Religion, Placebo, Meditation, and Prayer

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Health Psychology
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Death as an Issue in Health Psychology

- Levinson's model (1986)
  - Seasons of Life
    - Early adult transition (17-22)
      - Becoming independent. "Real job." Forming "The Dream" of the ideal life that guides one's choices.
    - Age 30 transition (28-33)
      - Sense of urgency to fully enter adult world: settle down
    - Midlife transition (40-45)
      - Possible deflation of dream: dissatisfaction. Shift in perspective from "time-since birth" to "time-left-to-live"

Worm at the Core of our Dreams

Death as an Issue in Health Psychology

- Becker
  - Dualistic nature of humans
    - Physical and abstract
  - The abstract is very real
    - We can choose to believe and it can "protect" us
  - "The weakness of the neurotic"

"Weakness of the Neurotic"

Lacking the capacity for illusion, for a creative myth about the possibilities of creation. Unable to open the mind to the possibilities of the transcendental dimension.

- Ernest Becker

Value of Belief (delusion?)

- Suppose we are designed/programmed to function with a belief system that does not necessarily have to be true? And that adherence to such systems are good for our personal health?
- Do we all have belief systems?
  - Scientism – 'conquer' our environment; hope
  - Healthism – defeat death & infirmity
  - Patriotism – defeat 'them'
  - Spiritualism – control our mortality
  - other isms

Religion Has Helped Humans Deal with Death

- Islam
- Christianity
- Tibetan Buddhism

Religiosity

- People with strong positive religious belief are generally healthier than the general population.
- Why?
  - hope/strength for handling stress
  - rules about eating and drinking, sexual promiscuity, anger and forgiveness
  - associating with people who share their beliefs
  - frequent reminders of how they seek to live

Maintaining Motivation

- Powerful Incentives
  - Peace
  - Safety/Protection
  - Salvation
  - Eternal Life

Four Noble Truths of Buddhism

1. Suffering exists
2. Suffering arises from attachment to desires
3. Suffering ceases when attachment to desire ceases
4. Freedom from suffering is possible by practicing the Eightfold Path

Eightfold Path

1. Right View
2. Right Thought
3. Right Speech
4. Right Action
5. Right Livelihood
6. Right Effort
7. Right Mindfulness
8. Right Absorption

1. Understanding of mind body relation
2. Seek inner peace; peace in the moment; Cognitive reframe
3. Monitoring selftalk
4. Monitoring behaviour
5. Career congruence
6. Choice, empowerment, commitment, ownership
7. Cues Reminders, conditioning
8. Attentional focus

Health as a Secular Religion

- A set of beliefs, values, and practices based on the teachings of a spiritual leader
  - Dean Ornish; Dr Phil
- A cause, principle, or activity pursued with zeal or conscientious devotion
  - Healthy lifestyle

Alfred North Whitehead

- Nothing is more curious than the self-satisfied dogmatism with which mankind at each period of its history cherishes the delusion of the finality of its existing modes of knowledge. Skeptics and believers are all alike. At this moment scientists and skeptics are the leading dogmatists. Advance in detail is admitted: fundamental novelty is barred

Psychology & Buddhism

- Both have an "eye toward understanding the inner workings of the mind and using that knowledge to reduce human suffering."
- Buddhist monks train for years to become expert observers of their own minds.
- Buddhist monks have been admired for emotional control.
  - Is anger 'OK?'
  - Is anger better expressed or suppressed?

Psychology & Buddhism

- Imagery
  - Buddhist monks are virtuosos
  - Years of earnest training
  - Represent the far end of expertise
  - Current body of knowledge describes the skills of amateurs: Western college 2nd years

Psychology & Buddhism

- Self Esteem
  - Contradiction: healthy-self vs. no-self
  - People come to therapy when their identity (sense of self) is threatened

Characteristics of the Practice of Some Religions

- Positive self-talk: scripts and songs
- Use of repetition: regular prayer & church attendance
- Leverages the power of belief
  - Letting go of toxins (e.g. anger, fear); trust; peace in the mind
  - Protection/safety: "the lord is my shepherd, I shall not want"
  - Hope
  - Meaning and purpose

Belief

- Faith healing works: leverages Ψ factors
  - "♪ anything is possible if you on-ly believe ♫"

Human Factors

- Jenkins, CD. (1971). Psychological & Social Precursors of Coronary Disease. The New England Journal of Medicine, 284, 244-255.
- Half of the new cases of atherosclerotic heart disease occur in people where major risk factors are not present

Rabbits

- Nerem, Levesque & Cornhill. (1980). Social Environment as a Factor in Diet Induced Atherosclerosis. *Science*, 208, 1475-1476.
- Fed diet to induce atherosclerosis
- One group had half the atherrosclerotic changes

Medalie & Goldbourt (1976)

- Followed 10,000 Israeli males aged 40+
- To determine impact of risk factors on the frequency of angina
- Among men with severe angina, those who *perceived* their wives to be loving & supportive had ½ the rate of angina as those who felt unloved & unsupported

Belief

- Krebiozen
- Expectations
- Placebo

- "Whether you believe and can, or you can't, you're right!"

Religiosity

- Prayer - shares features of stress reduction methods
  - repetitive chanting
  - purposeful thinking
  - letting go: "leave it in God's hands"
    - support when there otherwise might not be any
- Transpersonal factors?
  - Intercessory prayer

Definition

Intercessory Prayer is:

Praying for the benefit of others

Agenda

- Look at two studies (RCT's) supporting the efficacy of intercessory prayer
- Consider criticisms
- Why it is important to consider such questions

Evidence Categories (NIH)

Cat	Sources	
A	RCTs (rich body of data)	
B	RCTs (limited body of data)	
C	Non RCT's; Observational studies	
D	Panel Consensus	

Study One, 1988

Byrd, RC. (1988). Positive therapeutic effects of intercessory prayer in a coronary care unit population. Southern Medical Journal, 81, 826-829.

Byrd, RC. (1988) - Context

- Throughout the ages people have believed in the therapeutic benefits of intercessory prayer.
  - *"Please pray for me"*
- Extant medical literature had no evidence either confirming or negating the healing effects of intercessory prayer.

Byrd, RC. (1988) - Objective

- To answer the following question:

Does intercessory prayer have any effect on the patient's condition or recovery while in the hospital?

Byrd, RC. (1988) - Design

- Prospective: future oriented
- Randomized: randomly assigned to groups
  - Treatment group: usual treatment + prayer
  - Control group: usual treatment (coronary care)
- Controlled: exposure = deliberate intervention
- Double Blind: neither patients nor staff knew who was in the study

Byrd, RC. (1988) - Patients

- Public hospital (San Francisco General)
- 393 agreed to participate (57 refused)
- Nature of study was fully explained

Byrd, RC. (1988) - Intervention

- Criteria to be an Intercessor
  - Born again Christians, as per John 3:3
  - Active Christian life
  - Regular church goers
  - Daily devotional prayer
- Each patient had 3-7 intercessors who knew patient's condition
- Prayed for patient daily until out of hospital

Byrd, RC. (1988) - Measure

- The main outcome measure was comparative frequencies in Killip's classification categories.

Byrd, RC. (1988) - Measure

Killip's classification

Good – only one simple symptom & procedure

Intermediate – moderate-severe angina w/o infarction; congestive heart failure w/pulminary edema; 2 simple symptoms

Bad – Nonelective cardiac surgery; MI w/unstable angina; Severe congestive heart failure, death

Byrd, RC. (1988) - Result

Killip's Classifications by Group (count & percentage)			
Score	Prayer Group (n= 192)	Control Group (n = 201)	P
Good	163 (85%)	147 (73%)	<.01
Intermediate	2 (1%)	10 (5%)	<.01
Bad	27 (14%)	44 (22%)	<.01

Study Two, 1999

Harris, Gowda, Kolb, Strychacz, Vacek, Jones, Forker, O'Keefe, & McCallister. (1999). A Randomized, Controlled Trial of the Effects of Remote, Intercessory Prayer on Outcomes in Patients Admitted to the Coronary Care Unit. Archives of Internal Medicine, 159, 2273-2278.

Harris, et al. (1999) - Context

- Throughout the ages people have believed in the therapeutic benefits of intercessory prayer.
- Extant medical literature consists of one study confirming the healing effects of intercessory prayer.

Harris, et al. (1999) - Objective

- Replication study
- To determine whether remote, intercessory prayer for hospitalized, cardiac patients will reduce overall adverse events and length of stay.

Harris, et al. (1999) - Design

- Randomized
- Controlled
- Double blind
- Prospective
- Control group

Harris, et al. (1999) - Patients

- Private, university hospital
- Patients were unaware of the study!
- 1013 patients in two groups:
  - 484 in prayer group
  - 529 in control group

Harris, et al. (1999) - Measure

- Killip's classification (same as Byrd)
- MAHI CCU Stay Summary Score
  - Unstable angina: 1pt
  - Meds for unstable angina: 1pt
  - Catheterization: 1pt
  - Unsuccessful angioplasty: 3pts
  - Bypass surgery: 4pts
  - Cardiac arrest: 5pts
  - Death: 6pts

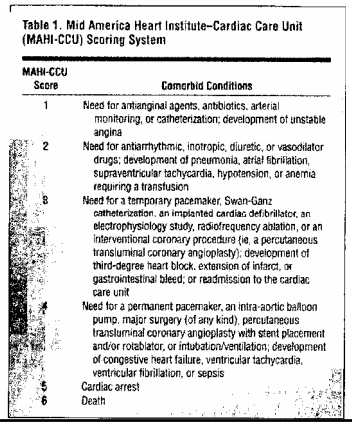

Table 1. Mid America Heart Institute–Cardiac Care Unit (MAHI-CCU) Scoring System

MAHI-CCU Score	Comorbid Conditions
1	Need for antianginal agents, antibiotics, arterial monitoring, or catheterization; development of unstable angina
2	Need for antiarrhythmic, inotropic, diuretic, or vasodilator drugs; development of pneumonia, atrial fibrillation, supraventricular tachycardia, hypotension, or anemia requiring a transfusion
3	Need for a temporary pacemaker, Swan-Ganz catheterization, an implanted cardiac defibrillator, an electrophysiology study, radiofrequency ablation, or an interventional coronary procedure (ie, a percutaneous transluminal coronary angioplasty); development of third-degree heart block, extension of infarct, or gastrointestinal bleed; or readmission to the cardiac care unit
4	Need for a permanent pacemaker, an intra-aortic balloon pump, major surgery (of any kind), percutaneous transluminal coronary angioplasty with stent placement and/or rotablator, or intubation/ventilation; development of congestive heart failure, ventricular tachycardia, ventricular fibrillation, or sepsis
5	Cardiac arrest
6	Death

Harris, et al. (1999) - Intervention

- Intercessors: Christians, weekly church attendance, daily prayer habits. 87% women, averaging 56yrs of age.
- Intercessors prayed for patients for 28 days.
- Each patient had 5 people praying for them.

Harris, et al. (1999) - Result

Effects of Intercessory Prayer on Killip's Classifications by Group (count & percentage)			
Score	Prayer Group (n = 466)	Usual Care Group(n=524	Pvalue
Good	314 (67.5%)	338 (64.5%)	.29
Intermediate	63 (13.5)	71 (13.5%)	.29
Bad	89 (19%)	115 (21.9%)	.29

Intercessory Prayer

- Findings
  - 11% lower CCU course scores in the Prayer group compared to the NoPrayer group (P=.04)
  - "Remote intercessory prayer may be an effective adjunct to standard medical care"
  - Doesn't prove God exists

Harris, et al. (1999) - Result

Effects of Intercessory Prayer on MAHI-CCU Score by Group: mean(SD)				
Score	Prayer Group (n=466)	Usual Care Group (n = 524)	%Change	Pvalue
MAHI-CCU	6.35 (.26)	7.13 (.27)	11%	.04

Research Criticisms

- Background prayer not controlled for
- No explanation of mechanism provided
- Likelihood of Harris' findings due to chance reported as 1 in 25. In reality the likelihood is 1 in 3:
  $1-(1-0.05)^3+1-(1-0.005)^{34}=0.14+0.16=0.30$
- Harris group did not differ on days in hosp or on the Killip's scale

Harris, et al. (1999) - Finding

- "Remote intercessory prayer may be an effective adjunct to standard medical care"

Why Such Questions are Important

- Earth was Flat (<1450)
- Galileo: Orbit of the earth (1575)
  - Heresy
  - No understanding of mechanism
- Sir Isaac Newton: Gravity (1660)
  - Surrendered to mysticism
- James Lind: Citrus fruit & scurvy (1753)
  - Did not know about mechanism:
    - Ascorbic acid; Nutients

Why Such Questions are Important

- Einstein: relativity of time
  - Time is experienced differently depending on where you are in the universe!
  - Time is affected by gravity
    d = t * speed of light
    We know that distance can seem different
    Speed of light is constant
    Therefore, time must be different

Why Such Questions are Important

- Bell's Theorem (John S. Bell, 1964)
- *"The most important discovery in the history of science,"*
  – Henry Strapp, UC Berkeley physicist

Bell's Theorem

- *If the statistical predictions of quantum theory are true, an objective universe is incompatible with the law of local causes.*
- Where
  - An objective universe is one that exists apart from of our consciousness, and
  - Law of local causes refers to the fact that events that occur in our universe happen at a speed that does not exceed the speed of light

Alfred North Whitehead

- Nothing is more curious than the self-satisfied dogmatism with which mankind at each period of its history cherishes the delusion of the finality of its existing modes of knowledge. Skeptics and believers are all alike. At this moment scientists and skeptics are the leading dogmatists. Advance in detail is admitted: fundamental novelty is barred

Evidence in Support of Psychokinesis

- Raden & Nelson. (1989). Consciouness-related effects in random physical systems. Foundations of Physics, 19, pages 1499-1534.
  - Meta-analysis of 832 studies done by 68 scientists
  - Distant influence of human consciousness on microelectronic systems
  - "..there is no escaping the conclusion that these effects are indeed possible"

"I am the manifestation of the prayers of millions of Japanese people. I pray that I am worthy."
Kamikaze pilot

- http://presidentialprayerteam.com/

Larry Dossey

- The work of Larry Dossey was used as source material for much of this lecture up to this point.
- http://www.dosseydossey.com/larry/default.html

Next Page

Meditation

- Extensive tradition
- Herbert Benson - well known western proponent who legitimized the concept of the Relaxation Response
  - reduced blood pressure
  - reduced respiration
  - changes in brainwave activity
  - reduces sympathetic arousal

Meditation

- Medical version: Relaxation Response
  - Herbert Benson
  - Four basic elements
    1. Quiet environment
    2. Mental device
    3. Passive attitude
    4. Comfortable position

Meditation

- In quiet environment deeply relax
- Breath through nose. As you exhale say OM
- Concentrate on the vibration it creates
- As you become aware that other thoughts have entered your mind, gently let them go and return to your breathing.

Humor, Music, Massage

- Not supported in the literature
- Norman Cousins and humor
- Art, dance and music therapy. Mudra. Rhythm and bilateral motion (emdr).
- Massage - secure, connected, pressure induced stimulation of parasympathetic nervous system

Drugs and Alcohol

- Are effective for acute stress. Long term management using drugs often creates additional problems:
  - physical problems
  - emotional problems
  - economic problems
- Tradeoffs

Psychosomatics

- Effect of the mind (psyche) on the body (soma)
- Many meanings
  - using Ψ to treat illness and disease
  - Ψ distress expressing as vague symptoms
  - organic disorders caused by Ψ/emotional problems
  - effect of Ψ factors on body's defenses

Somatopsychology

- Effect of physical states on mental states
  - hypothyroidism: lethargy
  - tumor in endocrine system: +/- hormone release
  - loss of function (sight, mobility): fear, anger
  - medication: impotence/wt gain => depression

Pain

- Intertwined with consciousness
- A subjective experience: no pain meter
- Pain-free surgery w/o anesthesia still occur
  - attention/distraction
  - **Belief/placeo**
    - Can be blocked with naloxone
  - hypnosis, suggestion
  - acupuncture
- Trauma victims report using detachment to cope with physical and emotional pain.

Rewards of Pain

- Related to rewards of sick role
  - a request for comfort?
- Pain may be rewarded or punished
  - football practice, boxing practice
  - comforted by a loving other
- May affect reaction to pain

Theory of Pain

- Endogenous Opiods
  - endorphins: internal morphine
  - physiological counterpart to emotions?
  - linked to gate control process?
- Gate control theory
  - thoughts and feelings can provide "gate closing signals that prevent the experience of pain

Pain Management

- TENS
  - disruption of pain signals?
  - closes gate?
  - distraction?
  - releases endorphins?
- Breathing, attention/distraction, relaxation

Pain Management

- Correlates of chronic pain
  - hypochondriasis
  - depression
  - fatigue
  - personality disorder:
    - dependent, passive aggressive
  - factitious disorders
  - substance abuse
- Personality not predictive of pain response

Behaviour Modification

- Extinction and punishment
- Expression of an emotion intensifies it
- Suppression of an emotion softens it
- Modeling

Cognitive Coping

- Pain induced analgesia
- Anger management
- Mindfulness

Biofeedback

- Not well understood
- Does induce deep relaxation
- Success requires "letting-go"
  - inaction as action

The Relationship

- Related to adherence to medical advice
- Expectations of health workers related to outcome

Somatoform Disorders

- Somatization disorder
- Undifferentiated somatoform disorder
- Conversion disorder
- Pain disorder
- Hypochrondriasis
- Body dysmorphic disorder
- Somatoform disorder NOS

Somatization Disorder

- Begins before age 30
- Extends over years
- Clinically significant impairment
- Polysymtomatic: combination of
  - Pain (4 sites)
  - Gastrointestinal symptoms (2)
  - Sexual problems (1)
  - Pseudoneurological symptoms (1)
- Not explained by medical condition

Undifferentiated Somatoform Disorder

- One or more physical complaints
- Symptoms cannot be explained by medical condition or effects of substance
- Clinically significant impairment
- Duration of at least 6 months
- Not better accounted for by another dx
- Symptoms are not intentionally produced

Conversion Disorder

- 1+ sx's affecting motor or sensory function
- Sx's preceded by stressors
- Symptoms are not intentionally produced
- Symptoms cannot be explained by medical condition or effects of substance
- Clinically significant impairment
- Sx's not limited to pain & sexual disfunction
- Not better accounted for by another dx

Pain Disorder

- Severe pain in 1+ are focus of attention
- Clinically significant impairment
- Ψ factors judged to have important role
- Symptoms are not intentionally produced
- Sx's not better explained by another dx

Hypochrondriasis

- Preoccupation with fear or belief one has a disease
- Preoccupation persists despite medical reassurance
- Not delusional. r/o BDD
- Clinically significant impairment
- Duration of at least 6 months
- Sx's not better explained by another dx

Somatoform Disorder NOS

- This category includes disorders with somatoform symptoms that do not meet the criteria for any specific somatoform disorder.
  - Pseudocyesis
  - Nonpsychotic hypochondriacal symptoms of less than 6 months duration
  - Unexplained physical complaints of less than 6 mo duration not due to medical condition

Factitious Disorder

- Intentional production of sx's
- Motivated to assume sick role
- No secondary gain as in malingering

Malingering

- V-code (V65.2)
- Strongly suspect if any combination of the following is noted
  - Medicolegal context of presentation
  - Discrepancy between pt report and medical findings
  - Lack of pt cooperation
  - Presence of Antisocial Personality Disorder

Multiaxial Assessment

- Axis 1 Clinical disorders
- Axis 2 Personality disorders
- Axis 3 General Medical Conditions
- Axis 4 Psychosocial & Environmental features
- Axis 5 Global Assessment of Functioning

The End