Dreams and Nightmares:
Concepts and Clinical Applications
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Definitions

Milton Kramer –
Dream – product of “...a process in which the dreamer is engaged in experiences that are, to some degree, extended in time and with a degree of consciousness during which awareness and discrimination can be made.”
Nightmare – “...a dream that awakens the dreamer in a terrified state generally with accompanying frightening dream content.”

PS- We will not limit discussion lab-defined dream states being defined by parameters such as REM, EEG, and chin EMG.

Famous Dreams

• Joseph – explaining to Pharaoh seven fat cows and seven lean cow dream.
• Mohammed – reported being visited by Angel Gabriel in a dream.
• Alexander the Great – successfully attacked Tyre after dream interpretation.
• Can you think of others?

Popular Culture

• Dream books – historically have focused on interpretation.
• Dreams/health – dreams as one facet of diagnosis for PTSD, sign of alien abduction.
• Literature/Movies – Scrooge seeing Marley, Inception (plant idea inside somebody during dream state).

Dream History - Asclepius

• Cult of Asclepius – 5th Century BC
• Sick people laid on a wooden pallet – slept
• Deity was to appear in dreams, priests would interpret
• Dreams personal, shared with authority, private interpretation

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Dream History – Galen of Pergamen
- Codified by Hippocratic practice – 2nd cent. AD
- Dreams had diagnostic value, not therapeutic
- Potentially (not always) divine origin
- Sleeping person cut off from external sensation, better able to sense inside
- Dreams reflect humeral imbalances
- Dream of star/rain = “wet brain”, tx with vapor baths, exercising with coat, etc.

Early Christian Physicians
- Dreams reflected righteous or sinful daytime actions, person could change dreams by changing daytime thoughts/behaviors
- Person is responsible for dreams
- Dream interpretation as divination sinful

Early Humanist Authors
- Dreams as spontaneous acts
- Thomas Hobbes (1588 – 1679) – part of mechanical and predictable process
- Vegetarian book – 1689 – improve dream quality by changing diet

18th Century Physicians
- Dreams – actually influence health in direct sense, not simply reflect health, and could affect physical health
- Tried measuring effects on dreams of varying levels of fluid intake, a proto-psychology
- Did focus on insomnia (when term originated)

19th Century Physicians
- Cause – effect studied in clinical populations
- Nightmares in asylum inmates/patients related to excess blood flow in brain
- Studied effects of industrial accidents/war injuries on dreaming
- Differentiated fatigue vs. sleep with measures of blood pressure/respiration
- Studied dreams vs. hypnotic images

1900s – First Half
- Sigmund Freud – dreaming had both biological and psychological functions
- Dreams had purpose – interpretation as tx
- Early recurring nightmare tx – analyst would focus on nightmare, bring into consciousness, cathexis
- Swiss/French psychologists argued that dreams – not a lot of “toxins” but protective
1900s – First Half (cont.)
- Russian physiologists (I. Pavlov) helped localize mid-brain as important in sleep in pat. studies
- Nathaniel Kleitman – 1st American sleep researcher – explored biological rhythms, muscle tension/relaxation, Rockefeller Found.
- E. Jacobson – relaxation – dreams estimated by string galvanometer movement, REM neg.
- EEG developed mid-1930s, wavelengths des.

1900s – Second Half
- Kleitman and E. Aserinsky -1st paper concerning REM and EEG in 1953 with dream frequency/duration measures
- William Dement related to clinical groups
- REM rebound after sleep deprivation noted
- Dement et al. – sleep temporal arch. (sleep stages) protect dreams, not that dreams protect sleep (psychoanalytic position)

1900s – Second Half (cont.)
- Health insurance started paying for sleep studies in late 1960s, e.g., narcolepsy
- Standardized criteria for scoring EEG, EOG, EMG in 1968 re: sleep studies
- First sleep disorders manual – 1979
- 1981 – sleep apnea (Pickwickianism) treated with C-PAP, sleep laps changed from neurological focus, to pulmonary focus

General Historical Themes
- Dreams private experience with public faces
- Dreams normal part of life that can be studied
- Dreams reflect daytime concerns as well as external stimuli/factors (pressure, meds) – psychological “continuity” hypothesis
- Sleep/dreaming legitimate part of health care

Current Dream Research – General
- Occurs in both lab and naturalistic settings
- Average Adult – 3 to 5 dreams nightly, remember 75% of REM dreams, lower/variable rate of non-REM dreams
- Repetitive Dreams – unfinished concerns during day, symbolic characterization more likely

Current Dream Res. - Demographic
- Women dream more than men, gender biggest factor
- Gender content – Males –more sexual, male characters, and unpleasant; Females more intimate, characters, and likely to be indoor
- Age – children – lower aggressive content; adolescents – more destruction and self-safety concerns; adults (young) – right/wrong; adults (older) - death
Current Dream Res. – Demo (cont.)
- Socioeconomic – less impact
  upper – fewer characters and premonitions
  lower – more misfortune
- Race/marital status – limited impact
  blacks – more anxiety; white – externally-directed hostility
  widows – more death anxiety issues
  formerly married (div.) – more family dreams

Current Res. Dreams – Clinical Pop.
- Schizophrenia – less interest in dreams, less complex dreams, more sexual/anxious content, more implausible
- Depression – Same frequency as non-clinical populations, less trauma, more family figures and death
- Dementia/OBS – fewer dreams
- Point – Dream affect correlate with day affect

Current Res. Dreams – Clinical Pop. Continued
- PTSD – part of diagnosis, trauma can vary over time; controversy whether dream vs. sleep problems most significant clinically
- Eating Disorders – fewer dreams reported, fewer aggressive dreams, more food dreams
- General Point – Any medication that alters emotional daytime state likely affects emotional status at night, correlates with tx

Current Dream Research - Recall
- Dream recall rates
  a. increase with intensity of dream
  b. increase with repeated dreams
  c. decrease with dream disconnectedness
  d. decrease with distraction during day
  e. varies with state dependency (meds, etc.)
  d. increases with confabulation – adding to
  f. decrease with censorship – neg. content

Current Nightmare Res. – Prevalence
- Children – 75% report at least one, ages 2 – 5
  24 % report as problem, ages 6 -10 is 41%
- College students – 5% 1 X week, 25% 1 X month, 45% 1 X yr.
- General adult – average 1 or 2 X yr., 5% c/o nightmares as a problem
- More for women, depressed people, on meds
- Disagree night terrors NE nightmares, continuum vs. different entity

Current Nightmare Research
- Increased motoric behavior noted in nightmare sufferers, ? More in non-REM (stage 2 or 4) sleep
- MMPI profiles – nightmare sufferers higher Sc and Pa scales, vivid dreamers higher Ma and Pt scales
- More “tension” in nightmare groups
Dream Biological Conceptualizations

- **Activation – Synthesis Theory** (A. Hobson – 2000) – dreams reflects subcortical brain stem activity, cortex than responds to stimuli
- **Cortical Theory** (M. Solms – 1997) – dreams initiated by arousing stimulus, e.g., REM, seizures, noise and cortical areas interpret
- **Problems - ? How go to consciousness; focus on dream form (REM/stage architecture), not content; no clear brain chemistry differences**

Nightmare Treatment - General

- **Best Practice Guidelines**
- **Evidence Levels –**
  Level A – Supported by randomized clinical studies and/or high quality cohort studies.
  Level C – Supported by low-grade data such as case series treatment studies.

Nightmare Tx – Definitions

- **Imagery Rehearsal Therapy** – recalling nightmare, recording, changing theme/ending to more positive
- **Lucid Dreaming** – altering nightmare story line during dream itself by realizing one is dreaming, i.e., being “lucid” during dream
- **Systematic Desensitization** – exposing person to fearful stimuli in graduated fashion

PTSD Nightmare Tx - Meds

- **Level A** – Prazosin – alpha1 – adrenergic receptor antagonist introduced as antihypertensive medication
- **Level C** – Clonidine – alpha2 – adrenergic receptor agonist
- **Level C (sparse data)** – trazodone, atypical antipsychotics (risperidone), topiramate, low-dose cortisol, fluvoxamine, triazolam/nitrazepam, tricyclics, etc.

Psychological Nightmare Treatment

- **Level A** – Imagery Rehearsal Therapy (both)
- **Level B** – Systematic Desensitization (idiopathic), Progressive Muscle Relaxation (idiopathic)
- **Level C** – Lucid Dreaming, Sleep Hygiene with Stimulus Control (PTSD), Hypnosis (PTSD), EMDR (PTSD), The Testimony Method (PTSD), Self-Exposure Therapy (both)

Imagery Rehearsal Therapy Steps

- Recording procedure established
- Writing down nightmare
- Think about cognitive origin of nightmare
- Imaginative/progressive relaxation
- Change nightmare ending
- Imagine/read changed ending to nightmare, 10 to 15 minutes daily (review with therapist)
Systematic Desensitization Therapy

- Falling off bridge nightmare
- Therapist first practices relaxation and anxiety rating
- Sequence developed – approaching long/high bridge by car, driving across bridge in center lane, driving across bridge on outside lane, approaching bridge on footpath on clear day, approaching bridge on footpath on windy day, walking onto bridge footpath, etc.

Lucid Dreaming Treatment

- Discussing common nightmare themes such as being chased, falling
- Intending before going to bed to realize nightmare not real, but dream
- Practice imagining recurrent nightmare during day while patients think they are only dreaming
- Think about how to positively alter dream while dreaming

Nightmare Tx - Miscellaneous

- Persistent nightmares – increase suicide risk
- Group treatments can be effective
- Simply reporting nightmares on paper in AM does not reduce anxiety levels
- With 6 – 11 y/o children, using pictures/drawings as part of IRT helpful
- REM Sleep Behavior Disorder (violent dreams during REM acted out) – predicted neurodegen. Disease (Parkinson’s, Dementia)

Resources


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