# attention bias modification training

Attention Bias Modification Training: Retraining the Mind for Better Focus and Emotional Health

**attention bias modification training** is an innovative psychological technique designed to alter the way individuals process and respond to certain types of stimuli, particularly those that trigger negative emotions or anxiety. This form of cognitive training aims to shift attentional patterns that unconsciously favor threatening or distressing information, thereby reducing symptoms related to anxiety, depression, and other mental health challenges. In today's fast-paced world, where distractions abound and emotional well-being is increasingly under threat, understanding how attention bias modification training works can offer new hope for managing stress and improving mental resilience.

## What Is Attention Bias and Why Does It Matter?

To grasp the significance of attention bias modification training, it's important first to understand what attention bias itself entails. Attention bias refers to the tendency of our cognitive system to prioritize certain types of information over others. For example, someone with social anxiety might automatically focus on negative facial expressions or signs of disapproval, even when none exist. This selective attention can intensify feelings of fear or worry, creating a feedback loop that perpetuates distress.

Attention bias plays a crucial role in many psychological disorders. Research shows that individuals with anxiety disorders, post-traumatic stress disorder (PTSD), or depression often exhibit heightened attention toward negative or threatening stimuli. This can mean hypervigilance to fearful faces, anxious thoughts, or reminders of trauma. Over time, this skewed attentional focus can worsen symptoms and interfere with daily functioning.

### How Attention Bias Affects Daily Life

The effects of attention bias extend beyond clinical diagnoses. Even in everyday situations, people might find themselves disproportionately focusing on negative feedback, perceived slights, or potential dangers. This can lead to increased stress, difficulty concentrating, and impaired decision-making. For example, during a work meeting, a person prone to attention bias might fixate on a colleague's neutral expression, interpreting it as disapproval, which then distracts them from engaging fully.

## How Attention Bias Modification Training Works

Attention bias modification training (ABMT) is a cutting-edge intervention that attempts to retrain the brain's attentional focus. The goal is to reduce the automatic draw toward negative or threatening stimuli and encourage a more balanced or positive attentional pattern. This is typically achieved through computerized tasks that subtly guide the participant's attention away from

distressing cues and toward neutral or positive ones.

## Common Techniques Used in ABMT

Many ABMT programs utilize variations of the dot-probe task, a well-established experimental paradigm in cognitive psychology. In this task, two stimuli—usually images or words—are presented simultaneously, one threatening and one neutral or positive. Shortly after, a probe appears in the location of one of the stimuli, and the participant must respond quickly. Over repeated trials, the probe consistently replaces the neutral or positive stimulus, training the participant's attention away from threat.

Other approaches may involve visual search tasks, where participants identify non-threatening targets among distractors, or tasks that require focusing on positive information while ignoring negative cues. These exercises are often subtle and designed to be engaging to encourage repeated practice.

## The Role of Technology in ABMT

Technology plays a key role in delivering attention bias modification training effectively. Computerized platforms and mobile apps have made it easier for people to access ABMT from home or clinical settings. These platforms can tailor difficulty levels, track progress, and provide immediate feedback, enhancing the training's impact. Virtual reality (VR) is also emerging as a promising medium to create immersive environments for ABMT, especially for individuals with phobias or PTSD.

# Benefits and Applications of Attention Bias Modification Training

The practical benefits of attention bias modification training are broad and promising. While initially developed as a tool for clinical populations, its applications have expanded, offering potential improvements in cognitive control, emotional regulation, and overall mental health.

## Reducing Anxiety and Depression Symptoms

One of the most researched applications of ABMT is in reducing symptoms of anxiety and depression. By training individuals to divert their attention away from anxiety-provoking stimuli, ABMT can help diminish hypervigilance and intrusive thoughts. Studies have reported reductions in social anxiety symptoms, generalized anxiety, and even post-traumatic stress symptoms after consistent training sessions.

## Enhancing Stress Management and Resilience

Beyond clinical symptoms, attention bias modification training can bolster resilience in the face of everyday stressors. By shifting focus toward positive or neutral information, individuals may experience less emotional reactivity and improved coping strategies. This can be particularly valuable for people in high-stress professions or those experiencing chronic stress.

## Potential in Addiction Treatment

Emerging research suggests ABMT may also support addiction recovery by reducing attentional bias toward drug-related cues. By training the brain to ignore or deprioritize triggers associated with substance use, ABMT could complement other therapeutic approaches in preventing relapse.

# How to Get Started with Attention Bias Modification Training

If the idea of retraining your brain’s attention patterns sounds appealing, you might wonder how to incorporate attention bias modification training into your routine. Fortunately, several user-friendly options are available.

## Finding the Right Program

Many clinical trials and therapeutic programs have developed ABMT protocols, some of which are accessible via apps or online platforms. When choosing a program, consider the following:

- **Evidence-based:** Look for programs backed by scientific research and clinical validation.
- **User-friendly interface:** Select platforms that are engaging and easy to navigate to encourage consistent use.
- **Customization:** Programs that adapt difficulty or stimuli to your needs can enhance effectiveness.

## Consistency Is Key

Like many psychological interventions, attention bias modification training works best with regular practice. Short daily sessions—often 10 to 20 minutes—over several weeks tend to yield noticeable improvements. Patience is important, as changes in attention bias and emotional responses develop gradually.

## Combining ABMT with Other Strategies

ABMT can be more effective when combined with other therapeutic methods such as cognitive-behavioral therapy (CBT), mindfulness meditation, or relaxation techniques. These complementary approaches help reinforce positive changes in thought patterns and emotional regulation.

# Challenges and Considerations

While attention bias modification training holds great promise, it’s important to be aware of its limitations and challenges.

## Individual Differences in Effectiveness

Not everyone responds to ABMT in the same way. Factors such as the severity of symptoms, type of attention bias, and individual cognitive differences can influence outcomes. Researchers continue to explore for whom ABMT works best and how to optimize protocols.

## Need for More Research

Although supported by a growing body of evidence, attention bias modification training is still an emerging field. Some studies have reported mixed results, highlighting the need for further research to refine techniques and understand long-term effects.

## Avoiding Overreliance on Technology

While technology enables convenient access to ABMT, it’s important to ensure that training is part of a broader mental health strategy rather than a standalone fix. Professional guidance can help integrate ABMT into a comprehensive treatment plan.

Exploring attention bias modification training opens an intriguing window into how subtle shifts in cognitive focus can ripple out to improve emotional well-being. By understanding and harnessing the brain’s plasticity, this approach offers a practical way to counteract the often unconscious patterns that fuel anxiety and negativity. Whether you’re seeking to manage stress, reduce anxiety, or simply gain better control over your attention, ABMT represents a promising tool worth considering on the journey toward a healthier mind.

# Frequently Asked Questions

## What is attention bias modification training (ABMT)?

Attention bias modification training (ABMT) is a cognitive intervention designed to alter individuals' attentional biases, particularly towards negative or threatening stimuli, by training them to focus on neutral or positive information instead.

## How does attention bias modification training work?

ABMT works by using computerized tasks that repeatedly direct a person's attention away from negative or threatening cues and towards neutral or positive cues, thereby retraining the brain's automatic attentional processes.

## What conditions can benefit from attention bias modification training?

ABMT has shown promise in treating anxiety disorders, depression, post-traumatic stress disorder (PTSD), and addiction by reducing maladaptive attentional biases that contribute to these conditions.

## Is attention bias modification training effective?

Research indicates that ABMT can be effective in reducing symptoms of anxiety and other disorders, although results vary and more large-scale, controlled studies are needed to confirm its efficacy and optimal protocols.

## How long does attention bias modification training typically take?

ABMT protocols vary, but training usually consists of multiple sessions over several weeks, with each session lasting about 15 to 30 minutes.

## Are there any side effects associated with attention bias modification training?

ABMT is generally considered safe with minimal side effects; however, some individuals may experience mild fatigue or frustration during training sessions.

## Can attention bias modification training be done at home?

Yes, many ABMT programs are computer-based and can be completed at home using specialized software or apps, often under the guidance of a healthcare professional.

# Additional Resources

Attention Bias Modification Training: Exploring Its Efficacy and Applications

**attention bias modification training** (ABMT) has emerged as a promising cognitive intervention aimed at altering maladaptive attentional patterns that contribute to various psychological disorders. By systematically retraining an individual's focus away from threatening or negative stimuli, ABMT seeks to mitigate symptoms associated with anxiety, depression, and addiction, among other conditions. As mental health professionals and researchers continue to explore its practical efficacy, attention bias modification training has garnered increasing interest in both clinical and experimental settings.

# Understanding Attention Bias Modification Training

Attention bias modification training is grounded in cognitive-behavioral theory, positing that individuals with certain mental health challenges exhibit a biased attentional focus toward negative or disorder-relevant stimuli. For instance, someone with social anxiety might disproportionately attend to perceived social threats, reinforcing their anxious state. ABMT attempts to recalibrate this attentional bias by using computerized tasks that direct the participant's attention away from threatening cues and toward neutral or positive stimuli.

Typically, ABMT involves tasks such as the dot-probe paradigm, where participants are presented with pairs of images or words—one threatening and one neutral. A probe then appears in the location of either image, and participants are trained to respond quickly to probes replacing neutral stimuli, thereby encouraging attentional shifts. Over repeated sessions, this conditioning aims to reduce the automatic attentional pull toward negative information.

## Mechanisms and Theoretical Foundations

The conceptual basis for ABMT lies in the understanding that attentional biases not only reflect but also perpetuate psychological distress. Neuroimaging studies have suggested that altered activity in brain regions related to attention control and emotional processing—such as the amygdala and prefrontal cortex—may underpin these biases. By modifying attention allocation, ABMT potentially recalibrates neural circuits, leading to reduced symptomatology.

Moreover, ABMT aligns with the broader field of cognitive bias modification (CBM), which includes interventions targeting interpretation and memory biases. Unlike traditional cognitive-behavioral therapy, which requires extensive therapist involvement, ABMT offers a scalable, computerized approach that can be administered with minimal supervision.

# Clinical Applications and Research Findings

The versatility of attention bias modification training makes it applicable to a range of psychological disorders. Here, we examine its role in anxiety, depression, addiction, and post-traumatic stress disorder (PTSD).

## Anxiety Disorders

Anxiety disorders have been the primary focus of ABMT research. Numerous randomized controlled trials have demonstrated that ABMT can reduce attentional bias toward threatening stimuli, subsequently decreasing anxiety symptoms. For example, in generalized anxiety disorder (GAD) and social anxiety disorder (SAD), ABMT has shown modest but statistically significant improvements in symptom severity compared to control conditions.

However, some meta-analyses highlight mixed outcomes, with effectiveness often influenced by factors such as session number, task design, and participant characteristics. While ABMT typically yields faster response times to neutral probes, translating these laboratory gains into real-world anxiety reduction remains an ongoing challenge.

## Depression

In depressive disorders, attention bias often manifests as a heightened focus on negative or sad stimuli. ABMT attempts to redirect attention toward positive or neutral cues, aiming to disrupt the cycle of negative rumination. Preliminary studies suggest that ABMT may improve mood and reduce depressive symptoms, although the evidence base is less robust than for anxiety.

The heterogeneity of depression and comorbidities complicates research findings. Some trials indicate that ABMT is more effective when combined with traditional psychotherapy or pharmacological treatments. The long-term maintenance of benefits and optimal training protocols are areas warranting further investigation.

## Addiction and Substance Use Disorders

Attention bias modification training has also been explored as an adjunctive tool in addiction treatment. Individuals with substance use disorders often demonstrate an attentional bias toward drug-related cues, which can trigger cravings and relapse. ABMT protocols designed to divert attention away from these cues have shown promise in reducing attentional bias and, in some studies, decreasing relapse rates.

Nonetheless, the complexity of addiction neurobiology means that ABMT is generally considered a complementary strategy rather than a standalone treatment. More rigorous trials are needed to establish standardized training regimens and long-term outcomes.

## Post-Traumatic Stress Disorder (PTSD)

PTSD is characterized by hypervigilance and attentional biases toward trauma-related stimuli. Research into ABMT for PTSD is emerging, with some studies reporting reductions in trauma-related attentional bias and symptomatology following training. Given the high burden of PTSD and limitations of current treatments, ABMT represents a potentially valuable, low-cost intervention.

However, clinical adoption remains limited due to variability in study designs and small sample sizes. Further exploration of ABMT's integration with trauma-focused therapies may enhance its therapeutic potential.

# Advantages and Limitations of Attention Bias Modification Training

Like any psychological intervention, ABMT presents a balance of benefits and challenges that influence its applicability and acceptance.

## Advantages

- **Accessibility:** ABMT can be delivered via computer or mobile platforms, increasing accessibility for patients with limited access to in-person therapy.
- **Non-invasive:** The training does not involve pharmacological agents, reducing concerns about side effects or drug interactions.
- **Targeted intervention:** By focusing specifically on attentional biases, ABMT addresses a core cognitive mechanism underlying various disorders.
- **Potential for personalization:** Training tasks can be adapted to individual symptom profiles or disorder specifics.

## Limitations

- **Mixed efficacy evidence:** While promising, ABMT outcomes vary considerably across studies and populations.
- **Short-term effects:** Many trials report transient benefits, with limited data on sustained symptom improvement.
- **Engagement challenges:** Repetitive computerized tasks may reduce participant motivation and adherence.
- **Generalizability:** Laboratory-based attentional changes may not always translate to real-world behavioral improvements.

# Future Directions and Integration with Other Therapies

The ongoing evolution of attention bias modification training is marked by efforts to enhance its efficacy and broaden clinical utility. Integrating ABMT with established therapeutic modalities such as cognitive-behavioral therapy (CBT) or pharmacotherapy could potentiate treatment effects by targeting multiple facets of psychopathology simultaneously.

Technological advancements also pave the way for more engaging and immersive ABMT experiences. Virtual reality (VR) and gamification approaches are under exploration to improve adherence and ecological validity. Additionally, incorporating neurofeedback and real-time brain monitoring may enable more precise modulation of attentional processes.

Personalized medicine approaches, leveraging genetic, neuroimaging, and behavioral data, hold promise for tailoring ABMT protocols to individual patient needs, optimizing outcomes.

Despite its challenges, attention bias modification training represents a noteworthy addition to the psychological intervention landscape. Its unique focus on attentional mechanisms offers insights into cognitive underpinnings of mental health disorders, while providing a scalable and potentially cost-effective tool for symptom reduction. As research advances, refining training paradigms and establishing standardized guidelines will be essential for translating ABMT from experimental settings to widespread clinical practice.

## Attention Bias Modification Training



**attention bias modification training:** Evaluating the Use of Self-relevant Stimuli in Attention Bias Modification Training as a Treatment for Anxiety , 2017 Increased attentional bias to threat has been identified as a causal mechanism in the development of anxiety. As such, attention bias modification (ABM) was conceived as a treatment option where anxiety is alleviated through a computerized cognitive training regimen that reduces an individual's attentional bias to threat. However, few studies to date have examined how to tailor ABM treatments to unique individuals and how that may facilitate greater generalization of treatment effects in the real world. Additionally, the neural mechanisms underlying ABM are poorly understood. The participants in this study gave a list of the 10 things that caused them the most anxiety and those stimuli were incorporated into the ABM design in place of typically, experimenter-generated stimuli. A control group completed a self-relevant variant of the dot-probe task in place of ABM. Pre and post-testing, consisting of the dot-probe task while NIRS activity was recorded, did not reveal significant changes in behavior or brain activation. However, examination of the control group's data revealed that participants generally displayed an attention bias towards their self-relevant threats and that reaction time stabilized after an initial session, implying that a practice session may facilitate more reliable results with the dot-probe task. Interestingly, participants only showed an attention bias on trials involving the top half of the screen and attention bias scores garnered from top and bottom trials separately

were highly correlated across sessions, suggesting that researchers may need to consider the spatial location of the target in order to draw more reliable results.--Abstract.

**attention bias modification training:** *Cognitive Bias Modification-attention* Priscilla Fauth, 2016 Anxiety disorders are the most frequently occurring psychiatric disorder in the United States (Beard, 2011). One type of treatment, Cognitive Bias Modification for Attention (CBM-A), has been shown to be an effective alternative for those who do not benifit other popular treatments (Ballinger, 2004). People with high levels of anxiety have a higher attention bias towards threatening information in the environment and CBM-A training works to reduce that attention bias towards threat, and in turn, reduce anxiety (Bar-Haim, 2010; Browning, Holmes, & Harmer, 2010; Hakamata, Y., Lissek, S., Bar-Haim, Y., Britton, J. C., Fox, N. A., Leibenluft, E., & ... Pine, D. S., 2010; Yiend & Mackintosh, 2004). However, it is unclear if CBM-A training is effective when completed outside of the controlled lab environment. The aim of this study was to further explore the possibilities of using multiple sessions of CBM-A in the home setting as a method of reducing attentional bias and trait anxiety. Participants consisted of 43 undergraduate psychology students at Eastern Washington University. Participants completed 6 daily sessions of CBM-A at home (or an equivalent control task), and their levels of anxiety were measured pre and post training in an on-campus lab setting. The results show a reduction in trait anxiety for those who received CBM-A training, but no indication of a change in attentional bias for either the control or experimental group regardless of the number of training sessions completed. Though the current study does lend some support to the idea that CBM-A training in the home environment may be helpful for reducing anxiety, further work is needed to explore how CBM-A training in the home can impact attention bias and what impeding its effectiveness as well as what tasks are appropriate for measuring an attention bias --Leaf iv.

**attention bias modification training: Measurement and Interpretation of Attentional Bias** Stuart G. Ferguson, Eva Kemps, Lien Goossens, 2022-03-08

**attention bias modification training: Die Macht des Schlechten** Roy F. Baumeister, John Tierney, 2020-02-12 Bezwingen Sie den Negativitätseffekt! Warum brauchen wir durchschnittlich vier gute Erlebnisse, um ein schlechtes emotional auszugleichen? Warum erschüttert uns ein einziges Wort der Kritik, selbst wenn es mit heftigem Lob daherkommt? Der renommierte Sozialpsychologe Roy F. Baumeister entdeckte den Negativitätseffekt als grundlegenden Aspekt unseres Wesens. Mit ihm lässt sich erklären, warum Länder in katastrophale Kriege geraten, warum Paare sich scheiden lassen, warum Menschen Vorstellungsgespräche vermasseln. Doch wir können lernen, unsere Negativitätsvorurteile zu erkennen, zu steuern und sogar zu überwinden. Die Macht des Schlechten kann perfekt für Gutes genutzt werden. »Dieser faszinierende Blick eines unserer kreativsten Psychologen und Wissenschaftsautoren auf unsere Negativitätsvorurteile kann Ihr Verständnis der menschlichen Natur erhellen, Ihre Weltanschauung ausbalancieren und Sie aufheitern.« Steven Pinker

**attention bias modification training: Handbook of Emotion Regulation** James J. Gross, Brett Q. Ford, 2024-02 This definitive handbook is now in an extensively revised third edition with many all-new chapters and new topics. Leading authorities present cutting-edge knowledge about how and why people try to regulate their emotions, the consequences of different regulatory strategies, and interventions to enhance this key area of functioning. The biological, cognitive, developmental, and social bases of emotion regulation are explored. The volume identifies critical implications of emotion regulation for mental and physical health, psychopathology, educational achievement, prosocial behavior, and other domains. Clinical and nonclinical interventions are critically reviewed and state-of-the-art measurement approaches described. New to This Edition *Broader coverage to bring readers up to speed on the ever-growing literature--features 71 concise chapters, compared to 36 in the prior edition. *Reflects a decade of continuing, rapid advances in theory and research methods. *New sections on emotion regulation in groups and collectives, specific emotion regulation processes, nonclinical interventions, and emotion regulation across disciplines. *Increased attention to the role of emotion regulation in culture, and broader societal issues.

**attention bias modification training:** *Attention Training in Anxiety Using Attention Bias Modification and Electrophysiology Methods* Kue Xiong, Travis C. Evans, Sarah M. Sass, 2018 Attentional bias modification (ABM) methods have been developed to reduce attentional bias to threat in anxious individuals by directing attention to non-threatening stimuli. Although ABM studies have been associated with a reduction in attentional bias to threat and a reduction in anxiety symptoms within anxious participants, these studies typically train attention toward neutral stimuli and away from threatening stimuli. Training attention toward pleasant and away from threatening stimuli may also be helpful to anxious participants who may not process pleasant information in the same way as non-anxious individuals. We hypothesized that training attention to pleasant stimuli would increase attentional processing of pleasant information and decrease anxiety symptoms. This case study describes how neuroscience methods such as electroencephalography (EEG) data can be combined with ABM methods to provide key information relevant to understanding how ABM reduces anxiety symptoms. Along with the challenges of using these methods, we discuss issues in conducting research within anxious populations.

**attention bias modification training:** Brain and Cognition for Addiction Medicine: From Prevention to Recovery Hamed Ekhtiari, Antonio Verdejo-García, Scott J. Moeller, Alexander Mario Baldacchino, Martin P. Paulus, 2021-01-12

**attention bias modification training:** Towards an Understanding of the Cognitive Mechanisms Involved in Threat Processing and Perception Andras Norbert Zsido, Carlos M. Coelho, David S. March, Michael Craig Hout , Jakub Polák, 2024-06-05 Much remains unknown about the cognitive mechanisms and information-processing biases involved in threat detection, or the acquisition and maintenance of threat associations. To complicate the picture, these mechanisms and biases likely differ between various types of threats (e.g., those originating from animals, weapons, social situations, or groups). There has been a recent push to highlight ways of improving methods used in research in this area, which has likewise prompted theoretical revisions. It is therefore important to continue clarifying the cognitive mechanism (e.g., perception, attention, memory, learning) underlying threat processing to develop a better understanding of how they affect social outcomes. For example, very little is known about how social identity, hierarchy, group structure, and other social cues affect our responses in threatening situations. As the social environment impacts our daily psychological functioning, one might suspect it has an important role in threat processing as well.

**attention bias modification training: Cognitive Systems and Signal Processing** Fuchun Sun, Huaping Liu, Dewen Hu, 2019-04-26 This two-volume set (CCIS 1005 and CCIS 1006) constitutes the refereed proceedings of the 4th International Conference on Cognitive Systems and Signal Processing, ICCSIP2018, held in Beijing, China, in November and December 2018. The 96 revised full papers presented were carefully reviewed and selected from 169 submissions. The papers are organized in topical sections on vision and image; algorithms; robotics; human-computer interaction; deep learning; information processing and automatic driving.

**attention bias modification training:** Experimental Approaches to Body Image, Representation and Perception Kevin R. Brooks, Lynda Boothroyd, Jason Bell, Ian D. Stephen, 2021-12-13

**attention bias modification training:** *Positive Neuroscience: the Neuroscience of Human Flourishing* Feng Kong, Aaron Shain Heller, Carien M. van Reekum, Wataru Sato, 2020-04-13

**attention bias modification training: e-Mental Health** Davor Mucic, Donald M. Hilty, 2015-10-12 This book describes the use of telecommunication technologies to provide mental health services to individuals in communities or locations that are underserviced, typically as a result of their geographic isolation or due to cultural and/or linguistic barriers. The potential of the e-Mental Health approach is demonstrated in various mental health settings by describing concrete clinical examples and applications involving novel strategies for employing technology. Further, the book presents an approach to cooperation on a global level based on the exchange of expertise and knowledge across national boundaries. The target audience includes mental health workers

(clinicians and staff members), medical and nursing students, academic researchers, technology professionals and health care policy makers.

**attention bias modification training:** The Wiley Handbook of Anxiety Disorders Paul Emmelkamp, Thomas Ehring, 2014-05-12 This state-of-the-art Handbook on the research and treatment of anxiety and related disorders is the most internationally and clinically oriented Handbook currently available, encompassing a broad network of researchers, from leading experts in the field to rising stars. The very first handbook to cover anxiety disorders according to the new DSM-5 criteria Published in two volumes, the International Handbook provides the most wide-ranging treatment of the state-of-the-art research in the anxiety disorders Offers a truly international aspect, including authors from different continents and covering issues of relevance to non-Western countries Includes discussion of the latest treatments, including work on persistence of compulsions, virtual reality exposure therapy, cognitive bias modification, cognitive enhancers, and imagery rescripting Covers treatment failures, transdiagnostic approaches, and includes treatment issues for children as well as the older population Edited by leaders in the field, responsible for some of the most important advances in our understanding and treatment of anxiety disorders 2 Volumes

**attention bias modification training:** Handbook of Substance Misuse and Addictions Vinood B. Patel, Victor R. Preedy, 2022-10-17 Substance misuse and addictions are a public health issue. They affect the well-being of each community and nation as a whole. It is, therefore, necessary to identify, educate, and treat individuals who are addicted to substances. Policies and procedures go hand-in-hand with public health education and safety. The science behind the public health issues of one drug may be applicable to other drugs as well. However, marshalling all of the aforementioned information into a single source is somewhat difficult due to the wide array of material. The Editors address this by compiling the research in this single reference work that serves as a one-stop-shopping approach to everything readers need to know about the scientific basis of public health and addictions and agents of misuse. Apart from active agents that have a plant or chemical basis, there is a need to consider that there are other forms of addiction which may have common modes of causality or prevention. These include food addiction, gaming, gambling, and other non-drug addictions. These types of addiction may be related to the addiction of drugs. The Handbook of Substance Misuse and Addictions: From Biology to Public Health offers a holistic understanding of the relationship between public health and substance misuse. The text provides a common platform upon which other forms of addiction or substance misuse can be understood and treated. Addiction processes involve understanding the biological processes as well as behavior, psychology, sociology, and public health, all of which are interlinked. This Handbook is a useful reference for lecturers, students, researchers, practitioners, and other professionals in public health, addiction science, epidemiology, health education, health promotion, and health sciences.

**attention bias modification training: Translational Research of Occupational Therapy and Neurorehabilitation** Ryouhei Ishii, Scott Alan Smith, Ryoichiro Iwanaga, Jing Xiang, Leonides Canuet, HIdeki Miyaguchi , Hiroyuki Inadomi, 2024-09-02 Occupational therapy (OT) is defined as “a health and rehabilitation profession that assists individuals of all ages who have had an injury, illness, cognitive impairment, mental illness, developmental, learning, or physical disability to maximize their independence” (AOTA). OT has very clear purpose to maximize a patient’s autonomy in all aspects of daily activities, to support them with any kind of deficits and, to express meaning through which organized and intentional performance, so-called “occupation. Treatment sessions of OT focus on engaging patients in significant activities in order to help them in achieving their goals and reach their sufficient level of satisfaction, productivity, and independence. This allows the patients to have a sense of increased competence, self-efficacy, independence, purpose and, especially wholeness. Emerging research and new technologies provide the research area and clinical practice of OT with treatment strategies and novel devices. Especially, neurorehabilitation (NR) is offering quite promising ideas to help patients with common neurological and cognitive disorders. NR tries to improve the quality of care and to explain the various responses to treatment by analyzing the correlation between central nervous system lesions and clinical findings.

**attention bias modification training:** The Power of Bad John Tierney, Roy F. Baumeister, 2019-12-31 The most important book at the borderland of psychology and politics that I have ever read.—Martin E. P. Seligman, Zellerbach Family Professor of Psychology at that University of Pennsylvania and author of Learned Optimism Why are we devastated by a word of criticism even when it's mixed with lavish praise? Because our brains are wired to focus on the bad. This negativity effect explains things great and small: why countries blunder into disastrous wars, why couples divorce, why people flub job interviews, how schools fail students, why football coaches stupidly punt on fourth down. All day long, the power of bad governs people's moods, drives marketing campaigns, and dominates news and politics. Eminent social scientist Roy F. Baumeister stumbled unexpectedly upon this fundamental aspect of human nature. To find out why financial losses mattered more to people than financial gains, Baumeister looked for situations in which good events made a bigger impact than bad ones. But his team couldn't find any. Their research showed that bad is relentlessly stronger than good, and their paper has become one of the most-cited in the scientific literature. Our brain's negativity bias makes evolutionary sense because it kept our ancestors alert to fatal dangers, but it distorts our perspective in today's media environment. The steady barrage of bad news and crisismongering makes us feel helpless and leaves us needlessly fearful and angry. We ignore our many blessings, preferring to heed—and vote for—the voices telling us the world is going to hell. But once we recognize our negativity bias, the rational brain can overcome the power of bad when it's harmful and employ that power when it's beneficial. In fact, bad breaks and bad feelings create the most powerful incentives to become smarter and stronger. Properly understood, bad can be put to perfectly good use. As noted science journalist John Tierney and Baumeister show in this wide-ranging book, we can adopt proven strategies to avoid the pitfalls that doom relationships, careers, businesses, and nations. Instead of despairing at what's wrong in your life and in the world, you can see how much is going right—and how to make it still better.

**attention bias modification training:** Evidence-Based Psychotherapy Daniel David, Steven Jay Lynn, Guy H. Montgomery, 2018-01-02 A Comprehensive, Systematic Evaluation of Treatment Effectiveness for Major Psychological Disorders With over 500 types of psychotherapy being practiced in the field today, navigating the maze of possible treatments can be daunting for clinicians and researchers, as well as for consumers who seek help in obtaining psychological services. Evidence-Based Psychotherapy: The State of Science and Practice offers a roadmap to identifying the most appropriate and efficacious interventions, and provides the most comprehensive review to date of treatments for psychological disorders most often encountered in clinical practice. Each chapter applies a rigorous assessment framework to evaluate psychotherapeutic interventions for a specific disorder. The authors include the reader in the evaluation scheme by describing both effective and potentially non-effective treatments. Assessments are based upon the extant research evidence regarding both clinical efficacy and support of underyling theory. Ultimately, the book seeks to inform treatment planning and enhance therapeutic outcomes. Evidence-Based Psychotherapy: The State of Science and Practice: Presents the available scientific research for evidence-based psychotherapies commonly practiced today Systematically evaluates theory and intervention efficacy based on the David and Montgomery nine-category evaluative framework Covers essential modes of treatment for major disorders, including bipolar disorder, generalized anxiety disorder, PTSD, eating disorders, alcohol use disorder, major depressive disorder, phobias, and more Includes insightful discussion of clinical practice written by leading experts Clarifies "evidence-based practice" versus "evidence-based science" and offers historical context for the development of the treatments under discussion Evidence-Based Psychotherapy: The State of Science and Practice is designed to inform treatment choices as well as strengthen critical evaluation. In doing so, it provides an invaluable resource for both researchers and clinicians.

**attention bias modification training:** The Oxford Handbook of Positive Emotion and Psychopathology June Gruber, 2019-09-05 Considerable research has been devoted to understanding how positive emotional processes influence our thoughts and behaviors, and the resulting body of work clearly indicates that positive emotion is a vital ingredient in our human quest towards

well-being and thriving. Yet the role of positive emotion in psychopathology has been underemphasized, such that comparatively less scientific attention has been devoted to understanding ways in which positive emotions might influence and be influenced by psychological disturbance. Presenting cutting-edge scientific work from an internationally-renowned group of contributors, The Oxford Handbook of Positive Emotion and Psychopathology provides unparalleled insight into the role of positive emotions in mental health and illness. The book begins with a comprehensive overview of key psychological processes that link positive emotional experience and psychopathological outcomes. The following section focuses on specific psychological disorders, including depression, anxiety, trauma, bipolar disorder, and schizophrenia, as well as developmental considerations. The third and final section of the Handbook discusses translational implications of this research and how examining populations characterized by positive emotion disturbance enables a better understanding of psychiatric course and risk factors, while simultaneously generating opportunities to bridge gaps between basic science models and psychosocial interventions. With its rich and multi-layered focus, The Oxford Handbook of Positive Emotion and Psychopathology will be of interest to researchers, teachers, and students from a range of disciplines, including social psychology, clinical psychology and psychiatry, biological psychology and health psychology, affective science, and neuroscience.

**attention bias modification training:** MEDINFO 2019: Health and Wellbeing e-Networks for All L. Ohno-Machado, B. Séroussi, 2019-11-12 Combining and integrating cross-institutional data remains a challenge for both researchers and those involved in patient care. Patient-generated data can contribute precious information to healthcare professionals by enabling monitoring under normal life conditions and also helping patients play a more active role in their own care. This book presents the proceedings of MEDINFO 2019, the 17th World Congress on Medical and Health Informatics, held in Lyon, France, from 25 to 30 August 2019. The theme of this year's conference was 'Health and Wellbeing: E-Networks for All', stressing the increasing importance of networks in healthcare on the one hand, and the patient-centered perspective on the other. Over 1100 manuscripts were submitted to the conference and, after a thorough review process by at least three reviewers and assessment by a scientific program committee member, 285 papers and 296 posters were accepted, together with 47 podium abstracts, 7 demonstrations, 45 panels, 21 workshops and 9 tutorials. All accepted paper and poster contributions are included in these proceedings. The papers are grouped under four thematic tracks: interpreting health and biomedical data, supporting care delivery, enabling precision medicine and public health, and the human element in medical informatics. The posters are divided into the same four groups. The book presents an overview of state-of-the-art informatics projects from multiple regions of the world; it will be of interest to anyone working in the field of medical informatics.

**attention bias modification training: Biased Cognitions & Social Anxiety: Building a Global Framework for Integrating Cognitive, Behavioral, and Neural Processes** Alexandre Heeren, Wolf-Gero Lange, Quincy Wong, Pierre Philippot, 2015-03-05 Social anxiety (SA) is a common and incapacitating disorder that has been associated with seriously impaired career, academic, and general social functioning. Regarding epidemiological data, SA has a lifetime prevalence of 12.1% and is the fourth most common psychopathological disorder (Kessler et al., 2005). At a fundamental point of view, the most prominent cognitive models of SA posit that biased cognitions contribute to the development and maintenance of the disorder (e.g., Clark & Wells, 1995; Rapee & Heimberg, 1997). Over the last decades, a large body of research has provided evidence that individuals suffering from SA exhibit such biased cognitions at the level of visual attention, memory of social encounters, interpretation of social events, and in judgment of social cues. Such biased cognitions in SA has been studied in different ways within cognitive psychology, behavioral psychology, clinical psychology, and cognitive neuroscience over the last few decades, yet, integrative approaches for channeling all information into a unified account of biased cognitions in SA has not been presented so far. The present Research Topic aims to bring together theses different ways, and to highlight findings and methods which can unify research across these areas.

In particular, this Research Topic aims to advance the current theoretical models of SA and set the stage for future developments of the field by clarifying and linking theoretical concepts across disciplines.

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