
 - Increased fatigue
 - More physical symptoms
 - Greater impact of pain on cognition
 - Higher levels of psychiatric comorbidity
 - Poor quality of life
 - Poor self-efficacy for pain management

Abeare et al. Clin J Pain 2010;26:683-9
Cogan et al. J Behav Med 1987;10:139-44
Carcoba et al. J Addict Dis 2011;30:258-70
Fillingim et al. Biol Psychol 2005;69:97-112
Finan et al. Psychosom Med 2009;71:474-82
Finan et al. Health Psychol 2010;29:429-37
Finan et al. Psychosom Med 2013; 75:463-470
Hamilton et al., Ann Behav Med 2005;29:216-24
Hanssen et al. Pain 2013;154:53-8
Hassett et al., Arthritis Rheum 2008; 59:1742-9
Hassett et al., Arthritis Rheum 2008; 59:833-40
Hirsch et al. Qual Life Res 2012;21:18794
Kamping et al. Pain 2013; Epub ahead of print
Kenntner-Mabiala et al. Biol Psychol 2008;78:114-22
Krok and Baker. J Health Psychol 2013; In Press
Parrish et al. Health Psychol 2008;27:694-702
Schon et al. Psychophysiology 2008;45:1064-7
Seebach et al. Pain 2012;153:518-25
Sibille et al. Clin J Pain 2012;28:410-7
Smith et al. Pain 2008;138:354-61
Staud et al. Pain 2003;105:215-22
Staud. Curr Pain Headache 2005;9:316-21
Stran et al. J Psychosom Res;60:477-84
Tang et al. Pain 2008;138:392-401
Vwesteeg et al. Qual Life Res 2009;18:953-60
Wesler et al. J Psychosoc Oncol 2013;31:451-67
Zautra et al. Pain 2007;128;128-35
Zautra et al. J Consult Clin Psychol 2005;73:212-20

Positive emotions or “affect”

- Happiness
- Love
- Calm
- Enthusiasm
- Interest
- Empathy
- Determination
- Passion
- Inspiration
- Gratitude



More important than negative affect?

- Solid prospective and experimental studies found PA related to:
 - Lower overall pain ratings
 - Lower pain intensity scores
 - Decreased same day pain report
 - Decreased subsequent day pain report
 - Decreased subsequent week pain report
 - Increased induced pain tolerance
 - Decreased induced pain sensitivity
 - Longer tolerance to pain
 - Evoked potential moderation
 - Decreased use of pain medication
 - Lower post-op pain ratings
 - Greater walking times post-surgery
 - Length of stay in colorectal cancer surgery

Adams et al. Activities, Adaptation and Aging 1986;8:157-75

Alden et al. Appl Psychophysiol Biofeedback 2001;26:117-26

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Bruel et al. Pain 1993;54:29-36.

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Clum et al. Pain 1982;12:175-83

Cogan et al. J Behav Med 1987;10:139-44

Connelly et al., 2007;131:162-70

Finan et al. Psychosom Med 2009;71:474-82

Finan et al. Health Psychol 2010;29:429-37

Finan et al. Psychosom Med 2013; 75:463-470

Gil et al., Health Psychol 2004;23:267-74

Hamilton et al., Ann Behav Med 2005;29:216-24

Hanssen et al. Pain 2013;154:53-8

Hertel et al. Psychol Rec 1994;33:207-20

Horan et al. Percept Mot Skills 1974;39:359-62

Hudak et al. Psychol Rep 1991;69:779-86

Kamping et al. Pain 2013; Epub ahead of print

Kenntner-Mabiala et al., Biol Psychol 2008;78:114-22

Meagher et al., Psychosom Med 2001;63:79-90

Meulders et al. J Pain 2014;15:632-44

Morgan et al. Percept Mot Skills 1978;47:27-39

Pickett et al. J Consult Clin Psychol 1982 ;50:439-41

Powell et al., Rehabil Psychol 2009;54:83-90

Rosenbaum et al. J Abnorm Psychol 1980;89:581-90

Sharma et al., Colorectal Dis 2008;10:151-6

Stevens et al. Psychol Rep 1989;64:284-6

Strand et al., J Psychosom Res 2006;60:477-84

Tang et al., Pain 2008;138:292-401

Weaver et al. Percept Mot Skills 1994;78:632-4

Weisenberg et al. Pain 1998;76:365-75

Worthington et al. J Couns Psychol 1981;28:1-6

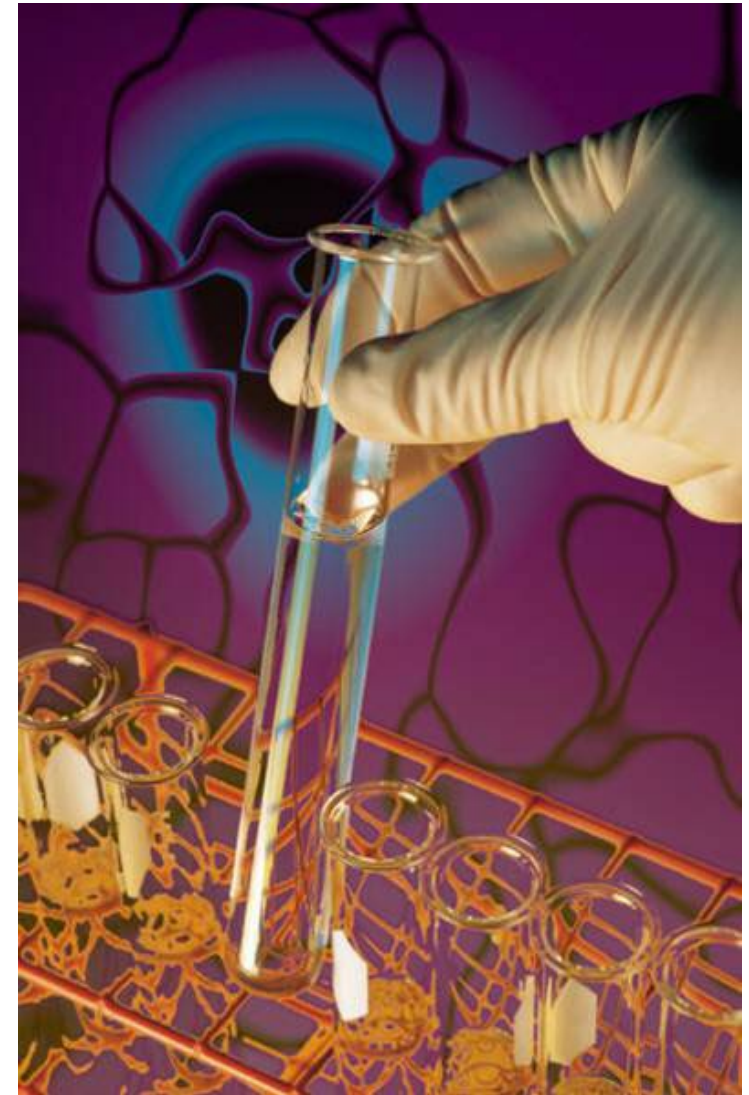
Zautra et al. J Consult Clin Psychol 2005;73:212-20

Zelman et al. Pain 1991;36:105-11

Emotions and neurobiological changes

Positive thoughts and emotions are associated with: Release of endogenous opioids (endorphins)

- Lower levels of cortisol (stress hormone)
- Reduced heart rate and greater heart rate variability
- Lower blood pressure
- Neural/brain changes (seen on neuroimaging)
- Gene transcription (inflammation, antiviral responses)
- Less pain sensitivity & better pain tolerance
- Immune response (improved cell trafficking)
- Improved wound healing



E.g., Dantzer et al. *Brain Behav Immun*. 2018 Nov;74:28-42. McEwen BS. *Ann N Y Acad Sci*. 2016 Jun;1373(1):56-64. Pressman & Cohen. *Psychol Bull*. 2005 Nov;131(6):925-971. Ebrecht et al. *Psychoneuroendocrinology*. 2004 Jul;29(6):798-809. Mavros et al. Review. *PLoS One*. 2011;6(5):e20306.

“Happiness Messengers”

Hormones and neurotransmitters

- Endorphins (endogenous opioids)
- Dopamine
- Serotonin
- Oxytocin

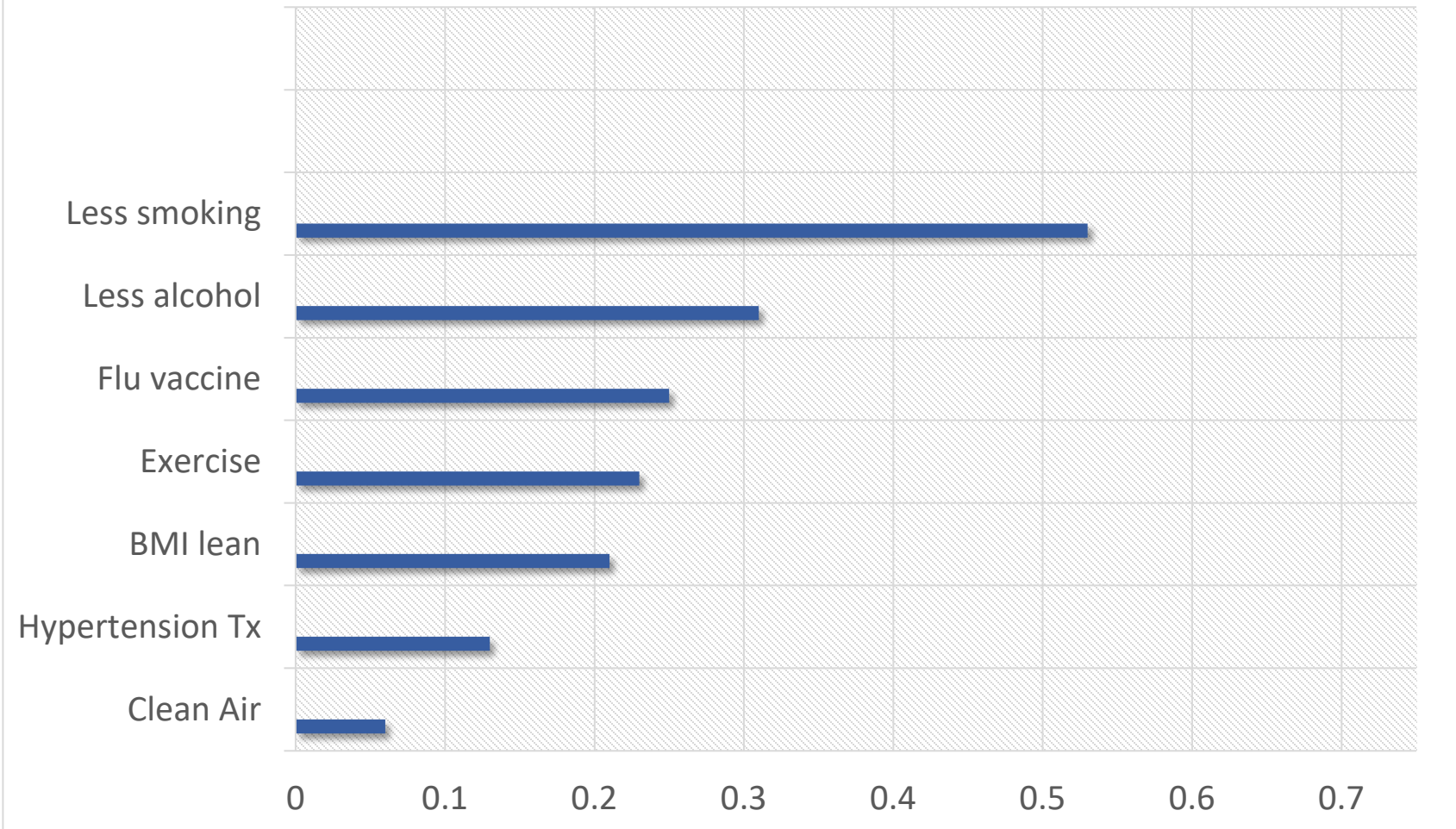
All can also produce analgesia, too!



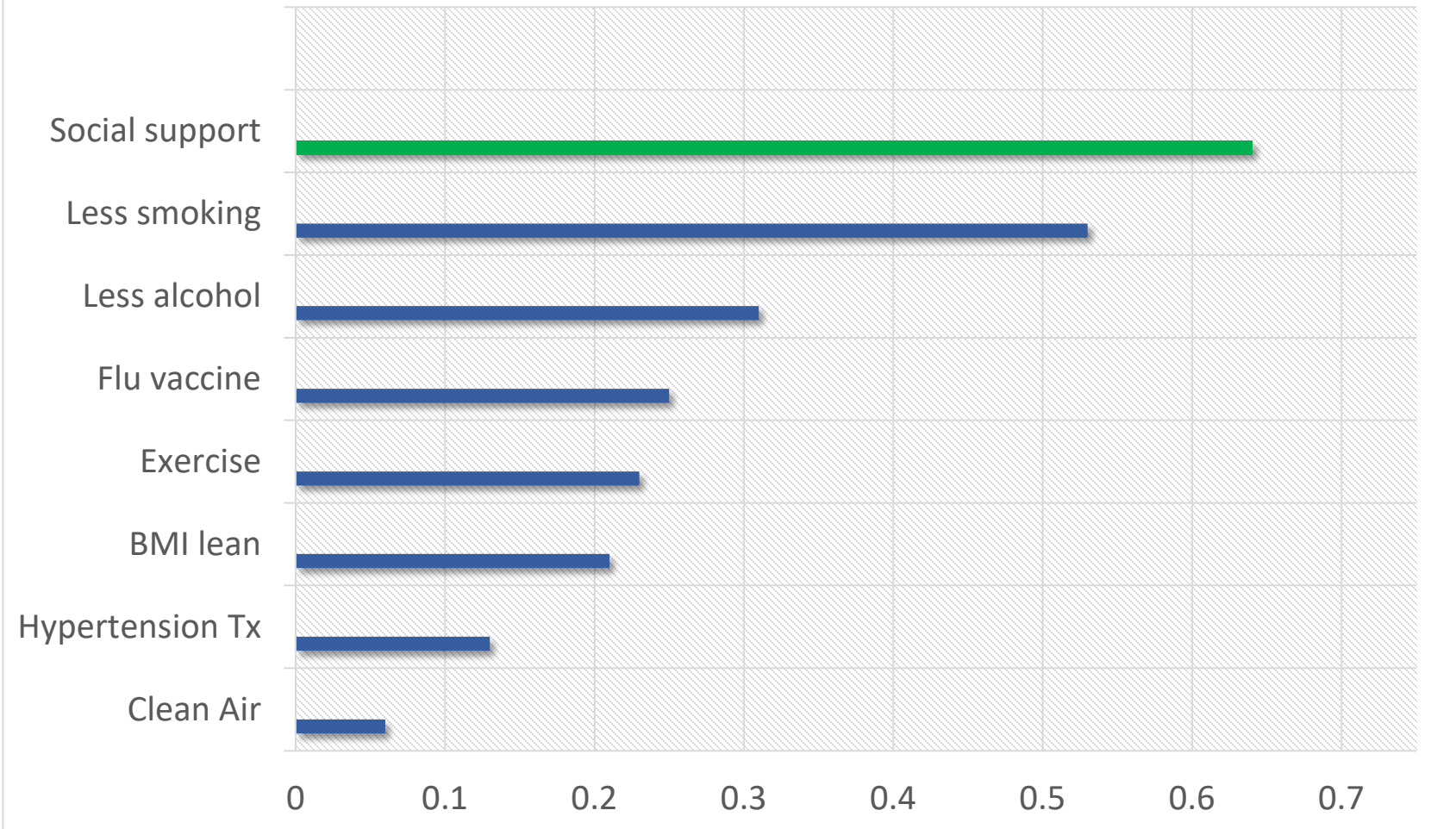


Why does feeling connected matter?

Comparison of Odds Ratios of Decreased Mortality across Conditions Associated with Mortality



Comparison of Odds Ratios of Decreased Mortality across Conditions Associated with Mortality



Social Relationships and Health

- (1) Mental and physical health;
- (2) Behavioral, psychosocial, and physiological pathways;
- (3) Costs (e.g., abusive relationships) + benefits for health (strong integration);
- (4) *Cumulative impact* on health outcomes over time.



Social Relationships and Health

Several recent review articles provide consistent and compelling evidence linking a *low quantity or quality of social ties* with a host of conditions:

- development and progression of cardiovascular disease, recurrent myocardial infarction, and atherosclerosis;
- autonomic dysregulation;
- high blood pressure;
- cancer and delayed cancer recovery;
- slower wound healing.

A person with long, dark, wavy hair is seen from behind, looking out over a city at sunset. The sun is a bright, glowing orb in the sky, casting a warm, golden light over the scene. The city below is silhouetted against the darkening sky. The overall mood is contemplative and serene.

Purpose in Life and Mastery

Purpose in life

Engage in meaningful activities

Your life purpose consists of the central motivating aims of your life:

- guides life decisions,
- influences behavior,
- shapes goals,
- offers a sense of direction,
- creates meaning.

Why you get up in the morning.



Purpose in life and health

The scientific evidence

Purpose in life is associated with:

- Less anxiety and depression
- Healthier aging
- Better sleep
- Better diet and nutrition
- Increased willpower
- Decreased risk of heart attack
- Decreased risk of Alzheimer's
- Improved immune system functioning
- Increased pain tolerance



Purpose in life

Citations

Cohen R, Bavishi C, Rozanski A. Purpose in Life and Its Relationship to All-Cause Mortality and Cardiovascular Events: A Meta-Analysis. *Psychosom Med*. 2016 Feb-Mar;78(2):122-33.

Neal Krause. Meaning in Life and Mortality. *J Gerontol B Psychol Sci Soc Sci*. 2009 Jun; 64B(4):517–527.

Hill PL, Turiano NA. Purpose in life as a predictor of mortality across adulthood. *Psychol Sci*. 2014 Jul;25(7):1482-6.

Boyle PA, Buchman AS, Barnes LL, and Bennett DA. Effect of a purpose in life on incident Alzheimer Disease and mild cognitive impairment in community-dwelling older persons. *Arch Gen Psychiatry*. 2010 Mar;67(3):304-10.

Kim ES, Sun JK, Park N, and Peterson C. Purpose in life and reduced incidence of stroke in older adults: The health and retirement study. *J Psychosom Res*. 2013 May;74(5):427-32.

Kim ES, Sun JK, Park JK, et al. Purpose in life and reduced risk of myocardial infarction among older U.S. adults with coronary heart disease: A two-year follow-up. *J Behav Med*. 2013 Apr;36(2):124-33.

Wood AM and Joseph S. The absence of positive psychological (eudaimonic) well-being as a risk factor for depression: A ten year cohort study. *J Affect Disord*. 2010 May;122(3):213-7.

Fava GA, Ruini C, Rafanelli C, et al. Six-year outcome of cognitive behavioral therapy for prevention of recurrent depression. *Am J Psychiatry*. 2004 Oct;161(10):1872-6.

Fredrickson BL, Grewen KM, Coffey KA, et al. A functional genomic perspective on human well-being. *Proc Natl Acad Sci U S A*. 2013 Aug 13;110(33):13684-9.

Ruini C, Fava GA. Well-being therapy for generalized anxiety disorder. *J Clin Psychol*. 2009 May;65(5):510-9.

Danhauer SC, Russell GB, Tedeschi RG, et al. A longitudinal investigation of posttraumatic growth in adult patients undergoing treatment for leukemia. *J Clin Psychol Med Settings*. 2013 Mar;20(1):13-24.

Purpose in life

Engage in meaningful activities

Health complications affect:

self-image, view of the future, and
sense of purpose.

Surgery compounds the stress.

Destabilizing and anxiety provoking!



Surgery => Loss of Control

- Loss control over one's environment.
- Lack of control results in anxiety, feelings of helpless and hopelessness.
- Associated with poor surgical outcomes.
- Improve sense of Control and Empowerment.



A silhouette of a person standing on a hill with their arms raised in a gesture of triumph or achievement. The background is a dramatic sky at sunset or sunrise, with warm orange and yellow tones near the horizon transitioning to a deep blue at the top. The person is positioned on the left side of the frame, facing right. The overall mood is one of resilience and accomplishment.

Building resilience

Positive Activity Interventions

Increase positive emotions



Amplify positive emotions
Behavioral activation

- Pleasant activities (VLAs)
- Gratitude activities
- Savoring
- Acts of kindness
- Positive daily reflection

PAIs are effective for people with chronic pain

Meta-Analysis in people with **chronic pain**:

- PAIs compared to controls decreased:
 - pain intensity
 - depressive symptoms
 - pain catastrophizing
 - negative affect/emotions
 - increased positive affect/emotions.

At 3-month follow-up, benefit persisted for depression and positive and negative emotions.



Positive Activity Interventions

Increase positive emotions

Pleasant Activity Scheduling

- On 3 to 5 days this week, set aside time to do something you enjoy. Put it on your calendar and treat it with the same respect as you would a doctor's appointment.

- Have coffee with a friend
- Spend time on your hobby/sport
- Buy a small gift for yourself/loved one
- Take a cooking or yoga class
- Get a massage
- Binge watch a favorite show
- Take the dog on a nature hike



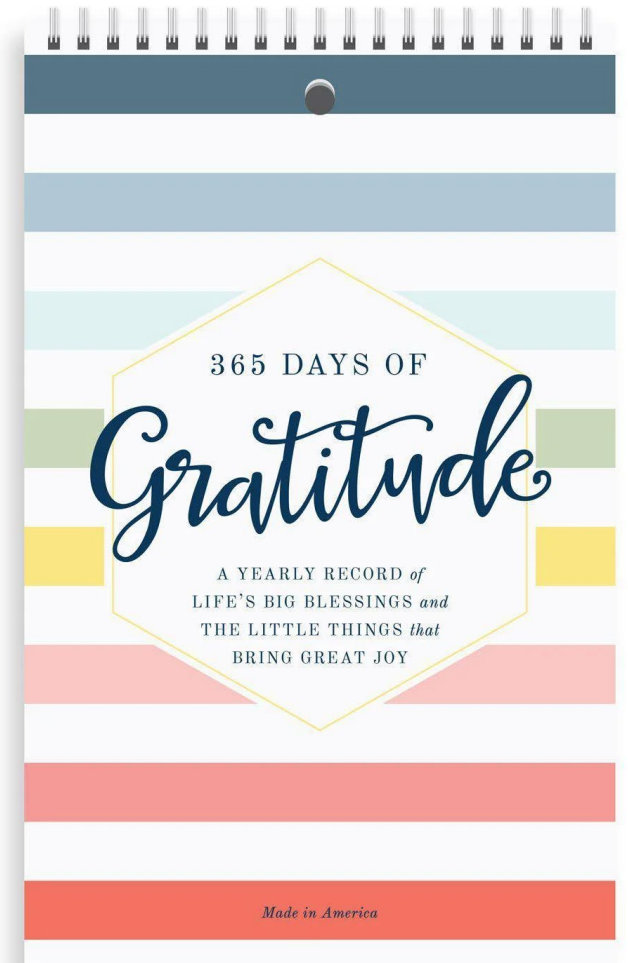
Cuijpers et al. Clin Psychol Rev 2007;27:318-26
LARGE effect size in depression = .87
Behavioral activation!

Positive Activity Interventions

Enhance feelings of gratitude

Keep a Gratitude Diary (next 30 days or longer)

1. Every day, write down 3 things for which you are grateful. It can be anything - feeling the sunshine on your face, happy that a friend phoned, receiving a gift, being able to take a walk, anything. Work out a time to do this. Set an alarm on your iPhone.
2. Make a commitment to yourself that you will write down 3 things every day.
3. The 3 things **MUST** be **DIFFERENT** each time.
4. Smile as you write them down. This will help you to feel grateful.



Moskowitz et al. Journal of health psychology. 2012;17(5):676-692.

Cohn et al. Journal of Positive Psychology. In press.

Emmons et al. Journal of personality and social psychology. 2003;84(2):377-389.

Kashdan et al. Behaviour research and therapy. 2006;44(2):177-199

Positive Activity Interventions

Increase mindfulness and presence

Savoring and Mindfulness:

- Every day for the next week, be sure to savor at least two experiences (for example, your morning coffee, a moment with a friend, or the sun on your face as you walk to your car).
- Be sure to engage all of your senses.
- Be present, be mindful.
- Spend at least 2-3 minutes savoring each experience.



Positive Activity Interventions

Connect with others – improve social support

Acts of Kindness

- One day this week, do five kind things for other people and one kind thing for yourself.
- The people can be complete strangers or friends and family members. You can do very small acts of kindness such as holding a door open, sharing a genuine compliment or giving somebody a hug. For yourself, perhaps take a long bath, call a close friend or enjoy a book or movie.



Acts of Kindness

- Acts of kindness have been associated with:
 - decreased levels of health-related stress,
 - less depression in patients living with diabetes,
 - lower levels of pain,
 - lower levels of cortisol,
 - lower blood pressure,
 - less anxiety and depression
 - and much more if you include *positive service/volunteering* as “act of kindness”!
- Curry et al. A systematic review and meta-analysis of the effects of performing acts of kindness on the well-being of the actor. <https://doi.org/10.31219/osf.io/ytj5s>
- Moskowitz JT, Hult JR, Duncan LG, et al. A positive affect intervention for people experiencing health-related stress: development and non-randomized pilot test. *Journal of health psychology*. Jul 2012;17(5):676-692.
- Cohn MA, Pietrucha ME, Saslo LR, Hult JR, Moskowitz JT. An online positive affect skills intervention reduces depression in adults with type 2 diabetes. *Journal of Positive Psychology*. In press.
- Hausmann LR, Parks A, Youk AO, Kwoh CK. Reduction of bodily pain in response to an online positive activities intervention. *The journal of pain : official journal of the American Pain Society*. May 2014;15(5):560-567.

A photograph of a dirt path winding through a dense forest of tall, thin trees. The sun is shining brightly from the center of the path, creating a strong lens flare and illuminating the scene with a warm, golden light. The text "Where are the opportunities in the perioperative setting?" is overlaid in a large, black, sans-serif font across the middle of the image.

Where are the opportunities
in the perioperative setting?

Systemic change

Values, support, control

- Humanizing our patients
- Focusing on what's important for our patients and even making these goals part of the treatment plan.
- Empowerment in a setting where most feel helpless.
- Prehabilitation



Prehabilitation

Empowerment, control, self-efficacy

- Methods include pre-op preparation videos, BT/CBT, music therapy, aromatherapy, hypnosis, guided imagery/relaxation therapy, and massage¹
- **Particularly helpful in cancer surgery populations.²**



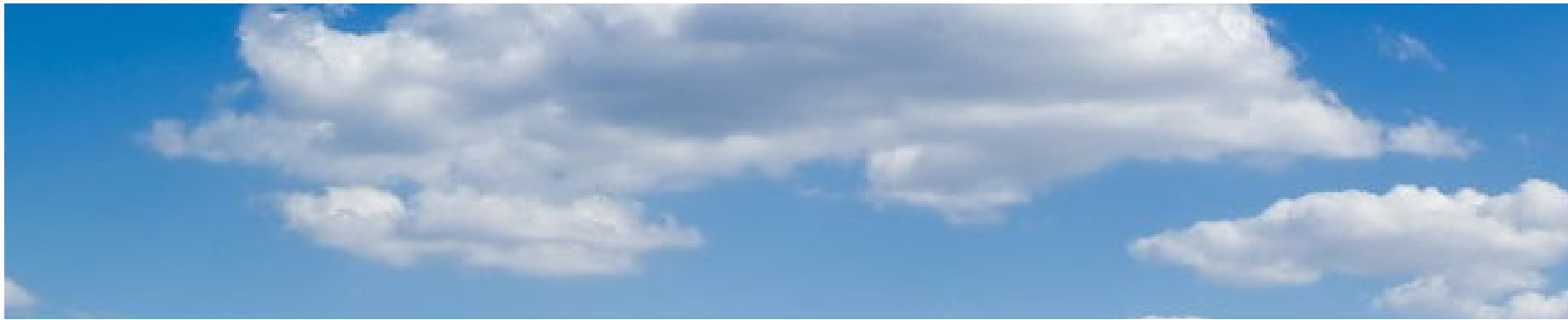
1) Wang et al. Front Public Health. 2022 Apr 11;10:854673.

2) Tsimopoulou et al. Ann Surg Oncol. 2015 Dec;22(13):4117-23.

MSHOP

Michigan Surgical & Health Optimization Program

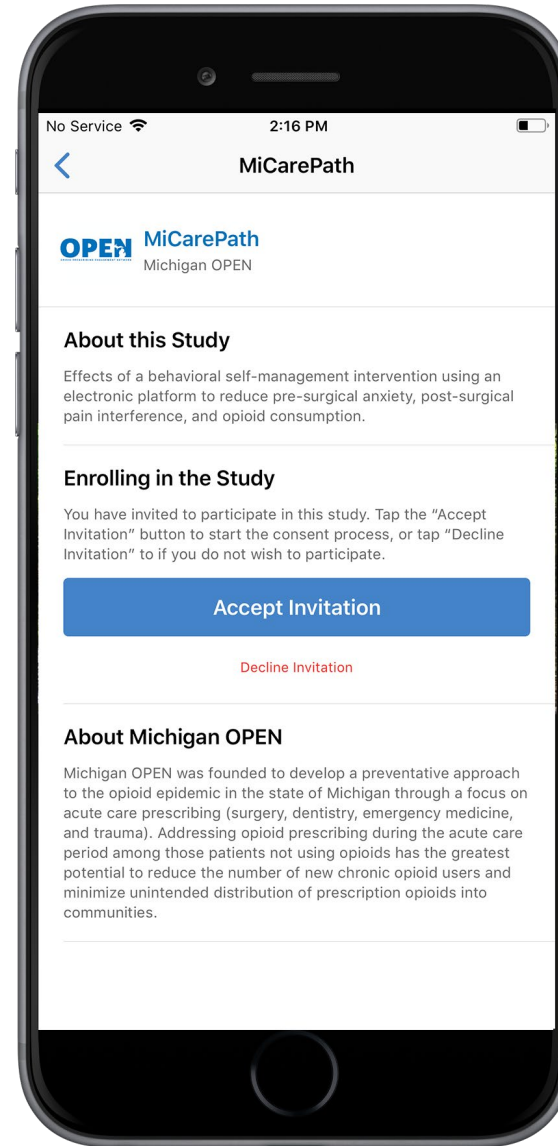
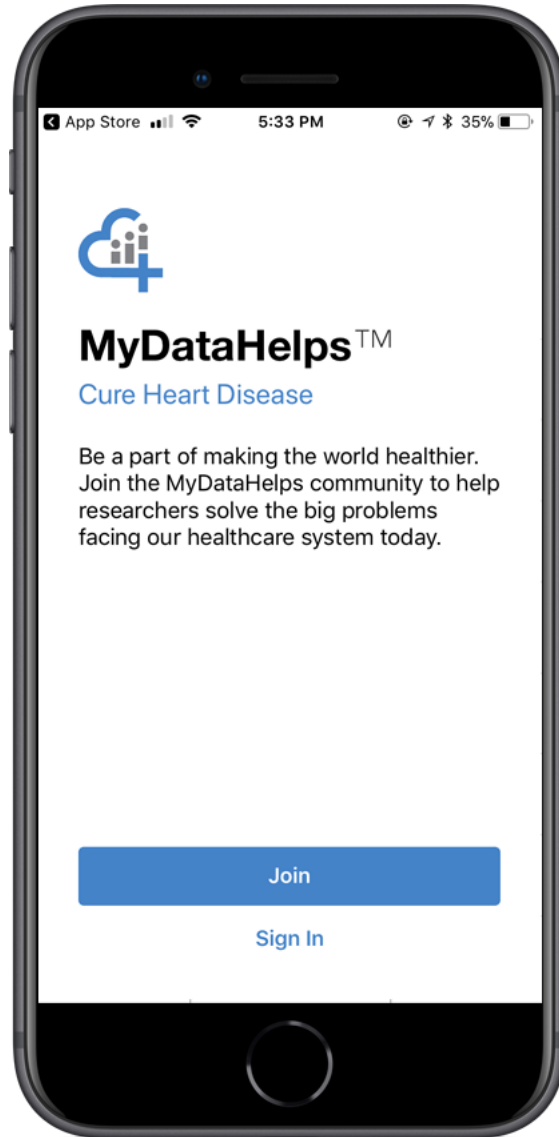
While not yet a universally embraced concept, prehabilitation activities aim to strengthen and enhance a patient's ability to endure surgery, while also assisting in recovery, thereby lessening length of hospital stay and ultimately reducing costs.

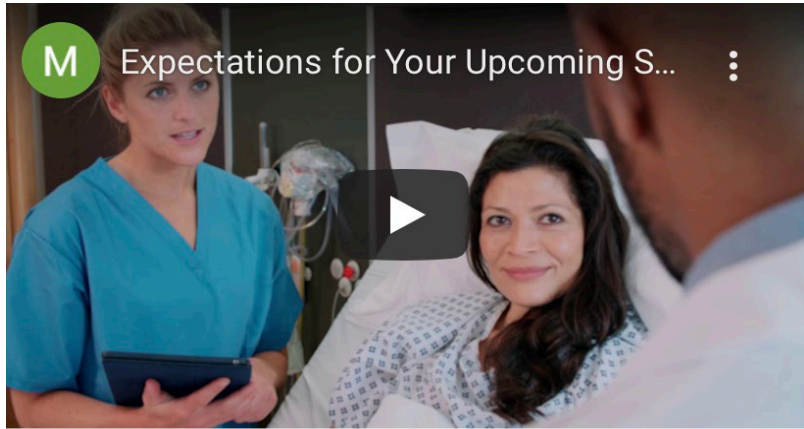


MiCarePath

A better way to prepare for surgery.







Preparing for Your Upcoming Surgery

Please watch this short video.



Using Opioids Safely

Please watch this short video.



Pain Management Planning

Please watch this short video.



Breathing Pacer 5

Pacer set to 5 breaths per minute



Guided Imagery Introduction

Guided imagery video with background music



Garden Guided Imagery

Guided imagery video with background music



Preliminary Data:

- MiCarePath vs TAU (n=56).
- Matched for age and sex MiCarePath had significantly reduced opioid use 2 weeks after surgery (P = 0.001).
- Current opioid use:
 - 75% of TAU patients
 - 7.1% of MiCarePath patients

Simple! Happiness and Pigs

Notice, savor, recall

Positive Piggy Bank:

- Piggy Bank
- Slips of paper and a pen
- Positive reflection instruction card



Happiness and Pigs

Notice, savor, recall

“Every evening think about the people, things or events that made you happy that day. You may make a list if you like. Pick one of these and spend a moment savoring it. What made it so special to you? Now, write down this moment on a “currency” slip. Use enough detail that you can immediately recall what happened later. Next, add the date, fold up your happy memory “currency,” and drop it in the piggy bank. You will make these happy memory “deposits” in the same way every evening for the next 30 days.”



Happiness and Pigs

Notice, savor, recall

“At the end of 30 days, you will “close your account.” This means that you will withdraw all of the “currency” from your piggy bank and read each and every one of the deposited happy memories. As you read them, try to recall details of the happy event and what made it so special to you at the time. Enjoy!”



Happiness and Pigs

Notice, savor, recall

Two RCT Pilot Trials:

General population, N=120: PPB or WLC

- Improved life satisfaction

Breast Cancer Surgery, N=20: PPB or TAU [presurgical]

- Lower levels of negative affect
- Less fatigue
- Improved subjective well-being





Virtual Reality

Virtual Reality

Virtual reality immersive experience decreased pain up to 40% in first stage labor.





Our Words Matter



Without direction...



With direction... “Imagine the happiest day of your life. What’s happening? What do you see, hear, smell, feel....”

Comfort Scores

- The word “pain” is a primer – nocebo effects
- The word “comfort” invokes a different expectation, “*What can we do to make you more comfortable?*”
 - *Pillow*
 - *Blanket*
 - *Some water*

Study in post op cesarean section pain - requests for analgesia decreased four-fold when pain scores were avoided in favor of comfort scores.¹

Comfort scores and pain scores have been found to be moderately correlated.²



1) Chooi et al. Br J Anaesth 2013;110:780-7

2) Miu et al. Anaesth Intensive Care. 2019 Sep;47(5):435-441.

A young girl with dark hair is shown in profile, smelling several bright pink flowers. She has her eyes closed and a gentle smile, suggesting a sense of joy and connection with nature. The background is a soft-focus field of similar pink flowers under a bright sky. The overall mood is peaceful and sensory.

Appeal to our senses

Aromatherapy

- Twenty studies (1717 participants)
- Aromatherapy reduced preoperative anxiety (compared to placebo control, conventional care and no intervention).
- Greater improvement preoperative anxiety in cardiac surgery as well as relatively *low-risk* surgery.
- Lavender oil, citrus, and rose oil were most commonly used.



Music

- 73 RCTs – music in post-operative period
- Music reduced postoperative pain, anxiety and analgesia use and increased patient satisfaction
- Length of stay did not differ
- Choice of music and timing of delivery made little difference for outcomes.
- Music was effective even when under general anesthetic.



Healing Spaces

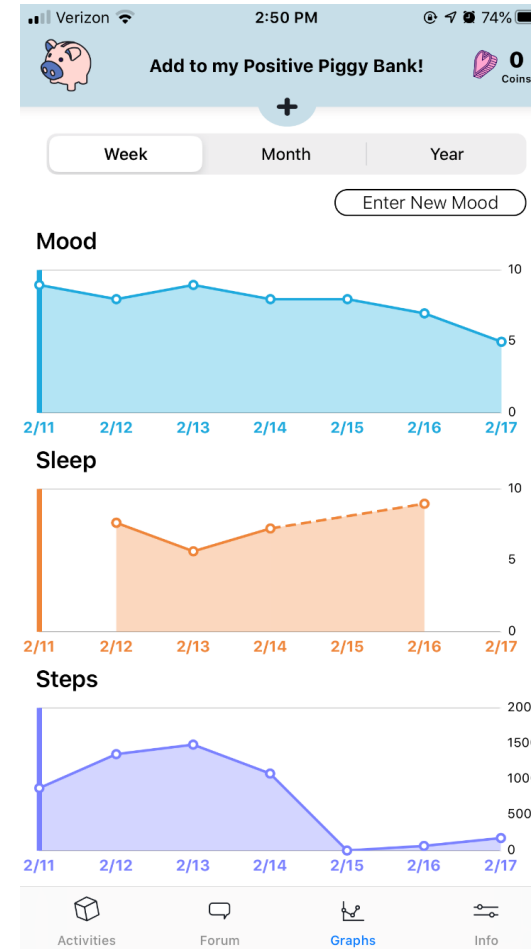
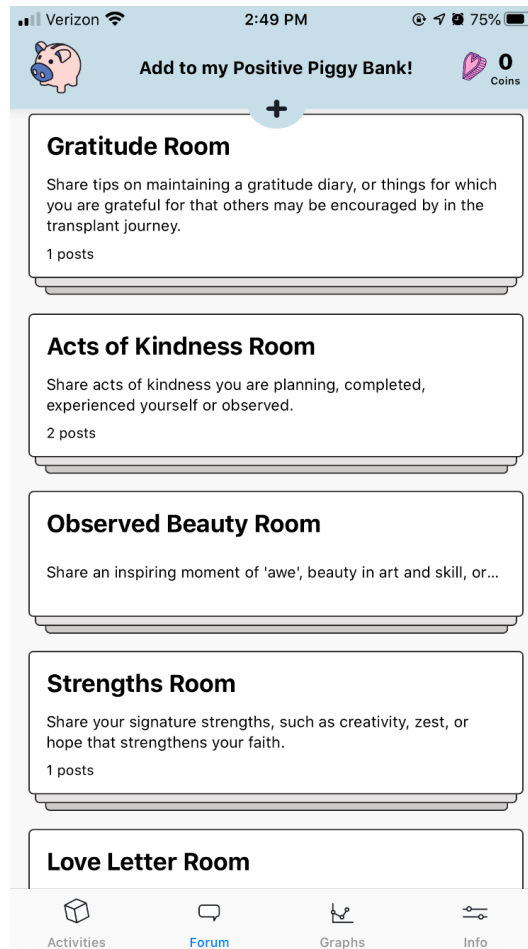
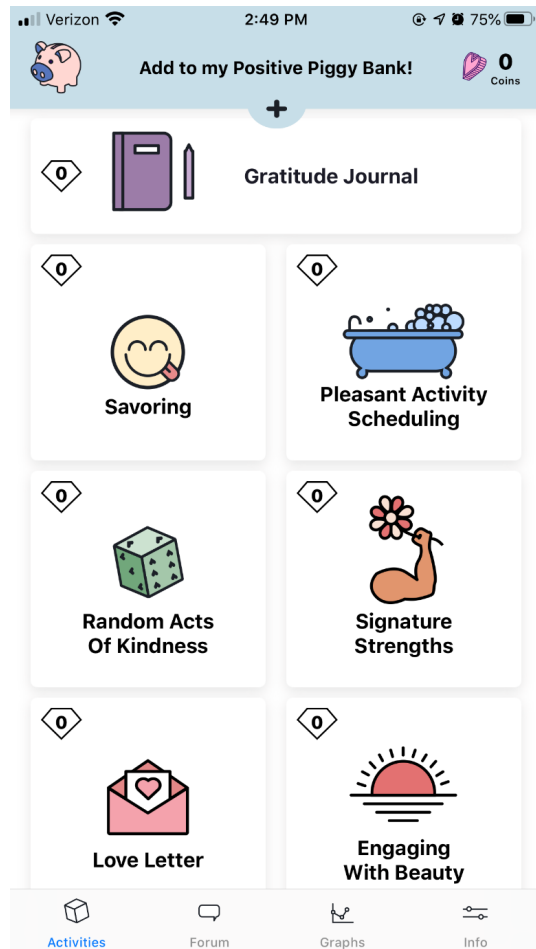


A photograph of two women sitting on a porch, engaged in conversation. The woman on the left has dark curly hair and is wearing a light-colored blazer and a matching scarf. The woman on the right has her hair pulled back and is wearing a light-colored floral shirt. They are sitting on a wicker chair with red and white striped cushions. The background shows a blurred outdoor setting with a table and chairs. The text "Family Member Caregivers" is overlaid in white on the image.

Family Member Caregivers

Promoting Health and Well-Being Through Mobile Health Technology (Roadmap 2.0) in Family Caregivers and Patients Undergoing Hematopoietic Stem Cell Transplantation: Protocol for the Development of a Mobile Randomized Controlled Trial

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Roadmap Participants:
 292 HCT patients & caregivers
 228 Frontline HC workers
 1997 College students
 100 ONC patients & caregivers

Rozwadowski et al. JMIR Res Protoc.
 2020 Sep 18;9(9):e19288
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Providers

Gratitude interventions effective in healthcare providers

- Emotional exhaustion (EE) in health care providers is common and linked to lower quality of care.
- Single-exposure trial of a gratitude letter–writing intervention for improving well-being.
- 1575 health care workers
- Significant improvements in [emotional exhaustion, happiness, and work-life balance](#) between the intervention and 1-week follow-up ($P < .001$).
- HCWs most motivated to improve their EE had higher EE at baseline ($P < .001$) and were more likely to improve EE a week later ($P = .03$).



Gratitude interventions effective in healthcare providers

Think of someone who has done something amazing for you; this person can be alive or no longer with us. This person contributed to your well-being in a big way. Spend the next 7 minutes writing a genuine, kind and appreciative 2-part note:

- Part 1: Tell this person what they did, how it impacted you, and the benefits you received.
- Part 2: Tell this person why it was important to you.



Moving forward:

We include the patient voice – partnering with people with lived experience



Moving forward:

We need to be daring, creative, and persistent.

- Typical concerns of patients (what's scary?)
- Points of intersection/contact
- Environmental changes
- Providers who could be involved in supportive care
- Types of interventions that could be used
 - BIG ideas
 - Little ideas





Funding Sources and Salary Support:

NIH-National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

NIH-National Heart Lung and Blood Institute (NHLBI)

NIH-National Center for Complementary and Integrative Health (NCCIH)

NIH-National Institute of Nursing Research (NINR)

University of Michigan, Department of Anesthesiology



**CHRONIC PAIN
AND FATIGUE**
RESEARCH CENTER



Moving forward:

We get the word out - bring evidence-based strategies to patients.

Chronic Pain

Self-Management with a focus on developing resilience and greater joy.

