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Posttraumatic stress disorder, trauma, and accelerated biological aging among post-9/11 veterans

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People who experience trauma and develop posttraumatic stress disorder (PTSD) are at increased risk for poor health. One mechanism that could explain this risk is accelerated biological aging, which is associated with the accumulation of chronic diseases, disability, and premature mortality. Using data from 2309 post-9/11 United States military veterans who participated in the VISN 6 MIRECC's Post-Deployment Mental Health Study, we tested whether PTSD and trauma exposure were associated with accelerated rate of biological aging, assessed using a validated DNA methylation (DNAm) measure of epigenetic aging—DunedinPACE. Veterans with current PTSD were aging faster than those who did not have current PTSD, $\beta = 0.18$, 95% CI [0.11, 0.27], $p < .001$. This effect represented an additional 0.4 months of biological aging each year. Veterans were also aging faster if they reported more PTSD symptoms, $\beta = 0.13$, 95% CI [0.09, 0.16], $p < 0.001$, or higher levels of trauma exposure, $\beta = 0.09$, 95% CI [0.05, 0.13], $p < 0.001$. Notably, veterans with past PTSD were aging more slowly than those with current PTSD, $\beta = -0.21$, 95% CI [-0.35, -0.07], $p = .003$. All reported results accounted for age, gender, self-reported race/ethnicity, and education, and remained when controlling for smoking. Our findings suggest that an accelerated rate of biological aging could help explain how PTSD contributes to poor health and highlights the potential benefits of providing efficacious treatment to populations at increased risk of trauma and PTSD.

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INTRODUCTION

Posttraumatic stress disorder (PTSD) is a common [1, 2] and costly [3, 4] mental health disorder that is linked to poorer health [5–7], including greater risk of chronic disease [5, 6], disability [8], and premature death [7]. Despite well-established epidemiological evidence linking PTSD to poor health, it is unclear what explains these health consequences [9–11]. It is critical to determine how PTSD might lead to poorer health to facilitate future interventions that might mitigate the health consequences of PTSD [10]. This is particularly true for populations at greater risk of developing PTSD, such as first responders and military veterans [12–14], who might benefit the most from such interventions.

A number of plausible physiological mechanisms have been theorized to explain the causal pathway from PTSD to poor health. Prior empirical work has shown PTSD can disrupt immune, endocrine, and circulatory system function [9, 15–18], as well as psychosocial mechanisms linked to health, including reduced social support [19, 20] and unhealthy behaviors [21]. Given the breadth of these findings, it is likely that the poor health observed

among those with PTSD arise from multiple causes spanning psychosocial, behavioral, and physiological dysregulation. With many plausible mechanistic pathways, there is a need to establish health-relevant biomarkers that can link PTSD to poor health and act as proximal outcomes for interventions studies aiming to reduce the health consequences associated with PTSD.

Accelerated biological aging is a novel mechanism that might help explain how PTSD could result in poor health that manifests across multiple physiological systems [22, 23] and risk for several chronic diseases. Biological aging represents the rate at which people's physiological function declines, which differs among people of the same chronological age. People with accelerated biological aging are theorized to be at risk of poor health across multiple organ systems [24], making assessments of biological aging particularly useful as surrogate clinical outcomes relevant to health [25, 26]. New advances in assessing biological aging using epigenetic DNA methylation measures (DNAm) has enabled more efficient and timely measurement of biological aging [27, 28], particularly third-generation epigenetic measures such as

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Aging And Posttraumatic Stress Disorder

Marc E. Agronin, Gabe J. Maletta



Aging And Posttraumatic Stress Disorder:

Aging and Posttraumatic Stress Disorder Paul E. Ruskin, 1996 Aging and Posttraumatic Stress Disorder PTSD explores the psychological sequelae of severe trauma in elderly patients and the manifestations in old age of psychological symptoms secondary to trauma experienced earlier in life Although methodological issues have made the scientific study of PTSD difficult a number of well designed research projects have begun to identify some of the key factors of aging and PTSD Do elderly patients respond differently to stress than younger people and do the effects of early stress change over time These questions are the focus of the book s 22 contributors Research with World War II combat veterans Holocaust survivors elderly victims of trauma and abused elderly persons provides new insight into why they might experience trauma differently than younger individuals Longitudinal data collected over a 14 year period provide a fascinating comparison of psychological distress and PTSD among older and younger people

Posttraumatic Stress Disorder J. Douglas Bremner, 2016-04-18 POSTTRAUMATIC STRESS DISORDER Posttraumatic Stress Disorder From Neurobiology to Treatment presents a comprehensive look at this key neuropsychiatric disorder The text examines the neurobiological basis of posttraumatic stress and how our understanding of the basic elements of the disease has informed and been translated into new and existing treatment options The book begins with a section on animal models in posttraumatic stress disorder research which have served as the basis of much of our neurobiological information Chapters then delve into applications of the clinical neuroscience of posttraumatic stress disorder The final part of the book explores treatments and the way in which our basic and clinical research is now being converted into treatment methods Taking a unique basic science to translational intervention approach Posttraumatic Stress Disorder From Neurobiology to Treatment is an invaluable resource for researchers students and clinicians dealing with this complex disorder Comprehensive coverage of this key neuropsychiatric disorder Chapters written by a global team of experts on basic and clinical aspects of posttraumatic stress disorder Takes a translational approach moving from basic research to clinical interventions

[Age-Adjusted Psychiatric Treatment for the Older Patient](#) Howard H. Fenn, James A. Bourgeois, Catharine Birtley Fenn, 2024-06-10 This book offers practical age adjusted recommendations to treat the most common psychiatric symptoms and syndromes in the geriatric patient The principles described here are not new advice for prescribing to the aging patient has always been to start low go slow This book fleshes out that dictum based on research evidence clinical experience and trends in the literature An age adjusted approach endorses medication interventions when needed as part of a comprehensive treatment plan A combination of psychotherapeutic interventions non pharmacological modalities and judiciously managed medications can improve quality of life and minimize risks inherent in pharmacotherapy applied to aging physiology Age Adjusted Psychiatric Treatment for the Older Patient is divided into five sections covering the foundations of evaluation and treatment neurocognitive disorders psychiatric syndromes therapeutics and interventions and special topics Each chapter begins with a complex case example

that illustrates the topic It then reviews current evidence based evaluation and treatments Age adjusted recommendations distilled from the literature are offered at the end of each chapter The intent is to provide actionable advice to supplement but not supplant good clinical judgement which can improve quality of life by managing psychiatric symptomatology while averting untoward results This volume is an essential guide for experienced clinicians as well as trainees across many health care disciplines both generalists and geriatric specialists who all see increasing numbers of aged patients with psychiatric symptomatology

Psychosis in the Elderly Anne M. Hassett, David Ames, Edmond Chiu, 2005-06-20 Across the spectrum of psychopathology in later life psychotic symptomatology has been the most neglected and although literature in this area is increasing this is the first book to address the need for an overarching framework to examine and understand late life psychotic phenomena Exploring the practical and ethical issues that arise when ma

Handbook of the Clinical Psychology of Ageing Robert T. Woods, Linda Clare, 2015-06-22 The first authoritative reference on clinical psychology and aging the Handbook of the Clinical Psychology of Ageing was universally regarded as a landmark publication when it was first published in 1996 Fully revised and updated the Second Edition retains the breadth of coverage of the original providing a complete and balanced picture of all areas of clinical research and practice with older people Contributions from the UK North America Scandinavia and Australia provide a broad overview of the psychology of aging psychological problems including depression anxiety psychosis and dementia the current social service context and assessment and intervention techniques

The Encyclopedia of Adulthood and Aging, 3 Volume Set Susan K. Whitbourne, 2016-01-19 This authoritative reference work contains more than 300 entries covering all aspects of the multi disciplinary field of adult development and aging Brings together concise accurate summaries of classic topics as well as the most recent thinking and research in new areas Covers a broad range of issues from biological and physiological changes in the body to changes in cognition personality and social roles to applied areas such as psychotherapy long term care and end of life issues Includes contributions from major researchers in the academic and clinical realms 3 Volumes www.encyclopediaadulthoodandaging.com

Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations Institute of Medicine, Board on the Health of Select Populations, Committee on the Assessment of Ongoing Efforts in the Treatment of Posttraumatic Stress Disorder, 2012-07-22 Prior to the military conflicts in Iraq and Afghanistan wars and conflicts have been characterized by such injuries as infectious diseases and catastrophic gunshot wounds However the signature injuries sustained by United States military personnel in these most recent conflicts are blast wounds and the psychiatric consequences to combat particularly posttraumatic stress disorder PTSD which affects an estimated 13 to 20 percent of U S service members who have fought in Iraq or Afghanistan since 2001 PTSD is triggered by a specific traumatic event including combat which leads to symptoms such as persistent re experiencing of the event emotional numbing or avoidance of thoughts feelings conversations or places associated with the trauma and hyperarousal such as exaggerated startle responses or difficulty

concentrating As the U S reduces its military involvement in the Middle East the Departments of Defense DoD and Veterans Affairs VA anticipate that increasing numbers of returning veterans will need PTSD services As a result Congress asked the DoD in consultation with the VA to sponsor an IOM study to assess both departments PTSD treatment programs and services Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations Initial Assessment is the first of two mandated reports examines some of the available programs to prevent diagnose treat and rehabilitate those who have PTSD and encourages further research that can help to improve PTSD care

The Oxford Handbook of Traumatic Stress Disorders J. Gayle Beck,Denise M. Sloan,2022 In the second edition of this handbook experts on traumatic stress have contributed chapters on topics spanning classification epidemiology and special populations theory assessment prevention early intervention treatment and dissemination and treatment This expanded updated volume contains 39 chapters which provide research updates along with highlighting areas that need continued clarification through additional research The handbook provides a valuable resource for clinicians and investigators with interest in traumatic stress disorders

Trauma and Posttraumatic Stress Disorder Evelyn J. Bromet,Elie G. Karam,Karestan C. Koenen,Dan J. Stein,2018-08-09 The first systematic analysis of the rates risk factors consequences and global burden of trauma and PTSD across the globe Handbook of PTSD Matthew J. Friedman,Paula P. Schnurr,Terence M. Keane,2023-11 Now in an extensively revised third edition with 65% new material this is the authoritative reference on posttraumatic stress disorder PTSD Contributors examine the breadth of current knowledge on the mechanisms by which stressful events can alter psychological processes brain function and individual behavior Risk and protective factors across development and in specific populations are explored Reviewing the state of the science of assessment and treatment the volume covers early intervention and evidence based individual couple family and group therapies Conceptual and diagnostic issues are addressed and key questions for the next generation of researchers are identified New to This Edition Thoroughly revised to reflect the accelerating pace of scientific and clinical progress includes a range of new authors Chapters on new topics treatment of PTSD with comorbid disorders and postmortem brain banking New chapters on previously covered topics including DSM 5 and ICD 11 diagnostic criteria the psychoneurobiology of resilience and challenges in implementing clinical best practices New or updated discussions of such timely issues as treatment of refugees telemental health and technology based interventions

Trauma Among Older People Leon Albert Hyer,Steven James Sohnle,2001 First Published in 2001 Routledge is an imprint of Taylor Francis an informa company

Posttraumatic Stress Disorder Julian D. Ford,2009-06-25 This authored text reference will be the first comprehensive text in the rapidly growing field of psychological trauma and posttraumatic stress disorder According to the NIMH approximately 5 2 million American adults already suffer from post traumatic stress disorder Caused by everything from combat experience to violent personal assaults to natural disasters and accidents the incidence of PTSD has already reached epidemic proportions The profound impact of

psychological trauma and the need for proactive and scientifically based approaches to timely prevention and evidence based treatment is unarguable and mental health programs are seeing a significant rise in the number of PTSD courses offered and services required As a result scholars researchers educators clinicians and trainees in the health care and human and social services need a concise and comprehensive source of authoritative information on psychological trauma and posttraumatic stress This volume will offer a foundational understanding of the field as well cover key controversies the influence of culture and gender and describe state of the art research and clinical methodologies in down to earth terms Clinical case studies will be used liberally Concise but comprehensive coverage of biological clinical and social issues surrounding PTSD Thoroughly covers evidence based treatments enabling the reader to translate current research into effective practice Exemplifies practical application through case studies

Evidence Based Treatments for Trauma-Related Psychological Disorders Ulrich Schnyder, Marylène Cloitre, 2022-06-16 The second completely updated edition of this book offers an evidence based guide for clinical psychologists psychiatrists psychotherapists and other clinicians working with trauma survivors in various settings It provides easily digestible up to date information on the basic principles of traumatic stress research and practice including psychological and sociological theories as well as epidemiological psychopathological and neurobiological findings However as therapists are primarily interested in how to best treat their traumatized patients the core focus of the book is on evidence based psychological treatments for trauma related mental disorders The full range of trauma and stress related disorders is covered including Acute Stress Reaction Complex PTSD and Prolonged Grief Disorder reflecting important anticipated developments in diagnostic classification Each of the treatment chapters begins with a short summary of the theoretical underpinnings of the approach presents a case illustrating the treatment protocol addresses special challenges typically encountered in implementing this treatment and ends with an overview of related outcomes and other research findings Additional chapters are devoted to the treatment of comorbidities special populations and special treatment modalities and to pharmacological treatments for trauma related disorders A novel addition is the chapter on Innovative interventions to increase global mental health The book concludes by addressing the fundamental question of how to treat whom and when

Principles and Practice of Geriatric Psychiatry Marc E. Agronin, Gabe J. Maletta, 2006 Written by noted authorities in geriatric psychiatry this volume is a clinically oriented guide to the diagnostic workup and treatment of psychiatric and neuropsychiatric disorders in elderly patients The book describes in detail the neurologic and neuropsychiatric patient assessment and the use of all treatment modalities both psychotherapeutic and pharmacologic in elderly patients Chapters discuss the treatment of disorders in all clinical settings inpatient outpatient emergency primary care assisted living and long term care Algorithms for workup and treatment are included as well as case studies and personal accounts by patients and care providers Appendices provide drug information and additional resources

Cognitive Behavior Therapy with Older Adults Kristen H. Sorocco, Sean Lauderdale, 2011-03-21 A one stop resource

for core discipline practitioners who provide mental health services to the geriatric population Cognitive Behavior Therapy with Older Adults presents strategies for integrating cognitive behavioral therapy CBT skills and therapies into various healthcare settings for aging patients Cognitive Behavior Therapy with Older Adults is divided into key two parts CBT for common mental health problems for older adults and innovations across settings in which older adults are present Evidence based and provider friendly it emphasizes adapting CBT specifically for the aging population and its specific needs Key features A general introduction on aging that dispels myths and highlights the need to address mental health problems among this age group Chapters that overview epidemiology data diagnostic criteria assessment and CBT approaches to treatment Case examples including those that depict a composite of a successfully aging older adult A comprehensive resource section including handouts note templates and other useful tips and worksheets for practice A listing of

supplemental texts patient resources and summary charts **Focus on Posttraumatic Stress Disorder Research** Thomas A. Corales, 2005 Posttraumatic Stress Disorder or PTSD is a psychiatric disorder that can occur following the experience or witnessing of life threatening events such as military combat natural disasters terrorist incidents serious accidents or violent personal assaults like rape People who suffer from PTSD often relive the experience through nightmares and flashbacks have difficulty sleeping and feel detached or estranged and these symptoms can be severe enough and last long enough to significantly impair the person's daily life PTSD is marked by clear biological changes as well as psychological symptoms PTSD is complicated by the fact that it frequently occurs in conjunction with related disorders such as depression substance abuse problems of memory and cognition and other problems of physical and mental health The disorder is also associated with impairment of the person's ability to function in social or family life including occupational instability marital problems and divorces PTSD is associated with a number of distinctive neurobiological and physiological changes PTSD is treated by a variety of forms of psychotherapy and drug therapy This new book presents leading research from around the world

Trends in Posttraumatic Stress Disorder Research Thomas A. Corales, 2005 Posttraumatic Stress Disorder or PTSD is a psychiatric disorder that can occur following the experience or witnessing of life threatening events such as military combat natural disasters terrorist incidents serious accidents or violent personal assaults like rape People who suffer from PTSD often relive the experience through nightmares and flashbacks have difficulty sleeping and feel detached or estranged and these symptoms can be severe enough and last long enough to significantly impair the person's daily life PTSD is marked by clear biological changes as well as psychological symptoms PTSD is complicated by the fact that it frequently occurs in conjunction with related disorders such as depression substance abuse problems of memory and cognition and other problems of physical and mental health The disorder is also associated with impairment of the person's ability to function in social or family life including occupational instability marital problems and divorces PTSD is associated with a number of distinctive neurobiological and physiological changes PTSD is treated by a variety of forms of psychotherapy and drug

therapy This new book presents leading research from around the world *Treatment of Psychiatric Disorders Among Older Adults* Rajesh R. Tampi, Deena J. Tampi, 2024-05-20 This timely book provides detailed information regarding the latest treatment for psychiatric disorders among the growing population of older adults The World Health Organization reports that between 2015 and 2050 the proportion of the world's older adults 60 years will double from about 12% to almost 22% of the total population and it is estimated that approximately 20% of older adults have a diagnosable psychiatric disorder Many of these older adults are prescribed psychotropic medications but these treatments can result in significant functional decline cognitive decline cerebrovascular adverse events and death The editors in collaboration with fellow experts in geriatric psychiatry provide the scientific background regarding the treatment of a range of psychiatric disorders among older adults The volume features a comprehensive table of contents covering a range of psychiatry subtopics such as neurocognitive disorders depressive disorders substance use disorders and anxiety disorders Each chapter adheres to the same easy to follow format and amongst other information includes evidence based assessments non pharmacological and pharmacological therapies potential side effects and their treatments and evidence based treatment algorithms for each disorder *Treatment of Psychiatric Disorders Among Older Adults* will be a valuable resource for psychiatrists geriatricians students neurologists advance practice nurses psychologists social workers occupational therapists physical therapists and dieticians who care for older adults with mental health disorders *Handbook of Behavioral and Cognitive Therapies with Older Adults* Dolores Gallagher Thompson, Ann Steffen, Larry W. Thompson, 2007-10-12 It gives me great pleasure to witness continued growth in the application of cognitive and behavioral theories and therapies to more diverse populations including in this volume their application to the mental health problems of later life Evidence continues to accumulate demonstrating that these are effective in treating a broad range of elderly patient groups This is the first book to examine a number of these evidence based interventions currently in use with older adults The editors have assembled chapters developed in many of the leading clinical and clinical research programs focusing on elderly patients both in this country and in the UK Since the emphasis of this volume is primarily on clinical application each author group was asked to discuss the empirical data for the treatment strategies it is using with the specific patient group selected Typically this was followed by a detailed description of treatment procedures that were then illustrated by one or more clinical examples The book begins by examining the treatment of depressive and anxiety disorders and then moves on to more complicated and/or serious disorders including schizophrenia and other psychoses suicidal behavior personality disorders bipolar disorders dementia and complicated bereavement A chapter on the problems and issues in training therapists to use evidence based interventions effectively is also included along with a chapter discussing the implications of Medicare policies and guidelines for service delivery *Geriatric Psychiatry, An Issue of Psychiatric Clinics of North America* Dan G. Blazer, Susan K. Schultz, 2018-02-10 This issue of *Psychiatric Clinics* edited by Drs Dan Blazer and Susan Schultz will cover a number of important aspects of Geriatric

Psychiatry Topics in this issue include but are not limited to Delirium in the elderly Depression and cardiac disease in later life Schizophrenia in later life Anxiety Disorders in later life Neurological changes and depression Behavioral Changes with Alzheimer s Disease and Vascular Dementia Palliative Care in Dementia and Chronic Mental Illness Collaborative Care for the elderly with psychiatric disorders and Post Traumatic Stress Disorders in the elderly

Unveiling the Magic of Words: A Review of "**Aging And Posttraumatic Stress Disorder**"

In a global defined by information and interconnectivity, the enchanting power of words has acquired unparalleled significance. Their ability to kindle emotions, provoke contemplation, and ignite transformative change is really awe-inspiring. Enter the realm of "**Aging And Posttraumatic Stress Disorder**," a mesmerizing literary masterpiece penned by a distinguished author, guiding readers on a profound journey to unravel the secrets and potential hidden within every word. In this critique, we shall delve into the book's central themes, examine its distinctive writing style, and assess its profound impact on the souls of its readers.

<https://abp-london.co.uk/results/book-search/fetch.php/astronomy%20and%20the%20imagination%20a%20new%20approach%20to%20experience%20of%20the%20stars.pdf>

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Aging And Posttraumatic Stress Disorder Introduction

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