Record Nr. UNINA9910506392003321 Advances in substance and behavioral addiction: the role of executive **Titolo** functions / / edited by Michela Balconi and Salvatore Campanella Pubbl/distr/stampa Cham, Switzerland:,: Springer,, [2021] ©2021 **ISBN** 3-030-82408-X Descrizione fisica 1 online resource (259 pages) Collana Advances in Mental Health and Addiction 616.8584 Disciplina Soggetti Executive functions (Neuropsychology) Compulsive behavior Abús de substàncies Drogoaddicció Funcions executives (Neuropsicologia) Anàlisi de conducta Psicodiagnòstic Desintoxicació de les drogues Prevenció de toxicomanies Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Intro -- Acknowledgements -- Contents -- Contributors -- Part I: The Nota di contenuto Executive Functions in "Old" and "New" Addictions -- Chapter 1: Similarities and Differences Between "Old" and "New" Addictions: The Focus on Executive Functions and Reward Mechanisms -- 1.1 Definition of Different (Old and New) Addictions -- 1.2 Cognitive and Control Impairment in Addiction -- 1.3 Executive Functions: A Unique Object? -- 1.4 Impairment of EF in Addiction -- 1.4.1 Decision-Making Processes -- 1.4.2 Metacognitive Processes -- 1.5 Commonalities and Differences for EF and Neural Circuits in Substance and Behavioural Addictions -- 1.5.1 Brain Dysfunctions -- 1.5.2 Brain

Circuits: The Role of Brain Connectivity -- 1.6 Reward Mechanisms (RM)

in Substance and Behavioural Addiction -- 1.6.1 RM in Substance

Addiction -- 1.6.2 RM in Behavioural Addiction -- 1.6.3 The Cortical Unbalance Model: Neurophysiological and "Attitude" Effect -- 1.7 EEG Approach to Addiction: BIS/BAS and Cortical Oscillations -- 1.8 Impulsivity Control and Psychological Traits -- 1.9 The Future Treatment Approach Based on Integrated Models: Neural Stimulation --1.10 Conclusions -- References -- Chapter 2: Psychopathology of EFs -- 2.1 Executive Functions: Conceptual Frame and Internal Structure --2.1.1 "Hot" and "Cool" Subcomponents of EF -- 2.2 Neurofunctional Correlates of EF: The Role of Prefrontal Hubs -- 2.3 EF in Psychopathology -- 2.4 Psychopathology of EF in Addiction -- 2.4.1 Bridging the Gap: Neurocognitive Models of Addiction -- 2.5 Conclusions -- References -- Chapter 3: The Assessment of Executive Functions: A New Neuropsychological Tool for Addiction -- 3.1 Neurocognitive Deficits in Addiction -- 3.2 Tools for Assessing EF in Addiction -- 3.3 Why a New Neuropsychological Battery for Screening of EF in Addiction -- 3.4 Potential Applications: Salience and Innovativeness of the BFE-A. 3.5 Presentation of an Empirical Validation Study -- 3.6 Structure of the BFE-A -- 3.6.1 Verbal Memory Test -- 3.6.2 Working Memory Test -- 3.6.3 Focused Attention Test -- 3.6.4 Verbal Fluency Test --3.6.5 Non-verbal Fluency Test -- 3.6.6 Modified Stroop Task for Addiction -- 3.6.7 Modified Go/No-Go Task for Addiction -- 3.7 Conclusions -- References -- Chapter 4: EFs in Pathological Gambling Disorder -- 4.1 Introduction and Definition of Pathological Gambling Disorder -- 4.2 How Are EFs Involved in Pathological Gambling Disorder? -- 4.2.1 Brain Correlates of EF in GD Deficits -- 4.2.2 Empirical Studies About Behavioural Deficits in GD: Measurement Evidence -- 4.2.3 Behavioural Addiction, GD, and Substance Addiction: What Kind of Brain Correlates Relationship? -- 4.2.4 Some Limits in EFs Studies Applied to GD -- 4.3 Theoretical Models to Explain SUD and GD -- 4.3.1 Aberrant Learning Theory -- 4.3.1.1 The Intermittent Schedule for Reward and Loss -- 4.3.1.2 Illusory Perceived Control -- 4.3.2 The Triadic Neurocognitive Model -- 4.3.2.1 The Hypersensitization Toward Gambling-Related Stimuli and the "Impulsive System" -- 4.3.2.2 The Disruption of the Reflective Function -- 4.3.2.3 The Role of Interoceptive Processes: Halfway Between Impulsive and Reflective Systems -- 4.3.3 Frontocortical Dysfunction Theory -- 4.3.4 The Cortical Unbalance Model and Lateralization Effect -- 4.4 Behavioural Study and EFs in GD -- 4.4.1 Reward Sensitivity and IGT -- 4.5 Electrophysiology of Pathological Gambling behaviour -- 4.5.1 ERP Evidence for GD -- 4.5.1.1 N200 -- 4.5.1.2 P300 -- 4.5.1.3 ERN and FRN -- 4.5.2 EEG and Lateralization Effect -- 4.6 To Summarize: Gambling Between Specificity and Uniqueness -- References -- Part II: Prevention and Treatment of Addictions -- Chapter 5: Neuroenhancement of the Executive Functions in Addiction -- 5.1 Introductive Remarks. 5.2 Cognitive Training for the Rehabilitation of EFs in SUD -- 5.2.1 Cognitive Bias Modification (CBM) Training -- 5.2.1.1 Neurocognitive Findings -- 5.2.2 Response Inhibition Training -- 5.2.2.1 Neurocognitive Findings -- 5.2.3 Working Memory Training (WMT) --5.2.3.1 Multicomponential Treatment Including WMT -- 5.2.3.2 Neurocognitive Findings -- 5.2.4 Goal Management Training (GMT) --5.2.4.1 Neurocognitive Findings -- 5.2.5 To Summarize -- 5.3 Cognitive Approaches for the Rehabilitation of EFs in Non-substance-Related Disorder -- 5.3.1 Gambling Disorder -- 5.3.2 Internet-Related Disorders -- 5.4 Tools for the Rehabilitation and Neuroenhancement of the EF in Addiction -- 5.4.1 Computer-Based Cognitive Training in Addiction -- 5.4.2 Non-invasive Brain Stimulation Through

Neuromodulation Techniques -- 5.4.3 From Serious Games to VR-Based Approaches -- 5.5 Current Trends: From the Combination of Multiple Training Approaches to Precision Medicine -- 5.6 Conclusions -- References -- Chapter 6: Mindfulness-Based Interventions (MBIs) as a Way for Treating EFs in Addiction-Related Disorders -- 6.1 An Introduction to Mindfulness-Based Interventions (MBIs) -- 6.2 MBIs for Addiction-Related Disorders -- 6.3 Mechanisms and Neurocognitive Correlates of MBIs as a Treatment for Addiction-Related Disorders -- 6.3.1 Neurophysiological Evidence of MBIs in SUD -- 6.3.1.1 Neurophysiological Evidence of MBIs on Cue-Induced Craving -- 6.3.1.2 Neurophysiological Evidence of MBIs on Reward Processing -- 6.3.1.3 Neurophysiological Evidence of MBIs on Stress Reactivity -- 6.3.2 Evidence of MBIs Application on Executive Functioning in SUD -- 6.3.3 Experimental Evidence from MBIs Applied to Behavioural Addictions (BAs) -- 6.4 Combining Neuroscientific Tools with MBIs for Boosting EFs in Addiction-Related Disorders -- 6.4.1 Neurofeedback Interventions and Wearable Devices. 6.4.2 MBIs and Neurofeedback Technique in Addiction-Related Disorders: State of the Art and Proposals -- 6.5 Conclusions --References -- Chapter 7: Neuromodulation Techniques in the Treatment of Addictions -- 7.1 Introduction -- 7.2 Invasive Brain Stimulation -- 7.3 Non-invasive Brain Stimulation -- 7.3.1 Repetitive Transcranial Magnetic Stimulation -- 7.3.2 Transcranial Direct Current Stimulation -- 7.3.3 Combined Non-invasive Brain Stimulation -- 7.4 Neurofeedback -- 7.4.1 Theoretical and Methodological Aspects --7.4.2 Functional Magnetic Resonance Imaging Neurofeedback -- 7.4.3 Electroencephalography Neurofeedback -- 7.4.4 Neurofeedback: Future Perspectives and New Insights -- 7.5 General Conclusion -- References -- Chapter 8: Alcohol Use Disorders and Psychiatric Comorbidities --8.1 Introduction -- 8.2 AUD and Other Externalising Associated Disorders -- 8.2.1 Substance Use Disorders (SUDs) -- 8.2.2 Personality Disorders -- 8.3 AUD and Internalising Associated Disorders -- 8.3.1 Major Depressive Disorder (MDD) and Anxiety Disorder -- 8.3.2 Attention-Deficit Hyperactivity Disorder (ADHD) -- 8.4 AUD and Thought Disorder -- 8.5 Comorbidity Research: Vision for Future Research -- References -- Chapter 9: Interoception and Addiction: Etiological Mechanisms and a Root for Intervention -- 9.1 The Construct of Interoception as a Dynamic Multicomponent "Interoceptive Experience" -- 9.2 Dysfunctional Interoceptive Processing and Addiction Disorders -- 9.3 Neural Basis of Interoception: Shared Circuits with Addiction and EFs? -- 9.4 Interoception as a Root for Interventions in Addiction Disorders -- 9.4.1 The Reason for "Personalized" Clinical Model-Based Interventions for Controlling Interoceptive Signals -- 9.4.2 Mindful Awareness in Body-Oriented Therapy (MABT) for Training Interoceptive Awareness Skills. 9.4.3 Physical Exercise for Empowering Interoception and Cognitive Control -- 9.5 Conclusion -- References -- Chapter 10: New Addictions in Youth: Internet Addiction and Internet Gaming Disorder -- 10.1 Introduction: Technological Addictions in Youth -- 10.2 Internet Addiction -- 10.3 Internet Gaming Disorder -- 10.4 Risk Factors for the Onset of New Addictions -- 10.4.1 New Addictions and Social Functioning -- 10.4.2 New Addictions and Characteristics of Personality -- 10.4.3 New Addictions and Coping -- 10.5 New Addictions and Neurobiological Correlates -- 10.6 Treatment --References -- Index.