WISDOM, GROWTH, & RESILIENCE IN CARE PARTNERSHIP

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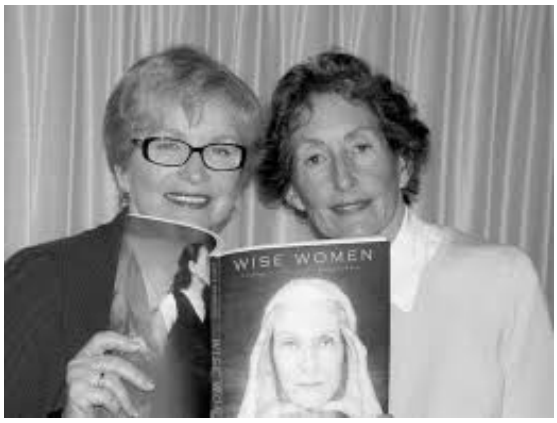
CHALLENGES OF CARE PARTNERSHIP

- 61% of caregivers rate the emotional stress of caregiving as high or very high.
- One-third of caregivers have reported symptoms of depression.
- Caregivers are more likely than noncaregivers to have reduced immune function and slower wound healing, new hypertension and new coronary heart disease.

Alzheimer's Association (2012). *"Facts & Figures" report*.

WHAT FACTORS MIGHT INCREASE OUR CHANCES OF GROWING MORE WISE AND RESILIENT IN THE FACE OF CARE PARTNERSHIP CHALLENGES?

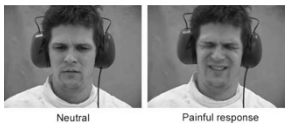


SIX SUBCOMPONENTS OF WISDOM :

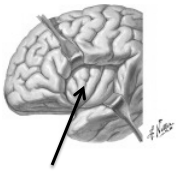
- Prosocial attitudes & behaviors (empathy, social cooperation, altruism)
- Social decision making/Pragmatic knowledge of life
- Emotional homeostasis
- Reflection/self-understanding
- Value relativism/tolerance
- Acknowledgment of and dealing effectively with uncertainty/ambiguity

Meeks, T.W., & Jeste, D.V. (2009). Neurobiology of wisdom: A literature overview. *General Psychiatry, 66*, 355-365.

EMPATHY FOR PAIN



Brain Areas Activated by both Experiencing & Observing Pain

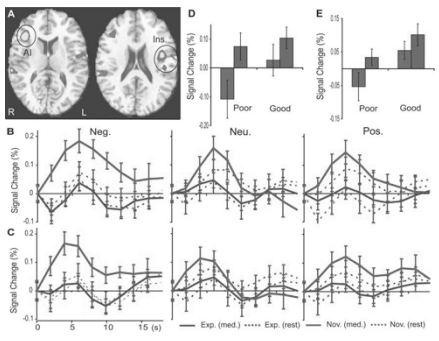


insula

- Observing facial expression of another in pain activates areas involved in emotional aspects of our own pain

Lamm, C., Batson, C.D., & Decety, J. (2007). The neural substrate of human empathy: Effects of perspective-taking and cognitive appraisal. *Journal of Cognitive Neuroscience, 19*, 42-58.

ACTIVITY IN EMPATHY-RELATED AREAS MAY BE "PLASTIC" IN RESPONSE TO MEDITATION TRAINING

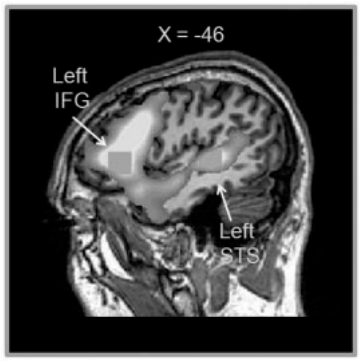


- "Expert" meditators (10,000 + hrs. practice) showed greater activation than novices to emotional sounds in insula during compassion meditation.

Lutz, A., Brefczynski-Lewis, J., Johnstone, T., & Davidson, R.J. (2008). Regulation of the neural circuitry of emotion by compassion meditation: Effects of meditative expertise *PLoS ONE*, 3(3), e1897. Doi:10.1371/journal.pone.00011897.

BRIEF MEDITATION TRAINING ALSO RESULTS IN MEASURABLE EMPATHIC ACCURACY & BRAIN-RESPONSE CHANGES

- 8 weeks of compassion meditation training increased empathic accuracy & related brain response when participants were not meditating, in comparison to those in a health discussion class.



Mascaro, J.S., Rilling, J.E., Negi, L.T., & Raison, C.L. (2012). Compassion meditation enhances empathic accuracy and related neural activity. *Social, Cognitive & Affective Neuroscience*. doi: 10.1093/scan/nss095.

BRIEF MEDITATION TRAINING INCREASES COMPASSIONATE ACTION

- 8 weeks of either mindfulness or compassion meditation training enhanced compassionate responding.
- Meditators, compared to waitlist controls, more frequently offered their seats to an injured person who appeared to be suffering.

Condon, P., Desbordes, G., Miller, W.B., & DeSteno, D. (2013). Meditation increases compassionate responses to suffering. *Psychological Science*, DOI: 10.1177/0956797613485603

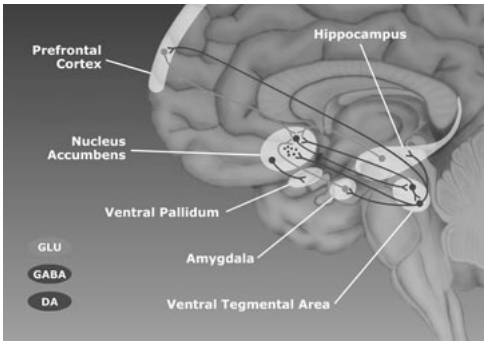
EMPATHY & AGING

- Longitudinal research shows no age-related decline in empathy
- Empathy in older age is related to greater life-satisfaction and a perception of more positive & meaningful social interactions.

Gruhn, D., Rebucal, K., Diehl, M., Lumley, M., & Labouvie-Vief, G. (2008). Empathy across the adult lifespan: Longitudinal and experience-sampling findings. *Emotion, 8*, 753-765.
Schieman, S., & Gundy, K.V. (2000). The personal and social links between age and self-reported empathy. *Social Psychology Quarterly, 63*, 152-174.

SOCIAL COOPERATION & ALTRUISM

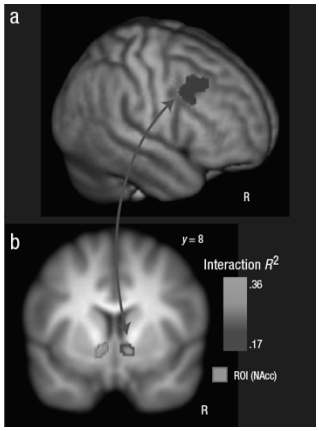
- Social cooperation & altruism both relate to activity in "reward centers" deep in the brain, similar to that of more instinctual pleasures such as food and sex.



Harbaugh, W.T., Mayr, U., & Burghart, D.R. (2007). Neural responses to taxation and voluntary giving reveal motives for charitable donations. , 1622-1625.
Moll, J, et al. (2006). Human fronto-mesolimbic networks guide decisions about charitable donation. , 15623-15628.
Rilling, J., et al. (2002). A neural basis for social cooperation , 395-405.

VERY BRIEF COMPASSION MEDITATION TRAINING ENHANCES ALTRUISM & BRAIN REWARD AREA ACTIVITY

- Both altruistic responding in an economic game and reward-associated brain activity were increased by compassion meditation training of 30 min. per day for two weeks.



Weng, et al. (2013). Compassion training alters altruism and neural responses to sufering. *Psychological Science, 24*, 1171-1180.

ALTRUISM, VOLUNTEERISM, & HEALTH IN OLDER ADULTS

- Longitudinal research also shows health benefits of volunteering & informal helping for older adults, including:
- Improved physical health
- Lower mortality/increased longevity
- Increased life satisfaction/decreased anxiety & depression

Omoto, A.M., & Schlehofer, M.M. (2007). Volunteerism, religiousness, spirituality, and the health outcomes of older adults. In Post, S.G. (Ed.), *Altruism and health: Perspectives from empirical research* (pp. 394-409). Oxford, U.K.: Oxford University Press.

SOCIAL SUPPORT, MEANINGFUL RELATIONSHIPS, & HEALTH

- Social support, particularly meaningful, loving relationships, is important for prevention of various illnesses and maintenance of well-being.

Levin, J. (2007). Integrating positive psychology into epidemiologic theory: Reflections on love, salutogenesis, and determinants of population health. In Post, S.G. (Ed.), *Altruism and health: Perspectives from empirical research* (pp. 189-218)). Oxford, U.K.: Oxford University Press.

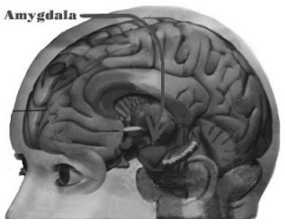
AGING & SOCIAL REASONING

- Presented with stories involving social conflicts, older adults made more use of higher-order reasoning schemes that emphasize need for multiple perspectives, allow for compromise, & recognize limits of knowledge.

Grossmann, I., et al. (2010). Reasoning about social conflicts improves into old age. *Proceedings of the National Academy of Sciences, 107*, 7246-7250.

EMOTIONAL BALANCE: AGING AND DECISION-MAKING

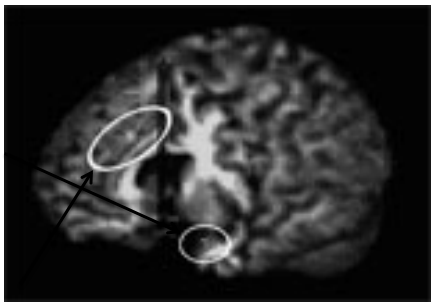
- In monetary decision-making games, older adults show little or no activation of the amygdala, a brain structure involved in threat detection, at the prospect of monetary loss.
- May be related to greater positivity & emotion regulation.



Nielsen, L.B., Knutson, B., & Carstensen, L.L. (2008). Affect dynamics, affective forecasting, and aging. *Emotion, 8*, 318-330.

EMOTION REGULATION & AGING

- Older adults are calmer and more emotionally regulated than younger adults, show greater positivity, and faster return to baseline of amygdala activation by negative images.
- This is true despite age-related changes in frontal brain regions important for emotion regulation.



Kaszniak, A.W., & Menchola, M. (2012). Behavioral neuroscience of emotion in aging. *Current Topics in Behavioral Neuroscience, 10,* 51-66.

WHY MIGHT WE GET BETTER AT EMOTION REGULATION AS WE AGE?

- Several studies suggest that older persons, aware of their own mortality and that of family and close friends, increasingly focus on emotional richness and social connection, placing a premium upon emotional positivity & regulation.

Carstensen, L.L. (2006). The influence of sense of time on human development. *Science, 312*, 1913-1915.

EMOTION IN LONG-TERM ZEN & MINDFULNESS MEDITATORS

- ✧Middle-aged and older long-term Meditators report experiencing greater emotional clarity
- ✧These meditators show lower physiological arousal, & greater subtle positive facial expression in response to subliminal emotional pictures, consistent with regulation early in the emotion process.

STM LTM

Nielsen, L., & Kaszniak, A.W. (2006). Awareness of subtle emotional feelings: A comparison of long-term meditators and non-meditators. *Emotion, 6*, 392-405.

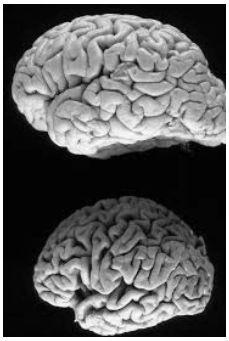
BRIEF MEDITATION TRAINING REDUCES LONELINESS AND PRO-INFLAMMATORY GENE EXPRESSION IN OLDER ADULTS

- Lonely older adults have increased expression of pro-inflammatory genes as well as increased risk for Illness & death.

- 8 weeks of mindfulness meditation training reduced loneliness and related pro-inflammatory gene expression in older adults.

Creswell, J.D., et al. (2012). Mindfulness-Based Stress Reduction training reduces loneliness and pro-inflammatory gene expression in older adults: A small randomized controlled trial . *Brain, Behavior, and Immunity, 26*, 1095-1101.

MEDITATION & BRAIN AGING



- Amount of meditation practice is significantly correlated with cortical thickness or volume by MRI.
- Zen meditators don't show the negative correlation found for non-meditators between age and performance on a sustained attention task, or between age and brain gray matter volume.

Lazar, S. W., Kerr, C. E., Wasserman, R. H., Gray, J. R., Greve, D. N., Treadway, M. T., et al. (2005). Meditation experience is associated with increased cortical thickness. *Neuroreport, 16*, 1893–1897.
Grant, J. A., Courtemanche, J., Duncan, G. H., & Rainville, P. (2010). Cortical thickness and pain sensitivity in Zen meditators. *Emotion, 10*, 43–53.
Pagnoni, G., & Cekic, M. (2007). Age effects on gray matter volume and attentional performance in Zen meditation. *Neurobiology of Aging, 28*, 1623–1627.

IS CAREGIVING ALWAYS A HEALTH RISK?

- National longitudinal survey of married older adults (N=3,376)
- Results showed that providing 14+ hrs. /wk. of care for a spouse predicted decreased caregiver mortality.
- Suggests that, at least under some circumstances, caregivers may actually benefit from providing care: Adverse health consequences of caregiving may be more related to anticipatory bereavement & witnessing decline of a loved one.

Brown, S.L., et al. (2009). Caregiving behavior is associated with decreased mortality risk. *Psychological Science, 20*, 488-494.

"

initiation, as great an initiation as life can offer two people… As we were held in the fire of transformation, we were burned and burnished until the gold of love shone unobstructed between us. That was, ultimately, the blessing and gift of the journey."

Hoblitzelle, O.A. (2010). *Ten Thousand Joys & Ten Thousand Sorrows: A Couple's Journey Through Alzheimer's*. New York: Jeremy P. Tarcher/Penguin.

INCREASING BENEFICIAL, & DECREASING ADVERSE CONSEQUENCES OF CAREGIVING

- Seeing the care partner' harmful, but the caregiver's compassion (perhaps leading to greater amounts of care provided) may be beneficial.
- How can the established benefits of compassionate action/altruism be enhanced, while minimizing empathic distress?

Schultz, R., et al. (2007). Perceived patient suffering and caregiver compassion: New opportunities for research, practice, and policy. *The Gerontologist, 47*, 4-13.

MINDFULNESS & COPING WITH THE DAILY CHALLENGES OF CAREGIVING

- Seeing more clearly what situations elicit problem behavior and how they can be avoided or modified.
- Decreasing emotional distress & avoidance coping; Increasing emotion regulation.
- Taking advantage of opportunities to increase positive events with care-recipient and enhance caregiver & care recipient mood.

MINDFULNESS BASED STRESS REDUCTION & CARE PARTNERSHIP.

- Recent investigations have indicated feasibility and showed subjective and physiological benefit of MBSR for older adult caregivers of persons with dementia.
- However, specificity of meditation training remains unclear.

Epstein-Lubow, et al. (2011). A pilot investigation of mindfulness-based stress reduction for caregivers of frail elderly. *Mindfulness, 2*, 95–102

O'Donnell, R., Kaszniak, A. W., & Menchola, M. (2010). *Evaluating mindfulness-based stress reduction for older family caregivers of persons with neurocognitive disorders*. Poster presented at the annual Mind and Life Summer Research Institute, Garrison, NY.

Oken, B. S., Fonareva, I., Haas, M., Wahbeh, H., Lane, J. B., Zajdel, D., et al. (2010). Pilot controlled trial of mindfulness meditation and education for dementia caregivers. *The Journal of Alternative and Complementary Medicine, 16*, 1031–1038.

ARIZONA MBSR CAREGIVER STUDY

- Recruited older adult family caregivers of persons with neurocognitive disorders (primarily dementia)
- Randomized assignment to 8-week Mindfulness Based Stress Reduction (MBSR) or Progressive Muscle Relaxation/Autogenic Imagery (PMR)
  - Measures at baseline, post-training, & 8-weeks post-training

INITIAL RESULTS: SUMMARY

- MBSR results in greater decrease of depression symptoms, although perceived stress decreases for both groups.
- Cortisol (a stress hormone) and systolic blood pressure (both before and after a stressor) show similar decreases for meditation & relaxation groups from pre- to post-training.

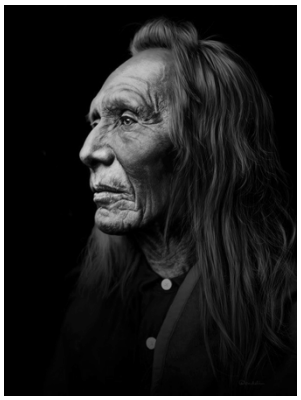
CONTEMPLATIVE TRAINING FOR PALLIATIVE CARE CLINICIANS

- Lessons from contemplative science are being applied in training programs for palliative care clinicians.
- Initial evaluations are promising (e.g. decreased burnout & moral distress), but randomized controlled trials are needed.

Rushton, C.H., Kaszniak, A.W. & Halifax, J.S., (2013). A framework for understanding moral distress among palliative care clinicians. *Journal of Palliative Medicine, 16*, 1074-1079.
Rushton, C.H., Kaszniak, A.W. & Halifax, J.S., (2013). Addressing moral distress: Application of a framework to palliative care practice. *Journal of Palliative Medicine.* 16, 1080-1088.

CONCLUSIONS

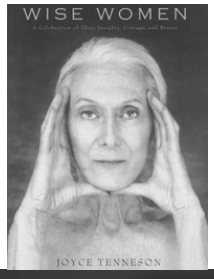
- Aging brings an accumulation of life experience, enhanced emotion regulation, greater positivity, altruism, more skillful social reasoning, and greater sense of emotional balance and well-being.



Stone, A., Schwartz, J.E., Broderick, J.E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *PNAS, 1*07, 9985-9990.

GROWING OLDER AND WISER

- This does not guarantee that older is wiser, but it might mean that aging improves our chances of being wiser.
- This may be particularly true for those who actively cultivate wisdom through meaningful relationships, service to others, and mental training practices such as meditation.



WISDOM, RESILIENCE & GROWTH IN CARE PARTNERSHIP

- Despite the challenges in care partnership, caregiver health and well-being can be enhanced through training and the wisdom of maturity.

SOME HELPFUL RESOURCES

- Brach, T. (2012)
own awakened heart. New York: Bantam.
- Halifax, J. (2008). *Being with dying: Cultivating compassion and fearlessness in the presence of death*. Boston: Shambhala.
- Richmond, L. (2012). *Aging as a spiritual practice: A contemplative guide to growing older and wiser*. New York: Gotham/Penguin.
- Hoblitzelle, O. (2010). *Ten thousand joys and ten thousand sorrows: A couple's journey through Alzheimer's*. New York: Jeremy P. Tarcher/Penguin.
- McBee, L. (2008). *Mindfulness-based elder care*. New York: Springer.

THANK YOU