Executive Functions And Developmental Psychopathology

In this paper we consider the domain of executive functions (EFs) and their possible role in developmental psychopathologies. We first consider general theoretical and measurement issues involved in studying EFs and then review studies of EFs in four developmental psychopathologies: attention deficit hyperactivity disorder (ADHD), conduct disorder, autism, and tourette syndrome (TS). Key words: developmental psychopathology executive function adolescence child development. J Am Acad Child Adolesc Psychiatry 2017 56 11 975982 A strong link between executive function (EF) impairment and psychopathology appears across the lifespan and is documented in multiple neuro psychiatric disorders. At clinical and subclinical, executive functioning and autism psychology bibliography in Harvard style change style these are the sources and citations used to research executive functioning and autism. Nigg J 2000 On inhibition disinhibition in developmental psychopathology views from cognitive and personality psychology and a working inhibition, this article outlines three psychological theories of ASD and their potential implications. Executive functions and developmental psychopathology journal of child psychology and psychiatry 37 1 5187 Premack D Amp WoodruFF G 1978 Does the chimpanzee have a theory of mind? The behavioral and brain sciences 4 515526, these abnormalities predominantly affect association areas and undermine functional integration. Executive function which has a protracted development into adolescence and reflects the integration of complex widely distributed brain function is also affected in autism, development of executive function in early childhood predominantly from developmental psychology and developmental neuroscience fields. Certainly, our understanding of executive function development in preschoolers is now far more advanced than it was a few decades ago despite these advances in knowledge pediatic neuro, in this paper we consider the domain of executive functions (EFs) and their possible role in developmental psychopathologies. We first consider general theoretical and measurement issues involved in studying EFs and then review studies of EFs in four developmental psychopathologies: attention deficit hyperactivity disorder (ADHD), conduct disorder, autism, and tourette syndrome (TS). E Pine D S Gur R C Gur Re 2016 An evaluation of the specificity of executive function impairment in developmental psychopathology journal of the American Academy of Child and Adolescent Psychiatry 2017 doi 10 1016 j jaac 2017 08 016 This is a PDF file of an unedited manuscript that has been accepted for publication as a service to, executive function (EF) refers to the set of neurocognitive skills involved in goal-directed problem solving including working memory, inhibitory control, and set-shifting flexibility. EF depends importantly upon neural networks involving prefrontal cortex and continues to improve into early adulthood although major advances in EF occur during the preschool period. Autism is a common and often highly debilitating neurodevelopmental condition whose core behavioral features are believed to be rooted in disrupted neurocognitive processes involving especially executive function. Researchers have predominantly focused upon understanding the putative causal relationship between difficulties in EF and autistic symptomatology. Executive functioning issues signs and symptoms of executive functioning issues impact kids in different ways. Kids may have weakness in only one or two areas or in all of them, the signs of problems with executive function often look like the signs of ADHD. Thats because ADHD is a problem with executive function, executive functions, and developmental psychopathology. Pennington BF 1 Ozonoff S Author information 1 Department of Psychology University of Denver CO 80208 USA In this paper we consider the domain of executive functions (EFs) and their possible role in developmental psychopathologies. The executive function theory was utilized to examine the relationship between cognitive process and the restricted repetitive symptoms of autistic disorder. Ad seventeen adults with AD were compared to 17 nonautistic controls on a new executive function battery. Delis Kaplin Executive function scales, in their book executive function amp child development. Marcie Yeager and Daniel Yeager provide a framework for teachers, parents, pediatricians, and therapists to help children with developmental, field of self regulation and executive function in developmental psychology. Executive function refers to the goal-directed conscious control of thoughts, actions, and emotions and includes processes of working memory inhibition and mental flexibility. Miyake Amp Friedman 2012 These skills are needed when one, Pennington B Ozonoff S Executive functions and developmental psychopathology 1996 Journal of child psychology and psychiatry 37 1 pp 51 87 Reitan R Validity of the Trail Making Test as an indicator of organic brain damage. Perceptual and motor skills 8 pp 271 276, this course taster is taken from the open university child development course ed209 it is an extract from one of the four course text books Hughes C Graham A and Grayson A 2004 Executive functions in childhood development and disorder in Oates J and Grayson A Eds Cognitive and language development in children Oxford Blackwell amp copy open university 2005, a selection of articles with abstracts from a variety of sources. Annual research review on the relations among self regulation self control executive functioning effortful control cognitive control impulsivity risk taking and inhibition for developmental
executive function abilities including working memory inhibitory control and the flexible volitional shifting of the focus of attention provide a foundation for reflection on experience reasoning and the purposeful regulation of behavior these abilities and their underlying neurobiology however are inherently malleable and influenced by characteristics of individuals and contexts, executive functions and school readiness intervention impact moderation and mediation in the head start redi program volume 20 issue 3 karen l bierman robert l nix mark t greenberg clancy blair celene e domitrovich, in this paper we consider the domain of executive functions efs and their possible role in developmental psychopathologies we first consider general theoretical and measurement issues involved, the typical developmental trajectory of social and executive functions in late adolescence and early adulthood sophie jane taylor lynne ann barker lia reidy ne heavey amp sue mchale department of psychology sociology amp politics sheffield hallam university, executive functions assessment and treatment at preschool age a case report of a child at risk of adhd executive functions and developmental psychopathology article the results give, i the development of executive function the function of executive function executive function is a popular topic in contemporary research but definitions of executive function differ widely one approach treats executive function as a higher order cognitive mechanism or ability denckla and, executive functions may be defined as those skills necessary for purposeful goal directed activity and are generally considered to be largely mediated by the frontal and prefrontal cortices of the brain these cerebral regions are relatively immature during childhood with development thought to be a protracted process which continues into early adolescence, there is strong evidence to suggest that individuals with autism show atypicalities in multiple cognitive domains including theory of mind executive function ef and central coherence cc in this study the longitudinal relationships among these 3 aspects of cognition in autism were investigated thirty seven cognitively able children with an autism spectrum condition were assessed, executive function attention deficits were examined in children with asperger syndrome attention disorder and reading writing disorder and in a group of normal children neuropsychological tests as well as cognitive tasks measuring different components in the processing of information were used the measures were divided into mirskys four components of attention namely sustain, effects of trauma induced stress on attention executive functioning processing speed and requirements for the degree of doctor of philosophy in counseling psychology seton hall university 2009 bernstein amp waber 2007 thus the variance in development of such functions in children may have significant implications for their, executive functions executive function ef is an umbrella term that encompasses the set of higher order processes such as inhibitory control working memory and attentional flexibility that govern goal directed action and adaptive responses to novel complex or ambiguous situations hughes et al 2005, adele diamond is the tier 1 canada research chair professor of developmental cognitive neuroscience at the university of british columbia ubc a fellow of the royal society of canada frsc and was recently listed as one of the 15 most influential neuroscientists one of the pioneers in the field of developmental cognitive neuroscience adele diamond is at the forefront of research on the, executive functioning is a term psychologists use to describe the many tasks our brains perform that are necessary to think act and solve problems executive functioning includes tasks that help us learn new information remember and retrieve the information we ve learned in the past and use this information to solve problems of everyday life, the executive functions are among the last mental functions to reach maturity this is due to the delayed maturation of the prefrontal cortex which is not completely myelinated until well into a persons third decade of life development of executive functions tends to occur in spurts when new skills strategies and forms of awareness emerge executive functions are the cognitive abilities needed to control our thoughts emotions and actions this topic aims to increase understanding about how these functions develop their role and their impact on a persons social emotional and intellectual life from early childhood to adulthood, introduction executive functions are processes that support many everyday activities including planning flexible thinking focused attention and behavioural inhibition and show continued development into early adulthood 1 2 one important backdrop to the development of these psychological abilities is the structural and functional development of the brain 3 4 5 6 among the slowest, how does executive functioning develop executive function ef skills are the range of self management skills that help us attain goals these abilities develop as children mature into adulthood executive functioning development occurs over time in typical children with the mid twenties as a time of peak executive functioning for most adults, the developmental progression and representative measures of each are discussed controversies are addressed e g the relation between efs and fluid intelligence self regulation executive attention and effortful control and the relation between working memory and inhibition and attention, nih toolbox cognitive function p d 2011 development of hot and cool executive function dur battery cf e measuring executive function and attention mon ing the transition to adolescence journal of experimental child graphs of the society for research in child development psychology 108 3 621637, paper
socioeconomic status and executive function developmental trajectories and mediation daniel a hackman 1 robert gallop 2 gary w evans3 and martha j farah1 1 center for cognitive neuroscience center for neuroscience and society department of psychology university of pennsylvania usa, this review paper examines theoretical and methodological issues in the construction of a developmental perspective on executive function ef in childhood and adolescence unlike most reviews of ef which focus on preschoolers this review focuses on studies that include large age ranges, individual differences in executive function and central coherence predict developmental changes in theory of mind in autism pellicano e 2010b individual differences in executive function and central coherence predict developmental changes in theory of mind in autism developmental psychology 46 530 544, carlson sm zelazo pd faja s executive function body and mind in zelazo pd editor oxford handbook of developmental psychology body and mind in zelazo pd editor oxford handbook of developmental psychology body and mind, normative developmental performance on a battery of executive function tasks was investigated executive function was defined as goaldirected behavior including planning organized search and impulse control measures were drawn from clinical neuropsychology visual search verbal fluency motor sequencing and wisconsin card sorting task wcst and from developmental psychology tower, the links between deficits in executive functions ef e g mental flexibility inhibition capacities and some psychological disorders e g anxiety and depressive disorders has been investigated in the past decades or so observations evidenced that some deficits in working memory planning and mental flexibility were highly correlated with anxiety and depressive disorders, executive function and self regulation skills depend on three types of brain function working memory mental flexibility and self control these functions are highly interrelated and the successful application of executive function skills requires them to operate in coordination with each other, executive functions are important higher order cognitive skills for goal directed thought and action these capacities contribute to successful school achievement and lifelong wellbeing the importance of executive functions to childrens education begins in early childhood and continues throughout development this study explores contributions of child and family factors in early childhood, the developmental relationships between executive functions ef and early language skills are unclear this study explores the longitudinal relationships between children s early ef and language skills in a sample of children with a wide range of language abilities including children at risk of dyslexia, bruno raposo ferreira instituto superior de psicologia aplicada william james center for research developmental psychology department member studies executive function social developmental psychology and self regulation, executive functions in autism authors authors and affiliations 1988 emphasized a thorough understanding of any developmental psychopathology requires a shift from descriptive accounts and statistical approaches to a focus on causal processes and underlying psychobiologic mechanisms welsh m c pennington b f amp groisser d b, an evaluation of the specificity of executive function impairment in developmental psychopathology this work suggests that general ef dysfunction is a nonspecific correlate of developmental psychopathology 11 12 s ozonoff executive functions and developmental psychopathology