Evidence-based treatments in clinical and operational applications of military psychology

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Fundamentals – Clinical psychology applications

• Psychological interventions

  • (1) Human development/optimization and social functionality/health promotion (e.g., coaching/psychological coaching)
  • (2) Solving psychological (life/personal) problems (e.g., counseling/psychological counseling)
    • Practical (life/personal) problems associated to functional negative feelings
      • Sadness/concern/annoyance/remorse - Low intensity/duration/frequency
    • Practical (life/personal) problems associated to dysfunctional negative feelings
      • Depression/Anxiety-Panic/Anger/Guilt – Low intensity/duration/frequency
    • Psychological vulnerabilities/Prevention
  • (3) Treatment of subclinical and clinical conditions (e.g., psychotherapy)
    • Subclinical
      • Functional negative feelings associated with practical (life and personal-behavioral problems/physical) problems
        • Sadness/concern/annoyance/remorse - High intensity/duration/frequency
    • Clinical
      • Dysfunctional negative feelings associated with practical (life and personal-behavioral problems/physical) problems
        • Depression/Anxiety-Panic/Anger/Guilt
        • Distress and/or Social Disability
Fundamentals – Clinical psychology applications

• Levels of action
  • Individual
  • Couples/Family/Groups
  • Organizations
Fundamentals – Clinical psychology applications

• Structure
  • Theory – Practice
    • Logics If A (Theory) Than B (Practice)

• Theory
  • From which it is derived
    • Practice (e.g., intervention protocols/packages – more or less structured/manualized)

• Practice
  • Explained by a Theory
Fundamentals – Clinical psychology applications

• Evidence-based movement in medicine (mid/end XX)
  • Beyond “..intuitions, unsystematic clinical experience, and pathophysiological rationale...”

• Logics If A (virus/irrational beliefs) Then B (hepatitis/anxiety)
  • Modus ponens:
    • If A, Therefore, B
  • Modus tollens
    • If Not B, Therefore not A
  • B does not necessary involve A
    • The fundamental mistake
  • Non A does not necessary involve non B!
    • Clinical trials!
      • Clients’ values
      • Clinical experience
    • Other evidences - preliminary
About the Irrationality of the Health Field

Daniel David

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Seven alternatives to evidence based medicine

David Isaacs, Dominic Fitzgerald

Clinical decisions should, as far as possible, be evidence based. So runs the current clinical dogma. We are urged to lump all the relevant randomised controlled trials into one giant meta-analysis and come out with a combined odds ratio for all decisions. Physicians, surgeons, nurses are doing it; soon even the lawyers will be using evidence based practice. But what if there is no evidence on which to base a clinical decision?

Participants, methods, and results

We, two humble clinicians ever ready for advice and guidance, asked our colleagues what they would do if faced with a clinical problem for which there are no randomised controlled trials and no good evidence. We found ourselves faced with several personality based opinions, as would be expected in a teaching hospital. The personalities transcend the disciplines, with the exception of surgery, in which discipline transcends personality. We categorised their replies, on the basis of no evidence whatsoever, as follows:

- Efficacy based medicine—The more senior the colleague, the less importance he or she placed on need for anything as mundane as evidence. Experience, it seems, is worth any amount of evidence. These colleagues have a faith in clinical experience, which has been defined as “making the same mistakes with increasing confidence over an impressive number of years.” The eminent physician’s white hair and balding pate are called the “halo” effect.

- Emancipation based medicine—The substitution of volume for evidence is an effective technique for brow beating your more timorous colleagues and for convincing relatives of your ability.

- Eloquence based medicine—The year round suntan, carnation in the button hole, silk tie, Armani suit, and tongue should all be equally smooth. Sartorial elegance and verbal eloquence are powerful substitutes for evidence.

- Providence based medicine—If the caring practitioner has no idea of what to do next, the decision may be best left in the hands of the Almighty. Too many clinicians, unfortunately, are unable to resist giving God a hand with the decision making.

- Diffidence based medicine—Some doctors see a problem and look for an answer. Others merely see a problem. The deficient doctor may do nothing from a sense of despair. This, of course, may be better than doing something merely because it hurts the doctor’s pride to do nothing.

- Nervousness based medicine—Fear of litigation is a powerful stimulus to overinvestigation and overtreatment. In an atmosphere of litigation phobia, the only bad test is the test you didn’t think of ordering.

- Confidence based medicine—This is restricted to surgeons (table).

Comment

There are plenty of alternatives for the practising physician in the absence of evidence. This is what makes medicine an art as well as a science.

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Below is an alphabetized list of psychological disorders. Click on a disorder to view a description and information about psychological treatment options. Or, if you prefer, you may search an alphabetized list of all treatments.

- Attention Deficit Hyperactivity Disorder (Adults)
- Bipolar Disorder
- Borderline Personality Disorder
- Child and Adolescent Disorders
- Chronic or Persistent Pain
- Depression
- Eating Disorders and Obesity
- Generalized Anxiety Disorder
- Insomnia
- Mixed Anxiety
- Obsessive-Compulsive Disorder
- Panic Disorder
- Posttraumatic Stress Disorder
- Schizophrenia and Other Severe Mental Illnesses
- Social Phobia and Public Speaking Anxiety
- Specific Phobias (e.g., animals, heights, blood, needles, dental)
- Substance and Alcohol Use Disorders
### APA list of research-supported psychological treatments (80 - as May 2018)

- Acceptance and Commitment Therapy for Chronic Pain
- Acceptance and Commitment Therapy for Depression
- Acceptance and Commitment Therapy for Mixed Anxiety
- Acceptance and Commitment Therapy for Obsessive-Compulsive Disorder
- Acceptance and Commitment Therapy for Psychosis
- Applied Relaxation for Panic Disorder
- Assertive Community Treatment for Schizophrenia
- Behavior Therapy/Behavioral Activation for Depression
- Behavioral Couples Therapy for Alcohol Use Disorders
- Behavioral Couples Therapy for Depression
- Behavioral and Cognitive Behavioral Therapy for Chronic Low Back Pain
- Behavioral Weight Loss Treatment for Obesity and Pediatric Overweight
- Biofeedback-Based Treatments for Insomnia
- Cognitive Adaptation Training for Schizophrenia
- Cognitive Behavioral Analysis System of Psychotherapy for Depression
- Cognitive Behavioral Therapy for Attention Deficit Hyperactivity Disorder (Adults)
- Cognitive Behavioral Therapy for Insomnia
- Cognitive Behavioral Therapy for Anorexia Nervosa
- Cognitive Behavioral Therapy for Binge Eating Disorder
- Cognitive Behavioral Therapy for Bulimia Nervosa
- Cognitive Behavioral Therapy and Cognitive Therapies for Generalized Anxiety Disorder
- Cognitive Behavioral Therapy for Obsessive-Compulsive Disorder
- Cognitive and Behavioral Therapies for Social Phobia/Public Speaking Anxiety
- Cognitive Behavioral Therapy for Chronic Headache
- Cognitive Behavioral Therapy for Panic Disorder
- Cognitive Behavioral Therapy for Schizophrenia
- Cognitive Processing Therapy for Post-Traumatic Stress Disorder
- Cognitive Remediation for Schizophrenia
- Cognitive Therapy for Bipolar Disorder
- Cognitive Therapy for Depression
- Dialectical Behavior Therapy for Borderline Personality Disorder
- Emotion-Focused Therapy for Depression
- Exposure and Response Prevention for Obsessive-Compulsive Disorder
- Exposure Therapies for Specific Phobias
- Eye Movement Desensitization and Reprocessing for Post-Traumatic Stress Disorder
- Family-Based Treatment for Anorexia Nervosa
- Family-Based Treatment for Bulimia Nervosa
- Family-Focused Therapy for Bipolar Disorder
- Family Psychoeducation for Schizophrenia
-Friends Care for Mixed Substance Abuse/Dependence
- Guided Self-Change for Mixed Substance Abuse/Dependence
- Healthy Weight Program for Bulimia Nervosa
- Interpersonal Therapy for Depression
- Illness Management and Recovery for Schizophrenia
- Interpersonal Psychotherapy for Binge Eating Disorder
- Interpersonal Psychotherapy for Bulimia Nervosa
- Intensive and Social Rhythm Therapy for Bipolar Disorder
- Motivational Based Treatment for Borderline Personality Disorder
- Moderate Drinking for Alcohol Use Disorders
- Motivational Interviewing and Motivational Enhancement Therapy for Substance and Alcohol Abuse/Dependence
- Multi-Component Cognitive Behavioral Therapy for Fibromyalgia
- Multi-Component Cognitive Behavioral Therapy for Pharmacologic Pain
- Paradoxical Intention for Insomnia
- Present-Centered Therapy for Post-Traumatic Stress Disorder
- Ptsd-Based Contingency Management for Alcohol Use Disorders
- Ptsd-Based Contingency Management for Cocaine Dependence
- Ptsd-Based Contingency Management for Mixed Substance Use Dependence
- Problem-Solving Therapy for Depression
- Prolonged Exposure for Post-Traumatic Stress Disorder
- Psychoanalytic Therapy for Panic Disorder
- Psychoeducation for Bipolar Disorder
- Psychological Detoxification for Post-Traumatic Stress Disorder
- Rational Emotive Behavior Therapy for Depression

### Additional Treatments

- Relaxation Training for Insomnia
- Reminiscence/Life Review Therapy for Depression
- Schema-Focused Therapy for Borderline Personality Disorder
- Seeking Safety for PTSD with Substance Use Disorder
- Seeking Safety for Mixed Substance Abuse/Dependance
- Self-Management/Self-Control Therapy for Depression
- Self-System Therapy for Depression
- Smoking Cessation with Weight Gain Prevention
- Short-Term Psychodynamic Therapy for Depression
- Sleep Restriction Therapy for Insomnia
- Social Learning/Token Economy Programs for Schizophrenia
- Social Skills Training for Schizophrenia
- Stimulus Control Therapy for Insomnia
- Stress Inoculation Training for Post-Traumatic Stress Disorder
- Supported Employment for Schizophrenia
- Systematic Care for Bipolar Disorder
- Transference-Focused Therapy for Borderline Personality Disorder

### Main Modalities

- Psychotherapy (Schools) vs. Psychological Treatments (Protocols)
- Tradition/paradigms
  - Cognitive-behavioral
  - Humanistic (existential-experiential)
  - Psychoanalytic-psychodynamic
  - Systemic
  - Interpersonal
Description

Posttraumatic Stress Disorder, or PTSD, sometimes develops following a traumatic event in which the person experienced intense fear, helplessness, or horror. Such events can include rape, assault, combat, kidnapping, or other experiences in which the person was threatened with death or serious injury, or in which the person witnessed someone else experiencing a traumatic event. People who develop PTSD following a trauma often “re-experience” the trauma, through intrusive images, thoughts, and dreams relating to the event, and sometimes feel or act as if the event is recurring. Often people with PTSD become very frightened, distressed, and/or physiologically reactive in response to cues in the environment that remind them of the event. People with PTSD avoid people, places, and/or activities that remind them of the trauma, and try to avoid thinking about the trauma. Sometimes people with PTSD cannot remember aspects of the trauma. PTSD is also associated with lowered enjoyment of participation in activities, feelings of detachment from others, difficulty experiencing certain emotions or being affectionate, and a sense that one’s future is foreshortened. In addition, individuals with PTSD tend to be easily aroused, including difficulty sleeping or concentrating, irritability, hypervigilance, and exaggerated startle response. To be diagnosed with PTSD, the person must have experienced these symptoms for at least one month. Individuals who experience these symptoms for less than one month are sometimes given a diagnosis of Acute Stress Disorder, which often develops into PTSD. PTSD often co-occurs with other psychological disorders, such as major depression and substance-related disorders.

Psychological Treatments

- Prolonged Exposure NEW (strong research support)
- Present-Centered Therapy (strong research support)
- Cognitive Processing Therapy NEW (strong research support)
- Seeking Safety for PTSD with co-morbid Substance Use Disorder (strong research support)
- Stress Inoculation Therapy (modest research support)
- Eye Movement Desensitization and Reprocessing (strong research support/controversial)
- Psychological Debriefing (no research support/potentially harmful)
Panic Disorder

Section Author: Greg Hajcak (Stony Brook University)

Description

Panic disorder is characterized by unexpected periods of intense anxiety or fear that generally peak within 10 minutes (i.e., panic attacks). Physical symptoms characteristic of panic attacks include: racing or pounding heart, shortness of breath or difficulty breathing, dizziness, nausea, feelings of unreality; Individuals may report that they fear they are dying, losing control, or going crazy during panic attacks. Individuals with panic disorder experience persistent fear about subsequent panic attacks and/or the consequences of having a panic attack. Treatments for panic disorder are appropriate regardless of whether the panic is accompanied by agoraphobia, or avoidance of places where panic attacks seem likely.

Psychological Treatments

- Cognitive Behavioral Therapy NEW (strong research support)
- Applied Relaxation (modest research support)
- Psychoanalytic Treatment (modest research support/controversial)

Also, see findings from the Division 12 clinical survey on the use of research-supported treatments for Panic Disorder.

Note: Other psychological treatments may also be effective in treating Panic Disorder, but they have not been evaluated with the same scientific rigor as the treatments above. Many medications may also be helpful for Panic Disorder, but we do not cover medications in this website. Of course, we recommend a consultation with a mental health professional for an accurate diagnosis and discussion of various treatment options. When you meet with a professional, be sure to work together to establish clear treatment goals and to monitor progress toward those goals. Feel free to print this information and take it with you to discuss your treatment plan with your therapist.
Psychoanalytic Treatment for Panic Disorder

Status: Modest Research Support/Controversial

What does this mean?

Description

Psychoanalytic treatment for panic disorder attempts to uncover the unconscious psychological meaning of panic; the treatment often focuses on psychodynamic conflicts that include separation'autonomy and anger expression/management. Psychoanalytic treatment for panic disorder also utilizes transference to work through unconscious conflicts.

The evidence for psychoanalytic treatment for panic disorder is somewhat controversial, insofar as the conceptual basis for this treatment has not been tested. That is, although psychoanalytic psychotherapy appears to work, it is not yet clear that the treatment works via the reduction of unconscious conflicts – the proposed mechanisms of change.

The Problem 1

• Logics If A (Theory) Then B (Practice)
  • Modus ponens:
    • If A, Therefore, B
  • Modus tollens
    • If Not B, Therefore not A
  • Non A does not necessary involve non B
  • B does not necessary involve A
    • The fundamental mistake!

• The role of theory
  • Mesmerism
  • Malaria
The Problem 2

• Evidence-Based vs. Gold Standard
  • Prescriptive vs. Descriptive
### The Scientific Status of Psychotherapies: A New Evaluative Framework for Evidence-Based Psychosocial Interventions

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**Guy H. Montgomery, Department of Oncological Sciences, Mount Sinai School of Medicine**

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**Table 1. Psychotherapies Classification Framework: Categories I–IX**

<table>
<thead>
<tr>
<th>Therapeutic Package</th>
<th>Well Supported(^a)</th>
<th>Equivocal—No, Preliminary, or MD(^b)</th>
<th>SCE(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I</td>
<td>Category II</td>
<td>Category V</td>
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<tr>
<td>Category III</td>
<td>Category IV</td>
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<tr>
<td>Category VI</td>
<td>Category VIII</td>
<td>Category IX</td>
<td></td>
</tr>
</tbody>
</table>

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**Notes.**

\(^a\) Well-supported theories are defined as those with evidence based on (a) experimental studies (and sometimes additional/adjunctive correlational studies) and/or (b) component analyses, patient–treatment interactions, and/or mediation/moderation analyses in complex clinical trials (CCTs); thus, the theory can be tested independent of its therapeutic package (e.g., in experimental studies and sometimes their additional/adjunctive correlational studies) and/or during a CCT; “well supported” within this framework means that it has been empirically supported in at least two rigorous studies, by two different investigators or investigating teams.

\(^b\) Equivocal evidence for therapeutic package and/or theory means No (data not yet collected), Preliminary (there is collected data, be they supporting or contradictory, but they do not fit the minimum standards), or Mixed Data (MD; there is both supporting and contradictory evidence).

\(^c\) Strong contradictory evidence (SCE) for therapeutic package and/or theory means that it has been empirically invalidated in at least two rigorous studies, by two different investigators or investigating teams.
Estimating the reproducibility of psychological science

Open Science Collaboration*†
* See all authors and affiliations

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Evidence-based interventions in clinical and operational applications of military psychology

• Decision Strategies
  • 1. Interventions for which both theory and practice are evidence-based
    • Clinical
      • Operational
  • 2. Interventions for which practice is evidence-based
    • Clinical/Operational
  • 3. Interventions for which theory is evidence-based
    • Ad Hoc Practice
      • Operational
        • Clinical
  • 4. Interventions guided by common-sense?
    • NO!
Deployment Psychology:
Evidence-Based Strategies to Promote Mental Health in the Military

Edited by Amy B. Adler, PhD, Paul D. Biese, PhD, and Carl Andrew Castro, PhD

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Your personalized prescription for "psychological pills"
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The PsyPills app – the current C
The PsyPills app – cognitive processes
The PsyPills app

Based on your situation this is your PsyPill

It is very bad and unpleasant when I have difficulties parenting, but I can stand it and try to find solutions, positive alternatives, and/or ways to cope.

Practice the psychological "pill" for a few minutes until you manage to use this way of thinking.

Read about the thinking-feeling connections

Read about rational and irrational thinking
The PsyPills app

Congratulations! It seems that the PsyPill was very helpful for your mood. You managed to change your mood from a DYSFUNCTIONAL negative feeling to a FUNCTIONAL negative feeling, which helps you accomplish your goals and then maybe even experience positive feelings.

We are recommending you take your "PsyPill" 1x/day for long lasting results.

Read about the thinking-feeling connections

Read about rational and irrational thinking
The PsyPills app
The PsyPills app
The PsyPills app

Congratulations! It seems that the PsyPills was helpful for your mood. You managed to reduce the intensity of your negative feeling. However, you need to practice rational thinking in order to change your mood from a DYSFUNCTIONAL negative feeling into a FUNCTIONAL negative feeling.

We are recommending you take your “PsyPill” # 3x/day, AM, noon, PM

Read more

Read about the thinking-feeling connections

How are you feeling now?

Pick an emotion that best describes your mood

- Depressed
- Anxious
- Panicked
- Angry
- Guilty
- Envious
- Ashamed
• Thank you!