

1. Behavioral Medicine in Dentistry

Behavioral Medicine
in
Dentistry
2006



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Guest: Lainie Andrew, Ph.D.

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2. Dental Medicine: Behavioral Science

Dental Medicine:
Behavioral Science

- ***Year 1: Behavioral Theories and Clinical Correlations: Overview***
- Year 2: Assessment and Classification: Psychological Symptoms and DSM-IVTR Classifications
- Year 3: Assessment and Management of Complex Syndromes....Chronic Pain

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3. Textbook

Textbook

Behavioral Medicine in Primary Care: A Practical Guide

By: Feldman, Mitchell D, Christensen, John F

Format: 382 pages
Pub Date: 2003-03-06
Publisher: McGraw-Hill
Copyright: 2003
2nd Edition

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4. Textbook

Textbook

Title: Behavioral science, 4th ed.

Author: Barbara Fadem

Format: Paperback

Pub. Date: 2005

Publisher: Lippincott Williams & Wilkins

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5.

1868 Dictionary Definition

1868 Dictionary Definition

- Psychology: “Doctrine of the Soul”
- Phrenology: “Science of the Mind”

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6.

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1868 Dictionary Definition

- Psychology: “Science of Mind”
- Phrenology: ?
.....and functional MRI

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7. Some common aged theories

Some common aged theories

Freud suggested that anxiety results from internal, unconscious conflicts. He believed that a person's mind represses wishes and fantasies about which the person feels uncomfortable. This repression, Freud believed, results in anxiety disorders, which he called neuroses.

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8. The Science has Improved

The Science has Improved

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9.

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Behavioral Science Theories in Dentistry and Medicine

- Dualism remains a curse, despite a century of research

Dental vs. Psychological
Psychogenic vs. Medical
Physical vs. Mental
Malingering vs. “real pain...”



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10.

A Few Postulates

A Few Postulates

- Anxiety is common
- Depression is common
- Substance abuse is common
- Compliance is poor
- Self-report data is questionable
- The placebo effect and suggestion influence outcome
- Regression to the mean fails to received credit for treatment outcome.

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11.

Some More Postulates

Some More Postulates

- There are effective interventions for many psychological symptoms/disorders
- The dentist can facilitate behavioral interventions
- Adequate assessment leads to more effective treatment

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12.

Behavioral Science Theories in Dentistry and Medicine

Behavioral Science Theories in Dentistry and Medicine

- A good understanding of a few behavioral science theories can enhance our ability to assess and treat our patients

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13.

The History

The History: Conditioning Theories

- 1904 Ivan Pavlov

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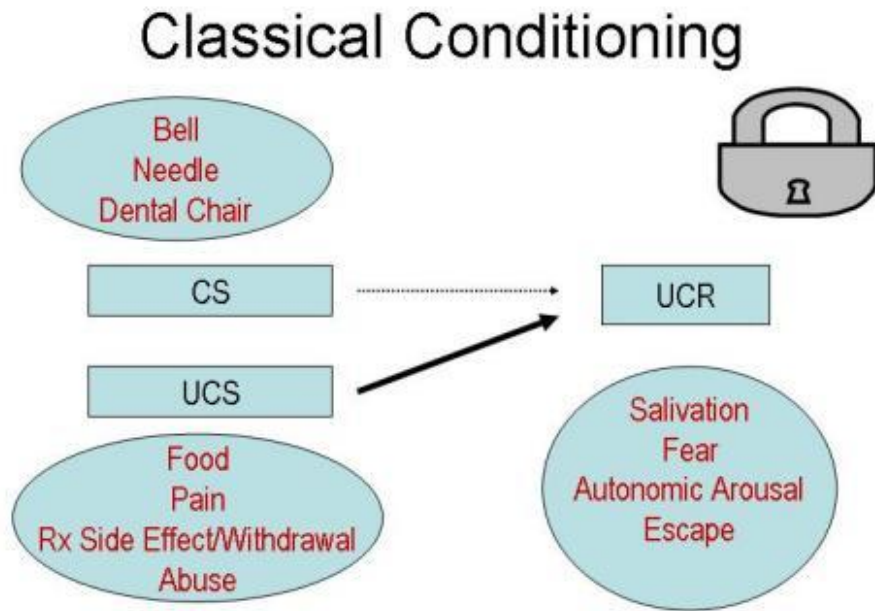
14.

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Classical Conditioning

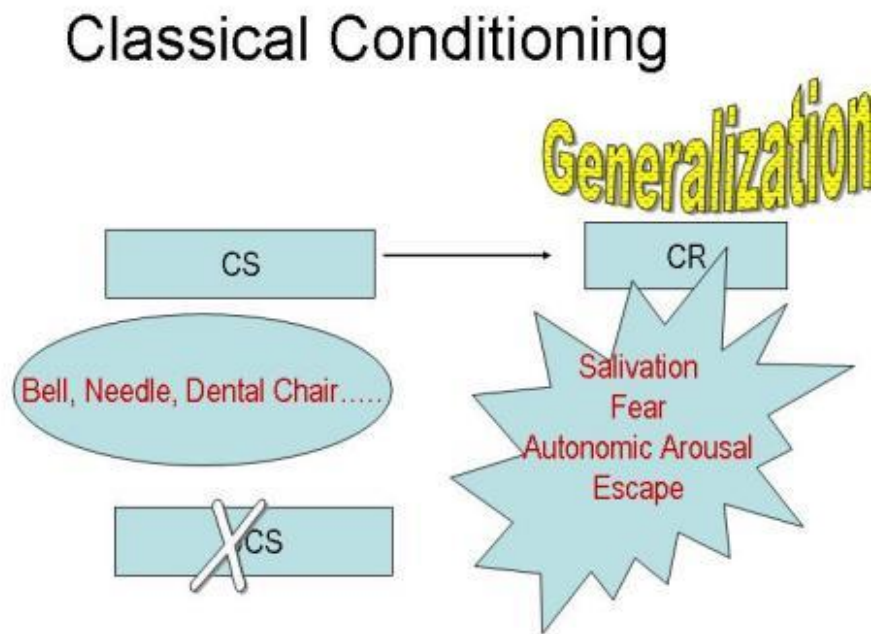
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15. Classical Conditioning



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16. Classical Conditioning



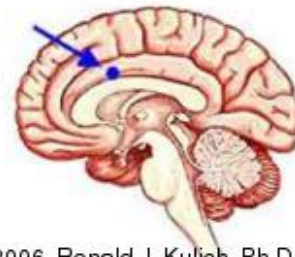
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17.

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Phobias: Unrealistic Fears

- Dental Phobias? (dentophobias)
 - Needles, Injections (trypanophobia)
 - Instruments (appearance, sounds)
 - Objects in the mouth, sharp objects (aichmophobia)
 - Prone position
 - Masks
 - Small rooms (claustrophobia)
 - Social settings, medical settings
 - Members of the same/opposite sex
 -or just dentists



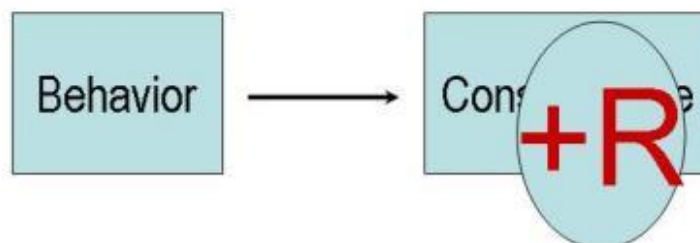
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18.

Operant Conditioning

Operant Conditioning

- Edward L. Thorndike (1874-1949)
- B.F. Skinner



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19.

Operant Conditioning

Operant Conditioning

- Positive Reinforcement
- Negative Reinforcement
(v. punishment)
- All Reinforcement Increases Behavior
- “Covert” behaviors are subject to the same principles
- Extinction (usually) occurs in the absence of +R
- The schedule of +R is critical in maintaining behavior

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20.

Operant Conditioning

Operant Conditioning

- Continuous v. Intermittent
- Reinforcement

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21.

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**Anxiety
is the
Most
Common**



Der Zahnbrecher. The Toothdrawer. (Image courtesy of National Library of Medicine.)

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22.

Anxiety: A Current Definition

Anxiety: A Current Definition

- Anxiety, emotional state in which people feel uneasy, apprehensive, or fearful. People usually experience anxiety about events they cannot control or predict, or about events that seem threatening or dangerous. There is a feeling of vulnerability, and severe anxiety can persist and become disabling

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23.

Anxiety and Fear

Anxiety and Fear

- Fear is a normal reaction to a known, external source of danger. Phobias are abnormal reactions
- In anxiety, the individual is frightened but the source of the danger is not known, not recognized, or inadequate to account for the symptoms
- The physiological manifestations are similar

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24.

Anxiety

Anxiety

- Adaptive and has evolutionary value
- Humans predisposed biologically
- Involves activation of the sympathetic nervous system
- Multiple neurotransmitters have been identified
- “Fight or flight” phenomenon
- Runs in families
- Severe anxiety often precedes depression

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25.

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Anxiety Disorders (DSM-IVTR)

- Co-occur with other psychiatric disorders
- Always present with acute and chronic pain
- Made worse by tobacco, pharmacotherapy, and drug withdrawal
- Results in poor compliance and poor treatment outcome

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26.

Anxiety: Panic Attacks

Anxiety: Panic Attacks

- A period of intense fear or discomfort that is associated with numerous physical and psychological symptoms such as:
 - Palpitations
 - Sweating
 - Trembling
 - Shortness of breath
 - Sensations of choking or smothering
 - Chest pain
 - Nausea or gastrointestinal distress
 - Dizziness
 - Tingling sensations
 - Chills or blushing
 - Hot flashes

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27.

Other Possible Anxiety Symptoms

Other Possible Anxiety Symptoms

- Muscles tightening
- Clenching/grinding
- Increased pain
- Complaints of “numbness and tingling”
- Increased/decreased urination
- Catastrophizing
- Fear/avoidance

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Anxiety Disorders: PTSD

- +/- 25% of whiplash victims (Blanchard, 2000)
- Among Domestic Violence Victims, rates of PTSD range from 83% - 88%*
Henry, 1997; Golier & Yehuda, 1998
Kulich, Mencher, Bertrand & Maciewicz, 2000
*Humphreys, 2003

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Anxiety Disorders: PTSD

- A. Exposure to a traumatic event involving serious injury
- B. The event is persistently re-experienced
- C. Avoidance of stimuli associated w/the trauma
- D. Persistent Sx of increased arousal
- E. > 1 month
- F. Significant impairment or distress

DSM IV TR 309.81

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30.

Anxiety Disorders: Agoraphobia

Anxiety Disorders: Agoraphobia

- The ancient term 'agoraphobia' is translated from Greek as 'fear of an open marketplace'. Agoraphobia today describes severe and pervasive anxiety about being in situations from which escape might be difficult or avoidance of situations such as being alone outside one's home, traveling in a car, bus, or airplane, or being in a crowded area.

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31.

Assessment of Anxiety

Assessment of Anxiety

- Thoroughly review symptoms and DO NOT simply rely on your medical Hx Questionnaire
.....in brief, ask the questions!

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32.

Treatment of Anxiety

Treatment of Anxiety

- Treat/Change maintaining factors, e.g., pain, underlying dental or medical problem
- Pharmacotherapy
 - Antianxiety agents (often short term)
 - Antidepressants
- Behavioral Treatments
 - Relaxation training, hypnosis, biofeedback
 - Desensitization, flooding, exposure
 - Cognitive therapies, improved perceived control
- Lifestyle interventions
 - Exercise
 - Smoking Cessation

*Grace et al. Referring patients for stress-related disorders. General Dentistry 2001: Nov-Dec, 538-9. (c) 2006, Ronald J. Kulich, Ph.D.

33.

Treatment of Anxiety

Treatment of Anxiety

“Long -Term Management of the Fearful Adult Patient Using Behavior Modification and Other Modalities”

***Berggren U J. Dent. Educ.
2001, Dec., 1337-1367***

“Dental management considerations for the patient with post-traumatic stress disorder”

**Friedlander AH, Mills MJ,
Wittlin BJ.
Oral Surg Oral Med Oral
Pathol. 1987
Jan;63(6):669-73.**

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34.

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Treatment of Anxiety

NIH Technology Assessment Conference Statement

Integration of Behavioral and
Relaxation Approaches into the
Treatment of Chronic Pain and
Insomnia **JAMA 1996**

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35. Physiological Measurement of Anxiety and Related Behaviors...

Physiological Measurement of Anxiety and Related Behaviors

- BIOFEEDBACK
as assessment & treatment

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36. Anxiety and Biofeedback

Anxiety and Biofeedback

Lainie Andrew, PhD
TUSDM
2006

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37.

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Is Biofeedback Effective for Anxiety Treatment?

- Biofeedback is rated as a 4 out of a scale of 1-5 in effectiveness

Evidence Based Practice in
Biofeedback and Neurofeedback
Yucha and Gilbert (2004)

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38.

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How would anxiety be treated?

- Breath
- Muscle
- Skin Conductance
- Temperature
- Heart Rate Variability
- EEG

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39.

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What is Biofeedback

- Information that is collected and displayed in order to change
- A non-invasive process, typically on the surface of the skin

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What is the purpose of instrumentation?

- To monitor the process of interest
- To measure the monitoring process
- To present this information in a meaningful way

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41.

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Types of Biofeedback

- sEMG
- Thermal
- Electrodermal
- HRV
- EEG
- HEG

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42.

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Cognitive Preparation

- Familiarity with disorder to be treated
- Assessment of patient's motivation
- Competence
- Enthusiasm
- Preparation for success

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43. Anxiety and anxiety related disorders

Anxiety and anxiety related disorders are only a small component of critical behavioral science issues

- Other DSM IV-TR diagnoses and problem areas that impact dental care

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44. Behavioral Medicine: Slide 45

Other Common Diagnoses and Problems

- Anxiety Disorders
 - Phobias
 - PTSD
- Depressive Disorders
- Sleep Disorders
- Somatoform Disorders
 - Somatization
 - Pain Disorder (chronic)
- Substance Use Disorders
 - Drugs/alcohol
 - Tobacco
- Personality Disorders
- Disability Behavior
- Compliance & Adherence

Diagnostic and Statistical Manual
of Mental Disorders (DSM IV-TR)

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45.

Recommended Readings

Recommended Readings:

- In Feldman & Christensen,
Ch 22. "Anxiety," J. Satterfield and W.
Levinson
Ch 4. "Difficult Patients," H. Beckman
- In Fadem
Ch 7 "Learning Theory"
- NIH Technology Assessment Consensus
Statement, 1996, Integration of Behavioral
and Relaxation Approaches into the
Treatment of Chronic Pain and Insomnia

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