Issue II Volume I

YellowBrick℠ journal

of Emerging Adulthood

Mission

Yellowbrick Journal is the official publication of Yellowbrick Foundation, a not-for-profit organization, whose mission is to support research, training and community education regarding the emotional, psychological, and developmental challenges of emerging adults, ages 18 to 29. Yellowbrick Journal is dedicated to the dissemination of work that informs the Yellowbrick model—a research-based treatment model that combines the most current contributions of developmental psychology, neuroscience, innovative psychotherapies, strength-based strategies and wellness medicine. Yellowbrick Journal highlights cutting-edge research that informs our understanding of emerging adults from a holistic perspective. Yellowbrick Journal publishes articles on applied work that has demonstrated effectiveness and is particularly dedicated to work that emphasizes multi-specialty evaluation, therapeutic residences, research-based strategies, and life-skills interventions. Yellowbrick Journal represents the voices and perspectives of those who serve as the catalysts for the evolution of Yellowbrick—emerging adults and all who are dedicated to the optimization of their potentials.

Letter From The Editors

Editorial Introduction to Issue II

In this second issue of Yellowbrick Journal we move forward with our objective to bring research-based information to our readership, professionals and parents dedicated to caring for and fostering well-being in emerging adults, ages 18 to 29. New in this issue is the introduction of what will be a regular feature—LITERATURE REVIEW. This first LITERATURE REVIEW provides summaries of foundation articles, papers that structure our understanding of the clinical and developmental features of emerging adulthood. From this set of studies, we learn that, despite high prevalence of psychiatric disorder in this age group, emerging adults make gains in self-sufficiency and independence from late adolescence through the late twenties. Some contend that this is because emerging adulthood is a window of opportunity—a life stage when individuals have the occasion to optimize new strengths and skills to change course from problematic histories. This proposition is derived from evidence that emerging adulthood remains an era of developmental plasticity, a life stage when brain maturation is still occurring and is responsive to rich and healthy experiences.

Well-developed executive functioning skills are essential for planning and organizing a healthy and successful transition to adulthood. But executive functioning deficits can be equally instrumental in undermining healthy and successful transitions to adulthood. The critical influence of executive functioning skills on emerging adult adjustment is the focus of the four articles included in this second issue. In the first article, Joseph Palombo introduces *Executive Function Disorder: An often undiagnosed learning disorder.* This article provides us with information about a psychiatric condition that can be overlooked in emerging adulthood, but takes on great salience. The importance of taking a developmental history is also underscored in this article. Drs. Jesse Viner and Umee Davaé *High-strung and strung-out:* bring awareness to the contemporary issues involved in diagnosing and treating ADHD during emerging adulthood and the special issues that arise in treating ADHD in this age group. *Reflections from the front lines: A career counselor's view of emerging adulthood* by Arlene Hirsch establishes the need for and value in revising traditional career counseling theories and methods to meet the stage-specific needs of emerging adults planning and entering careers. Paule Verdier Dir. in *Executive functioning and the emerging adult: The dissonance between intelligence and competence,* provide a clinical interpretation of emerging adults' behaviors that can be construed as "lazy" or "dumb" leading to shame among emerging adults with this condition. Rather these behavioral manifestations of executive functioning deficits can signal to providers that interventions are required to help facilitate maturation of these essential skills.

RESEARCH ARTICLE HIGHLIGHT

Educational Therapist (2002). v. 23(4), 4-8

ORIGINAL PAPER

Executive Function Disorder:

An often undiagnosed learning disorder[1]

Joseph Palombo M.A.

Introduction

Many learning disabilities teachers and educational therapists will find familiar aspects in the following description of a child I shall call Cory.

> *Cory's mother described him as having been a very active toddler. At times, he would have serious tantrums. He learned the alphabet by 18 months. By age three he liked to climb and jump off the jungle gym, taking risks and being unafraid. As a student in grade school, his teachers said he always rushed through his work. He made careless mistakes and was poorly organized. They also said he needed to show more control and not speak out so often in class. In fifth grade, Cory's teacher asked his parents to empty his desk into a garbage bag because it was messy and unorganized. His lockers and desk were unorganized and messy throughout his years at school. From grade school through high school, his mother would joke that she that she was going to tie him to his desk. When he would go to his room to study he would stay 10 minutes, at most. She would next find him watching TV, or teasing his brother. He seldom brought home his assignments, he would procrastinate getting to work on them, and even if he completed them, he would forget to take back to school the work he had done. Cory's mother constantly had to prod him and nag him to do his school work.*
>
> *Cory had very poor time management skills. In the mornings, after his mother woke him up, she frequently found him lying in bed 15 to 20 minutes later. By the time Cory was in high school it was a daily battle to get him out of the house and to school on time. They thought he would never graduate from high school. His bedroom and bathroom were cluttered with papers, clothes, and books. At home, Cory never followed through with his chores. It seem as if he weren't listing, and some tasks would take three days of nagging and reminding before he completed them.*

The questions I want to address in this paper are: What causes children like Cory to act as they do? Are they simply messy, unmotivated children who refuse to be compliant, or do they have a neuropsychological problem that interferes with their ability to function? Do they have ADHD? To address these questions, I will first describe executive function disorder (EFD), one that has been recognized by researchers and practitioners as a learning disorder for the past two decades, but has not been recognized as a learning disability by federal or state agencies that determine the standards by which students are identified as needing special education services.

What Is Executive Function Disorder?

Characteristics of the Disorder

Defining features: Lezak (1983) describes in detail four behavioral components of executive function: *goal formulation, planning, carrying out goal-directed plans, and effective performance.* Children with executive function problems may have difficulties in one or more of these areas. These behavioral manifestations of the problem can serve as guides for understanding and identifying EFD.

1. *Goal formulation* involves the capacity to conceptualize a plan and the ability to initiate steps to implementing it. Procrastination is probably the most prominent symptom of the failure in this capacity.
2. *Planning* involves the ability to select and bring to bear a number of resources such as materials and skills that will be necessary to implement the plan. It involves drawing upon a pool of knowledge as well as envisioning the actual steps or obstacles that may lie ahead for the successful completion of the task.
3 *Carrying* out the activities, or implementing the plan, involves the translation of the conceptual scheme into a set of behaviors or actions.
4 *Effective performance* requires the person to inhibit responses to distractions so that tangential factors do not interfere with the attainment of the goal. Furthermore, it requires the resourcefulness and flexibility to find alternative paths to the goal if obstacles are met. Self-monitoring and self-regulation are important psychological functions necessary to stay focused on the task.

We have no data on the prevalence and sex ratio of this disorder. ADHD is frequently associated with EFD, although it is not known how often they coexist. Some of the symptoms of ADHD, such as impulsivity and inattention, may be present; however, the symptoms associated with executive function disorder, unlike those of ADHD, do not respond to stimulant medication (Ellenberg 1999). Some children, like Cory, do have ADHD in addition to having an executive function disorder.

Explanatory Paradigms

Many practitioners are probably familiar with a group of students who do not manifest signs of weaknesses in motor function, perception, or language, and who appear quite competent, but who often do not complete academic tasks. They often fail to demonstrate the knowledge that they possess. Many practitioners fail to diagnose EFD because they are not familiar with this disorder, and its underlying causes are poorly understood.

From a neuropsychological perspective, Denckla (1994; 1996) presents a compelling argument for the relationship between executive

function disorder and brain dysfunction. She presents data from neurology that indicate that patients with damage to the prefrontal cortex and its interconnected subcortical regions manifest many of the symptoms associated with executive function disorders. She suggests that executive function disorders are a domain-general impairment as contrasted with the modular or domain-specific impairments, such as dyslexia. By this she means that while researchers hypothesize a direct association between a set of symptoms and a dysfunction in a specific brain system, as in specific learning disabilities, such a direct relationship is too simplistic for our understanding of executive function disorders. The functions subsumed under executive function are broad and probably widely distributed; that is, they involve a number of brain systems. Denckla does not provide a definition for the disorder, but describes a range of activities and behaviors that are found in patients with this disorder. These include deficits in organization and strategic planning.

Torgesen (1994) suggests that these children's problems may be best understood as the absence of the capacity to process information metacognitively. *Metacognition* involves the capacity for self-monitoring and self-regulation, and for the selection of the salient factors necessary to complete a task. It may be described as having the ability to think about how to think about the completion of a task. A distinction is made between *metacognitive knowledge* and *metacognitive behaviors;* that is, while some children may posses the necessary knowledge to complete a task, they may be unable to do so, because they do not posses the know-how to get the job done. The distinction is based on the difference between the cognitive strategies necessary to understand intellectually what is involved to accomplish a specific objective and the ability to implement the actual steps necessary to carry out the plan and monitor the progress made toward an objective. (Wong, 1984)

Disorganization has frequently been considered a hallmark of EFD. Levine (1994) describes four types of persistent organizational failures: 1. *Material-spatial disorganization,* which prevents children from dealing effectively with the equipment needed to be efficient in school. This is seen in such behaviors as losing things, creating messes among belongings; and not bringing home or returning assignments in a timely way. 2. *Temporal-sequential disorganization,* in which children display confusion about time and the sequencing of tasks, such as being late; procrastinating; or having trouble allocating time, estimating how long a task will take to complete, or knowing the order of steps needed to complete a task. 3. *Transitional disorganization,* which involves difficulty shifting gears smoothly, and results in rushing from one activity to the next, having difficulty settling down to work, or being slow in preparing to leave home for school in the morning. 4. *Prospective retrieval disorganization,* which involves the inability to remember to do something that had been planned in advance, such as forgetting the deadline of a project until the night before, or failing to follow through on a promise to finish a task. (pp. 138-141)

In current discussions of executive function the focus tends to be on the cognitive component involved in the completion of tasks. Important aspects such as social, emotional, and personality factors tend to be left out of consideration, although these may contribute significantly to a child's performance in the completion of a task. In particular, these discussions ignore the role of motivation, with the result that some clinicians fail to distinguish between a child's *inability* to perform a task and the *lack of desire* to do so. This distinction, between lack of motivation and a neurologically based deficit, is critical in making a diagnostic assessment of the reasons for a child's failure to perform.

Presenting Problems

Next extent to which a child's functioning is impaired is often related to the child's age and maturity, and to the severity of the deficit in executive function. In addition, the expectations the context makes for carrying into action a set of task may diminish the effects of the deficit. Finally, the child ability to make use of compensatory strategies and to enlist others to complement his or her deficits may mitigate or enhance the effects of the deficit.

By latency (roughly from age 6 to 10) problems can emerge in three areas related to EFD: *academic, social,* and *emotional.* In the academic area these children underachieve because they do not meet teacher's expectations. Homework assignments are lost or not turned in. Poor study skills, procrastination in completing projects, and inefficiency in doing class assignments result in poor performance and low grades.

In the domain of social relationships, the child, at first appears unaffected by the disorder. Although he or she might make friends easily, the friendships are hard to sustain because the child often does not follow through consistently on plans made with friends, and fails to take responsibility for his or her actions. As the child gets older, friends, caregivers, and teachers become increasingly impatient with the child's disorganization, and are puzzled by the underachievement. They may attribute the child's poor performance to laziness, lack of motivation, or simply being disinterested. Caregivers and teachers may then become critical of punitive. Some children respond to such disapproval by becoming oppositional. They resist caregivers' attempts at structuring and organizing tasks for them, thus compounding their problems.

In the emotional domain, no distinctive problems are associated with this disorder. However, some of the children are generally ineffectual in adapting to social and life situations. Their bewilderment as to why things are not working out results in an erosion of self-esteem. A pattern of behaviors, such as not being able to put order and sequence into life occurrences, emerges that make the child appear to some clinicians as having characteristics of a borderline personality disorder. Such a diagnosis is unwarranted, as the symptoms reflect the child's emotional immaturity rather than deep-seated psychopathology.

The Context

"Context" as used here includes the entire milieu in which a child is raised-the social, cultural, economic, religious, familial, and other domains. The demands made by context may either aggravate or mitigate the effects of EFD. In our society, the requirements to be organized, to arrive on time for appointments, to be productive, and to meet deadlines in a timely fashion are not easily met by those who have executive function difficulties. As a result, their capacity to be successful, as our society defines it, is severely impaired.

Complementary Functions

The development of a healthy sense of self requires that there be a good fit between the child's strengths and deficits, and the ability of those in the context to provide a adequate supportive complementary functions. Complementary functions include *emotional nurturing* and *adjunctive functions,* which caregivers and others provide, which are necessary for the child to maintain a sense of self-cohesion or a healthy sense of self. Adjunctive functions are those functions that others perform for the child to complement areas of neuropsychological deficits.

While caregivers may be able and willing to provide these functions, it is also necessary for the child to accept and make good use of

such help from others. Children are not passive recipients of what caregivers make available to them, but are active participants in those interchanges. Some children are more adept that others at eliciting responses from their context. The extent to which children can adapt, by eliciting appropriate responses from those in the context, will determine the extent of their dysfunction. In simple terms, children who are best adapted to use what is available to complement their deficits, those who are pro-active in the search for complementarity, will suffer less and will function more successfully than others with similar deficits. Some caregivers, however, are unable to provide adequate emotional or adjunctive support and some children are unable to make use of the functions that are available. This may be due to temperamental factors, or emotional problems. For those children, negotiating life's challenges becomes much more difficult than for children who have appropriate help available and are able to take advantage of it.

Complementary functions must provide for two types of needs: *emotional needs* and *adjunctive needs.* Children with EFD have exceptional requirements for complementarity in both areas. Unless those are met, their functioning will be negatively affected. At the emotional level they will feel vulnerable to the loss of self-cohesion. That is, they will be more susceptible to psychological injury and loss of self-esteem. At the neuropsychologial level they are more likely to fail a whole range of life tasks that require executive function skills.

Emotional needs: Children with EFD have often been exposed to considerable criticism. They are often perceived as bright and competent. It is difficult for adults to understand why they have to much trouble with the simple tasks that others perform easily. They are then berated for being lazy, not trying hard enough, or simply being defiant of adults' directions and expectations. These criticism lead to considerable resentment on the part of the children, who feel misunderstood and devalued. The course of their development is deflected from its path. Some children internalize criticism and lose motivation to try to do better. The loss of motivation compounds the problem, as it reinforces adults' negative perception of the child. Other children begin to veer away from the parental expectation and values. They devalue the parent's life style, their career paths, and their moral standards. In adolescence, these children may embrace an antiestablishment life style, which they find to be more in conformity with their own limitations and the image of themselves as not fitting in.

Neuropsychological needs: Adjunctive functions are normally provided by caregivers to help the child meet neuropsychological developmental milestones. Children who have learning disabilities have exceptional needs for complementarity in the areas of their disabilities. Example of such functions are tutorial help of assistive devices that enhance the child's functions, (e.g., palm pilot, spell-check, medication). By providing these functions, caregivers enhance motor, sensory, attention, memory, executive function, language, nonverbal communication, or social functions. The need for these adjunctive functions must be met in order to prevent the child from failing at certain developmental tasks, that most other children negotiate with little assistance.

Zone of Proximal Development

The challenge for caregivers is that of maintaining a positive tie to their child while addressing the underlying problem. Caregivers often confront a dilemma. On the one hand, children need affirmation and praise, but on the other hand, parents may find it difficult to respond positively, especially if the child does not conform to their wishes and expectations. Yet a child's need for nurturance, love and approval from the caregivers-giving unconditionally-must be met for development to progress well. If a child does not respond positively to adjunctive supports, the caregivers face a similar dilemma.

Both the emotional support and the adjunctive functions are best provided in the *zone of proximal development.* As stated earlier, the dilemma that confronts caregivers of these children with deficits is how much to do for them and how much to let them struggle to do for themselves; when to praise and when to withhold praise. If too much is done for the children, they will be prevented from exerting any effort to do for themselves. Also, children may regress and develop an inordinate reliance on others. If too little is done, the child may become frustrated, fail at a task, give up trying, and lose motivation. Staying within the zone of proximal development means meeting the child half way. The child is challenged as well as supported by caregivers to avoid failure. By using this approach, caregivers can avoid having the child either become overly dependent or fail to develop potential competencies.

Interventions

Critical to planning any intervention is correct assessment of the problem. In the case of EFD this is not easy. While refined neuropsychological testing may detect the condition, as in ADHD, it is most often identified by its clinical manifestations. A confounding factor in identifying EFD is the extent of the child's motivation to make an effort at correcting the problems. Often children will convince caregivers that they can perform the task, and indeed they know exactly what needs to be done. The problem is that they cannot follow through on what they know. Many children are highly motivated at the beginning of the school year, when the novelty of starting from scratch leads them to believe that they will do better than they did in the past. However, by about six weeks into the school year, the old problems emerge; children fall behind in their work and lose the motivation that activated them at the start of the school year.

When such patterns of disorganization and ineffectual task performance recur, it is time to institute interventions. The question then becomes, what sort of intervention to institute. Options include various forms of remediation, psychotherapy, or both. An essential part of the success of any intervention is the coordination of the activities of all those involved in the child's life. School teachers, tutors, therapists, and caregivers, must consistently follow through on an agreed-upon plan for the child to gain the full benefit of the intervention. The burden on the parents to be consistent is especially onerous, as they must be the major organizers of the child's life.

The goal of these interventions is to teach the child habits that become so routinized that the he or she follows them without thinking. The major compensation becomes the use of procedural memory to replace episodic memory in the performance of tasks. Procedural memory is the type of memory we have for the performance of such tasks as riding a bicycle, swimming, or playing the piano. We form a set of associations between a set of goals and a motor program that allows the performance of the task automatically and unconsciously. Such procedures can be taught for the performance of school-related activities, such as homework, and for life tasks, such as getting up and arriving at school on time. The child learns to follow patterns of behavior automatically, never deviating from them in the least, since deviation will result in disorganization. These patterns should be instituted in the child's home environment, as well as at school. They should be developed for all the routine tasks that most people take for granted.

A further goal of intervention is to acquaint the child with the

nature of his or her difficulties. This understanding can correct any misconceptions the child might have about the reasons for his or her behaviors. It can also provide tools to advocate for him-or herself at a later time.

Remediation. The overall strategy in remediation is to provide a structure that will scaffold the child's tasks. From this perspective, an executive function disorder may be understood as a deficit in the psychological structure necessary to initiate and undertake tasks in a logical sequential manner. This means that providing the child with an understanding of what must be done is insufficient to remedy the condition. What must occur is the acquisition of a set of action patterns that shape the way the child approaches a task. The action patterns must be broken down into steps that will lead to the successful completion of a task. Most of all, the child will actually rehearse in action each of these activities. Understanding the steps without actually undertaking them does not serve the purpose.

Teachers are quite accustomed to instructing a child on what to do, but few of them are in the position to follow through and make sure that the child follows the instructions. This requires a learning specialist and/ or the caregivers to supervise the interventions. Thus, giving a child a homework assignment notebook in which to write the homework is insufficient, since the child will not remember to look in the notebook when he or she gets home. Additionally, there is no assurance that the child will remember to take the notebook home or back to school.

Each strategy, therefore, must be accompanied by the appropriate set of actions that implement the steps embodied in the plan. The repetition of those steps, in the same sequence, until they become habitual will assure that the child has acquired a set of procedures to perform the task. It cannot be emphasized sufficiently that, depending on the complexity of the task, this process may take weeks, months or even years. Therefore, patience is required in mentoring the child, whose successes should be praised or even rewarded.

Psychotherapy. Children with EFD often have other difficulties with which they must cope. They may suffer from depression, or have ADHD or other learning disabilities. Psychotherapy is indicated for a child with an executive function disorder when the problems interfere with development. The child is in need of support and understanding, which may not be available in the context of his or her life.

One goal of psychotherapy is to address the misconceptions the child has acquired about the reason for his or her behaviors. These misconceptions are incorporated into the child's self-narrative. The self-narrative is the autobiographical statement we would give if asked to relate the events of our lives. In these autobiographical statements, we include themes that we believe have been major contributors to the organization of our lives. These themes have evolved out of event that have had special meanings to us. For example, the loss of a parent--through divorce or death--during childhood may become an important organizer in how we perceive others and how we relate to significant persons later in life. Children with an executive function disorder, as we have seen, have been repeatedly exposed to judgmental statements about their behaviors. These statement may lead the children to view themselves as they have been labeled. The negative valences carried by those labels may be incorporated as themes within their self-narratives. These themes become organizes of their experiences and of their views of themselves. The children build narratives that do not include an appreciation of the significance that neuropsychological deficit has had for their development. In part, this is due to the fact that those deficits are hidden or poorly understood. In place of an adequate understanding, the child has substituted explanations and attitudes of others to account for his or her behaviors. These misconceptions must be corrected, if the child is to be restored to a positive self-view. The process through which the restoration of the child's self-esteem is to occur is complex (Kohut, 1977). The child must experience being valued, and must relive within the relationship with the therapist (within the transference) some of the dysfunctional patterns that are symptomatic of the emotional and adjunctive deficits. While that is occurring, explanations and attitudes are examined. The child is given mare appropriate explanations based on the specific diagnosis of the disorder. The goal is for the child to feel strengthened, to feel a greater sense of worth, and be motivated to try harder to succeed.

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[1]Some sections of this paper are taken from the chapter on executive function in my book Learning Disorders and Disorders of the Self in Children and Adolescents. W. W. Norton, 2001. For further details on the issues discussed in this paper, readers should refer to the appropriate chapters in the book.

High-strung and strung-out:

Clinically relevant questions regarding adult ADHD and comorbid bipolar and substance abuse disorder

Jesse Viner, MD and Umee Davaé, DO

Attention Deficit Hyperactivity Disorder (ADHD) is characterized by a pattern of hyperactivity, forgetfulness, distractibility, impulsiveness and/or inattention, depending on the type of ADHD. Despite a symptom profile that affects critical executive functions, as well as, emotional and self-regulation, clinicians often question the long-term consequences of childhood and adolescent ADHD. Specifically, they question whether pediatric patients need only be supported through it until they grow out of it, of whether there are sequelae that also require treatment. Moreover, confusion exists as to the relationship between ADHD and disorders that commonly co-occur in emerging adults, such as bipolar disorder and substance abuse disorder. This paper reviews clinically relevant research regarding these issues.

For decades ADHD was limited to a diagnosis only in children and adolescents. Recent studies have established that ADHD also presents in adult populations. But even when diagnosed in adults, it is understood that onset of ADHD occurs during childhood (Biederman, 2005). Depending on the study, childhood prevalence of ADHD varies up to 12% Kent & Craddock, 2003; Tamam et al., 2008; Wingo & Ghaemi, 2007). Adult prevalence is estimated at 4 to 5% across studies (Fischer et al., 2007; Tamam et al., 2008; Sobanski et al., 2007; Wingo & Ghaemi, 2007); for example, 4.4% of 18 to 44 year-olds met criteria for ADHD in the National Comorbidity Study Replication (NCS-R; Kessler et al., 2006). From this, it can be estimated that up to 50% of children affected by ADHD retain the condition during their full adult years (Tamam et al., 2008).

Age-of-onset and developmental follow-back studies reveal that 75% of cases of emerging adult disorders represent cases that first onset in childhood or adolescence (Kessler et al., 2005; Kim-Cohen et al., 2003). This appears to be the case for ADHD as well. Weiss (1992) found that 70% of emerging adults had persistent ADHD symptoms. Despite the apparent continuity across developmental stages, only 11% of the NCS-R adults who met criteria for ADHD reported receiving any treatment (Kessler, Adler, Barkley, et al., 2006).

The long-term impact on quality-of-life from a diagnosis of adult ADHD is considerable. Most patients suffering with adult ADHD experience substantial functional impairments in their daily activities. Biederman and Faraone (2006) studied over 500 adults with ADHD, finding that they achieve fewer educational milestones beyond high school, are less likely to be employed full-time, and have significantly lower average household incomes than people without the disorder. They were also twice as likely to get arrested or divorced. And, in terms of health, they were 78% more likely to be addicted to tobacco which; in turn, has significant associated medical morbidity and mortality. Barkley (2005) found that untreated adults with ADHD were three times as likely to be unemployed and four times as likely to contract an STD. Given the breadth and carry-over of negative outcomes across adulthood, adequate diagnosis and treatment of adult ADHD is an important mental and public health issue.

Diagnosis of ADHD in emerging adulthood is challenging for a number of reasons. Adult ADHD does not symptomatically present in an identical manner to child and adolescent ADHD. Hyperactive symptoms tend to decrease with age (Nierenberg et al., 2005). As a result, adults with ADHD are less likely to present with externalizing symptoms (i.e., hyperactivity) which makes diagnosis more challenging (Karam et al., 2008) because observable behaviors are more noticeable. Second, diagnosis is complicated by the fact that adult ADHD is often comorbid with other disorders, such as major depressive disorder, generalized anxiety disorder, alcohol and/or substance abuse, bipolar disorder, and a variety of conduct or behavioral disorders. Therefore, many symptoms that indicate ADHD are often mistakenly accounted for by other psychiatric diagnoses and consequently not fully treated (Fischer et al., 2007; Kessler et al., 2006).

Diagnosis of ADHD is further challenged because its adult presentation is similar to the presentation of other disorders commonly diagnosed in emerging adulthood. For example, Klassen, Katzman, and Chokka (2009) describe the subtle differences in the clinical presentation of adult ADHD and bipolar disorder. They note how several symptoms ADHD and bipolar disorder overlap in the DSM-IV (Figure 1; Kent & Craddock, 2003; Wingo & Ghaemi, 2007). However, the one study (Milberger et al., 1995) that did assess whether the high rate of comorbidity was due to symptom overlap, concluded that the overlap in DSM-IV symptoms was not responsible for the high comorbidity between ADHD and bipolar disorder that has been reported in several studies.

Comparing commonly comorbid disorders such as adult ADHD and bipolar disorder is essential for improving differential diagnosis. According to Klassen, Katzman, and Chokka's review, comorbid adult ADHD/bipolar disorder is distinguished by early onset mood disorder, a greater number of mood disorder episodes, and a more severe course of illness. Other factors predisposing comorbidity include lower levels of functioning, fewer partnering attachments, more suicide attempts, and increased legal problems. Thus recognition and aggressive treatment of comorbid ADHD and bipolar disorder in adulthood is essential in these highly affected cases.

Adult ADHD is also commonly comorbid with substance abuse disorder. Moreover, compared to either condition alone, this specific comorbidity indicates increased risk for other disorders as well (Biederman et al., 2005; Wilens et al., 2005). Wilens and colleagues (1997) reported that the onset of substance abuse in individuals with ADHD occurs significantly earlier than control substance abusers. Also, adults with ADHD have longer courses of substance abuse compared to the course of substance abuse in adults who do not have ADHD.

Comorbidities make ADHD not only more difficult to diagnose, but also more complicated to apper. Clinicians no longer question the validity and effectiveness of using stimulants in both pediatric and adult patients to treat Adult ADHD. Based on the current evidence, withholding stimulants to treat ADHD would appear to be a decision based on ideology over data that determines the effectiveness of this treatment. However, this accepted standard practice requires further consideration when substance abuse or bipolar disorder is also

present. With regard to co-occurring substance abuse, current evidence indicates that treatment of ADHD with stimulants is associated with reduced risk of substance abuse (Biederman, 2003). Stimulant treatment also appears to be indicated for comorbid adult ADHD/ bipolar disorder. After the stabilization of bipolar disorder, the addition of stimulants further improves the clinical presentation by reducing ADHD symptoms without destabilizing mood (Scheffer et al., 2006).

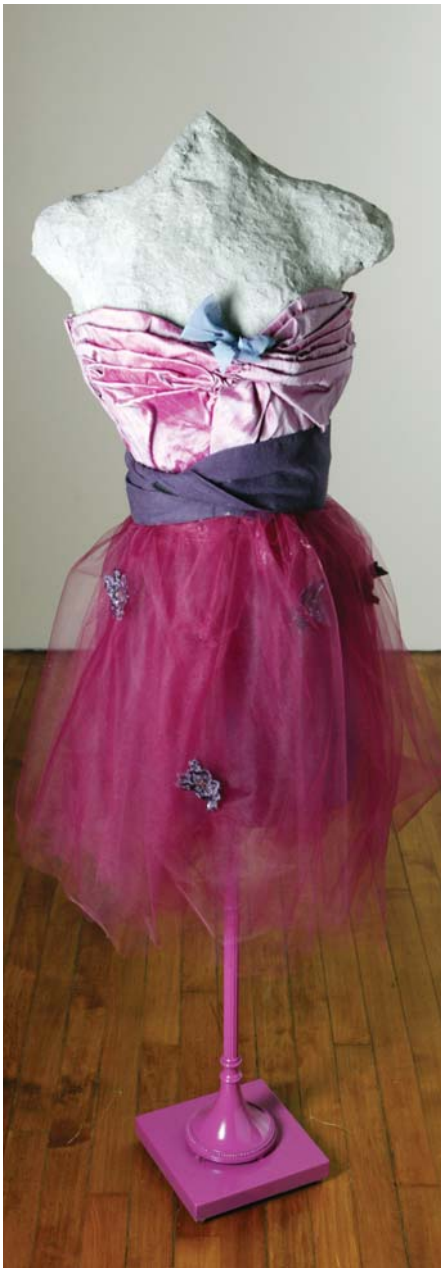
The clinical dilemma of using medications in substance-abusing adolescents and adults with attention-deficit/hyperactivity disorder remains. What does the literature tell us? Reports indicate that the initial interventions for treating comorbid ADHD/substance abuse disorder must first focus efforts on detoxification; the remission of the substance abuse is targeted next. Following these steps, psychiatric disorder should be addressed; and subsequently, the addition of stimulants for treating ADHD. Planning for an enduring outcome, it is also essential to include psychotherapy and support to facilitate the development of delayed or impaired executive skill functioning.

In conclusion, this paper reviewed current issues relevant to the diagnosis and treatment of ADHD in emerging adulthood. We attempted to emphasize the significance of diagnosing ADHD during these critical years because it has the potential to persist from youth into adulthood without notice. Lack of recognition of this disorder in emerging adulthood will permit functional impairments to persist and reduce quality of life in emerging and later adulthood. ADHD may be difficult to differentially diagnose from bipolar disorder; and it may be over-shadowed when substance abuse is also present. But, treatment of ADHD can reduce the risk of substance abuse and other psychiatric comorbidities. In terms of treatment, it appears unwarranted to withhold stimulants for the treatment of ADHD. And therapeutic support to reduce associated impairments is also recommended to achieve long-term positive outcomes.

Figure 1.

Overlapping and non-overlapping symptoms in ADHD and bipolar disorder. Adapted with permission from Kent & Craddock (2003) and Wingo & Ghaemi (2007).

ADHD	*Bipolar disorder*
Overlapping symptoms	
1. Talks excessively	1. More talkative than usual
2. Easily distracted/jumps from one activity to the next	2. Distractibility or constant changes in activity or plans.
3. Difficulty sustaining attention	
4. Fails to give close attention to details/makes careless mistakes.	
5. Fidgets	3. Increased activity or physical restlessness
6. Difficulty remaining seated	
7. Runs or climbs about inappropriately	
8. Difficulty engaging in leisure activities quietly	
9. On the go as if driven by a motor	
10. Interrupts or butts in uninvited	4. Loss of normal social inhibitions
11. Blurts out answers before questions have been completed	
12. Difficulty awaiting turns	
Non-overlapping symptoms	
13. Forgetful in daily activities	5. Inflated self-esteem/grandiosity
14. Difficulty organizing tasks and activities	6. Increase in goal-directed activity
15. Loses things	7. Flight of ideas
16. Avoids sustained mental effort	8. Decreased need for sleep
17. Does not seem to listen when spoken to directly	9. Excessive involvement in pleasurable activities with disregard for potential adverse consequences.
18. Difficulty following through on instructions/fails to finish work	



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Reflections from the front lines:
A career counselor's view of emerging adulthood

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Contemporary emerging adults (ages 18 to 29) are unlikely to have a rock-solid answer when asked: What do you want to be when you grow up? What are you going to do when you graduate? Unlike parents who tended to make early pledges to careers, the delayed commitments of today's twentysomethings worry parents. Parents often interpret their adult children's lack of career certainty as floundering. Rather, emerging adults' common response to queries about their future careers—that's what I am trying to figure out!—reflects the exploratory and transitory nature of career development in the new millennium. Emerging adulthood, between adolescence and young adulthood, is not a stage of linear development. Emerging adults move forward and backward exploring different choices and possibilities that they have for establishing careers.

However normative, all of the exploring is stressful for some; not knowing what one is going to do to support oneself can be overwhelming for others. Parents may feel helpless in trying to guide their adult children through unchartered experiences. Moreover, recentering (Tanner, 2006), the primary developmental task of the age period, is about down-shifting parent influence, and accelerating self-directedness.

The extended school-to-work transition has resulted in a need for services to help traverse these years. Career counselors are increasingly called upon to provide these resources. Likewise, mental health professionals may need to provide career development support when mental health problems interfere with career development, or because career launching is overwhelming or unsuccessful. The challenge is providing resources that fit emerging adults distinct needs.

Currently, we lack a specialized framework for facilitating career development with this unique age group. But there is much to be gained from combining contemporary theory on emerging adult development with best practices in career counseling. An integrated model is potentially useful to a wide-array of helping professionals.

Career counseling the emerging adult

A classic career-counseling model can be modified for work with emerging adult clients. Traditionally, the first-step in career counseling is use of the Vocational Intake Interview (VII) to establish rapport and gain information about a client's goals. The VII commonly includes an educational and work history. This also provides an opportunity to assess a client's self-understanding of strengths and deficits; gain a sense of his or her occupational knowledge; and evaluate psychological issues that may interfere with career development. This foundational information is then used to create a plan for the work the client and career counselor will undertake.

For example, a first meeting with Rebecca, age 24, revealed that …she had a "passion for teaching." She was understandably unhappy with her decision to pursue a parent-approved path into business. In college, she majored in business because she was "good in math" and "wanted to make money." After a frustrating two years in the business world, she acknowledged what she already knew—she wasn't interested in business.

For all, career decisions often have multiple layers and meanings. An integrated developmental-career approach will encourage a career counselor to use the developmental lens to look for meaning in emerging adults' reactions to career-related experiences. In Rebecca's case, we learn that she has a passion for a career that is unrelated to the strengths and values she had in adolescence—she was good in math and she wanted to make money, respectively. Pursuing business was a valid goal; however, it is important to recognize that adolescent-era goals are often temporary and often must be "let go." In Rebecca's case, the stumbling block testing her was more psychological than practical.

Rebecca shared her frustration about her career with her parents and told them that she wanted to reroute her career into education. Her parents were not supportive. They viewed her interest in teaching as financially unrealistic and naively idealistic. They encouraged her to continue building a career in the business world.

A change in her career goals led to conflicted feelings, she wanted to pursue teaching but she longed for her parents' approval. Counselors can help emerging adults by encouraging them to respectfully evaluate rather than wholeheartedly accept or reject parental advice and guidance. It is also important to help them avoid unwanted consequences of taking a defensive position because this can lead emerging adults to get stuck using dualistic thinking. Career choices are not like true-false questions on an exam; there can be a number of viable options.

Respecting the fact that emerging adults are in the process of separating and individuating from their parents is also an important aspect of helping this age group. Rejecting parental opinion may feel risky. And, in fact, it may be chancy in that there is real potential for parents to withdraw support (i.e., emotional or financial) when their authority is challenged. In Rebecca's case, working with her on her career development issues involved grappling with what it meant for her to take responsibility for her own life choices and direction.

Helping professionals can support this process by encouraging "ownership" over the career planning process. When the emerging adult client asks, as they so often, do "What's out there?" the key is to teach them how to figure it out for themselves. Many emerging adults have research abilities that were developed in the course of their education but they may not know how to apply those research skills in the career decision-making arena. Working with the emerging adult to develop a research plan that draws on both secondary published sources and primary research (usually in the form of informational interviewing) will help them access valuable information. For example, Rebecca, after researching and discovering that teaching salaries were comparable to many business professions, grew more invested in making a career change. Teaching had lots of enticements: a nine-month work schedule (with summers off) as well as the option to supplement her income with coaching or extracurricular activities. She knew she'd love the work and it fit with her long-term goal to balance career and family.

Acquiring information about career options and jobs gives emerging adults immediate access to data and information. This step is essential for designing a career development plan, but also useful to them when they are challenged to objectively evaluate advice. In Rebecca's case, as she made progress in her research, she began to be less focused on her parents' reactivity to her leaving a pathway in which they had invested. Moving forward, she integrated her career goals with goals in other life domains that are important

to her—family. This case study reveals the dynamic underlying process involved in career counseling emerging adults. Career development is but one of a number of demands and challenges facing an emerging adult.

Rebecca's case is an example of an emerging adult client who was relatively far along in the career "identity" process. Other emerging adult clients may be less certain of their interests, aware of their skills, or attuned to opportunities. Working with the these clients, career counselors can turn to a number of classic resources useful with older clients who are more likely to be exploring career alternatives.

A career that promises good "fit" is one that is consonant with one's interests, abilities, and personality. Emerging adults are actively searching for an answer to the formidable question, who am I? what do I like? Some emerging adults may be actively working on these issues, others may be stalled-out in the process. The Strong Interest Inventory (SII) can provide professionals with an understanding of emerging adults' career interests in two ways. First, the SII can identify psychological obstacles and can identify potential points of intervention. For example, emerging adults characterized by flat profiles, do not have any compelling occupational interests. This signals the counselor to understand the disengagement. Other emerging adults are identified by circumscribed profiles; this indicates that an emerging adult's interest may not translate into a career choice, but rather a hobby. Working with these emerging adults, counselors can help them determine how strong interests in music, art, drama, and writing may relate to viable career options.

Even when there is extreme interest in a career, abilities that translate into doing well in that career will play a large role in determining success. Emerging adults may or may not be accurate in their self-understanding of their abilities. After years of being told what they are good at (i.e., by parents, teachers, coaches, peers), emerging adults may need help identifying strengths that may not have been praised or highly regarded before emerging adulthood. Rebecca constructed her career objectives both on knowledge about the field and knowledge about herself:

While Rebecca was "good in math" she also had very good communication and relationship skills. Her math skills were useful in her business career but she did not want them to be the central focus of her daily activities. A driving force behind her passion for teaching was her passion for communicating.

Aptitude testing provides objective information about strengths and also weaknesses. Utilizing the developmental approach to deliver results to emerging adult clients is crucial. It is essential to stress the plasticity of the age period, to acknowledge that emerging adulthood is a window of opportunity for gaining new skills. Therefore, aptitude tests provide useful, but not definitive evaluation. It is also helpful to include a discussion of "motivated skills" because it places the emphasis on skills that an individual finds enjoyable and is motivated to develop.

Last, emerging adulthood is an ideal time for choosing a career that one will like. Because people tend to like things that are consistent with their natural dispositions, personality assessments can provide feedback about the type of jobs that are likely to feel right. The Myers-Briggs Type Inventory (MBTI), a personality test grounded in Jungian typology, categorizes personality along four core dimensions: extraversion-Introversion, sensing-intuition, thinking-feeling, judging-perceiving. In sessions with the emerging adult, this information can be translated into meaningful discussions about how personality type influences vocational choices. In turn, this can help emerging adults select fulfilling careers.

Conclusion

Emerging adults face a unique set of developmental and practical challenges as they struggle with what it means to become adult. Career decision-making is central to a successful outcome because of its potential to promote psychological self-sufficiency and well-being. Emerging adults are asking big questions: "What do I want to be when I grow up?" "What am I good at?". Clearly there is no one right answer to such monumental life questions. There is, however, an incremental process of exploration and choice-making that can be used by professionals in a variety of disciplines that will enable emerging adults to make satisfying life decisions. By fostering collaborative relationships with emerging adults, professionals can model a different kind of authority relationship in which emerging adults play an increasingly independent role. Rather than assume a mantle of authority, professionals need to view emerging adults as the experts in their own lives. Our goal is to help them develop that expertise.

Recommended resources:

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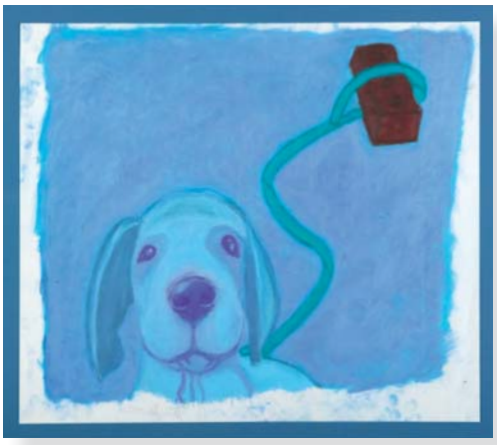

Executive Functioning and the Emerging Adult:

The Dissonance Between Intelligence and Competence

Paule Verdier MDT, OT/L

Emerging adulthood is a time of cognitive, social, emotional, and behavioral transformation. The brain is more neuroplastic than any other time of life after the first three years and executive functioning and self-organizational skills are "coming online" to set the trajectory for the rest of the emerging adult's life (Giedd, 2008; Schore, 1994). The brain has overproduced neurons and is now selectively eliminating that which can be 'weeded out,' to assist in greater connectivity and integration of disparate brain functions (Giedd, 2008). During the emerging adult years, the myelin lining of the neurons is building and consolidating (Hooper et al., 2004). Development of the orbito-frontal cortex is solidifying, leading to better impulse control and judgment (Galvan et al., 2006). Self-esteem and life competence are also emerging during this time, making the young adult vulnerable to inflation and deflation of self-esteem. Vulnerable self-esteem can lead to avoidance in two ways: 1) avoidance of facing the reality of their competencies and incompetencies, and 2) avoidance of learning a skill. Either way, the emerging adult can feel ashamed and like a failure. This only perpetuates the avoidance. We could find no research study examining the current norms of independent life functioning in this age group, but in our experience, such include skills such as using kitchen appliances, self-care hygiene, regulating sleep, managing finances, maintaining safety, and executive functioning.

Executive functions are self-regulating and control functions that direct and organize behavior. These include planning, decision making, directed goal selection, self-inhibiting, self-monitoring, self-evaluating, flexible problem-solving, initiation, and self-awareness (Zoltan, 1996). For example, self-inhibiting describes the ability to cease doing something, like deciding one is finished with playing a video game and turning it off. Initiation represents the ability to begin a task, which can be very difficult when negative emotions dysregulate functioning. An example of this is how difficult it is for an emerging adult to take a shower in the morning, to just begin that process, when feeling very depressed or anxious. Managing emotions is an essential capacity to develop at this time. This includes tolerating distress, in the moment, and modulating emotions for task accomplishment. Dysregulated emotions negatively affect the ability to function. A depressed brain cannot engage, connect, or sprout new learning circuits (Leuchter et al., 2002). Executive functions rely heavily on frontal lobe circuitry that is relatively late in maturing (Giedd, 2008).

Imagine how challenging a typical day is in an emerging adult's life. They have to be able to get up in time to do their morning routine, eat, and get to school, work, or volunteering, either by car, foot, or public transportation. They have to be able to run errands like grocery shop within a budget, mail bills, get to doctor's appointments, etc. At home, they have to manage their apartment, keeping it clean and maintained. They need to prepare their meals, find social activities to fill their time, do laundry, and get to bed at a reasonable hour. They are learning to do these things mostly on their own when, in the past, others have done the tasks for them or assisted them.

For those emerging adults who are not competent in these life skills, their self-image and self-esteem suffer tremendously. They feel debilitating shame and self-recrimination. They try to hide their incompetence, not asking for help, soon they are overwhelmed with dirty laundry, broken appliances, messy refrigerators, and unpaid bills. For example, one young man is fully capable of showering, dressing himself, and making it to appointments, but he has never experienced independent living. He has not learned how to do laundry, budget his money, or set up utilities in a new apartment. He feels great shame and self-contempt, as if he's "supposed to know how" to do these things, even though he has not had a chance to learn. Instead of reaching out to those around him who can show him the way, he denies his needs out of humiliation and self-condemnation. Instead of asking for assistance, he laughs at the thought, stating he doesn't need the help. At these moments, he feels utterly alone in the world, unable to request the help he needs because he thinks he should already know how to do everything. Even when those around him offer support, he brushes it off, later resenting that no one is there to support him. The idea of successfully living an independent life seems hopeless.

To a parent, teacher, or boss, what looks like laziness or irresponsibility may actually be executive functioning deficits, which are neurological mechanisms tied to specific brain functions key to development at this age. The parent sees the son who isn't showering and is distressed, concludes that he is lazy or doesn't care about his appearance, when it is really a deficit in the executive function of "initiation." A teacher observes a student who forgets to turn in homework all the time and concludes that student is irresponsible when, really, it is a deficit in "planning." A boss sees an employee who gets stuck on simple tasks as "dumb" when, in reality, it is a deficit in "problem-solving."

High IQ/Executive Functioning Disability

Just because an adult has a high IQ doesn't mean that they are capable of living on their own. We have seen many examples of emerging adults who are well above average in intelligence, but lack executive functioning capabilities. The following domains describe areas of executive functioning and examples of how the emerging adults with high IQs at Yellowbrick perform on a well-established assessment tool for independent life skills functioning, the Performance-Based Assessment of Self-Care Skills (PASS).

The PASS offers the opportunity to observe patients in "real time" for two hours as they perform everyday tasks, thereby, providing the assessor with a wealth of information on the young person's life experiences and difficulties with executive functioning. At Yellowbrick, we use the PASS because of the large discrepancy we have observed between IQ and life functioning. We have also developed our own measure to evaluate these deficiencies in more specific activities, such as using the washer and dryer, self-care and hygiene, and self-organizational patterning.

PASS was created by two occupational therapists it is a criterion-referenced assessment with two versions offered for in-home and in the clinic. Consisting of 26 tasks, although at Yellowbrick, only 17 are utilized as the remaining 9 are not appropriate for this population.

Items are rated on a predefined four-point ordinal scale. The scoring system yields three types of scores for each subtask – task independence, task safety, and task adequacy outcome. There are nine types of assistance provided, where the independence data

comes from, they are: verbal supportive, verbal non-directive, verbal directive, gesture, task object or environmental rearrangement, demonstration, physical guidance, physical support, and total assist. Safety data is compiled from unsafe observations from the examiner. Task performance outcomes for a subtask that are of unacceptable quality are checked in the quality column, whereas inefficiency in the task process is checked in the process column. The scores are then summarized from the raw data (Rogers & Holm, 1989).

The following table lists the different areas of executive functioning and the subtasks of the PASS that assist in identifying difficulties in that area.

Self-monitoring and awareness represent the ability to be aware of one's own limitations and recognize deficits and problems. For example, one adult had great difficulty when to fixing a flashlight that wasn't working properly. While attempting to take the flashlight apart

Self-monitoring & awareness	Planning & organization	Problem-Solving	Mental flexibility & abstraction	Generalization & transfer
Flashlight, Home safety, Cooking, Toenail trimming, Making a bed, Mailing bills, Shopping	Managing medications, Toenail trimming, Cooking, Using the phonebook	Radio broadcast & newspaper article, Flashlight, Cooking, Cleaning, Paying bills, Shopping	Using the phonebook, Home safety	Radio broadcast & newspaper article

she cut her thumb removing the light bulb. Another self monitoring task is to identify and correct dangerous situations created in the kitchen. Several did not notice a pair of scissors sticking out of a drawer, point up, the assessor was forced to stop people from walking into the scissors.

The steps needed to achieve and make choices reside in the executive function of planning and organization. Many of the adults exhibit the inability to follow verbal or written directions precisely in several of the subtasks. One required several prompts to follow the directions written on the medication bottles when distributing them.

Problem-solving skills are invaluable and tend to be deficient or lacking in the emerging adult population. In order to problem solve, one must attend to the problem, devise a plan, initiate activity, access information, and integrate feedback from the attempt to solve the problem. When given information through the radio announcement on the PASS, many young adults appear to not understand the underlying subject matter and do not provide a reasonable solution to the problem. Several have replaced both the light bulb and the batteries in the flashlight instead of determining which was faulty. Even after reading the directions, one emerging adult was confused by the directions on a soup can and required physical assistance to open the can. When he did not find a large bowl in the only cabinet he opened, one young man decided to use a plastic pitcher to hold muffin mix. When asked to clean the counters of the kitchen, one chose to use dish soap to clean up spills instead of a traditional cleanser.

"Mental flexibility" and "abstraction" are the abilities to think beyond concrete thought. One young woman had some difficulty finding the number to the pharmacy in the yellow pages, looking for the listing for Walgreens under W instead of P. "Generalization and Transfer" describe the ability to transfer new learning and use new information in a novel situation. There are several tasks that offer the emerging adults an opportunity to use these executive functions. When given an article to read, with the instructions that she reiterate the theme of the article and indicate something she would do differently now that she has read that information, one young woman did not understand the instructions and, instead, wanted to rewrite the article to be more precise in it's information.

CASE EXAMPLES:

BRILLIANT BOY WHO CAN'T FUNCTION WHEN EMOTIONALLY DYSREGULATED

Charles had completed his degree before entering treatment. He is in the highest one percentile in Verbal and Performance scores on IQ testing. Yet, after college, Charles fell apart, unable to get out of bed and go to work. The PASS provided several opportunities for the assessor to determine in detail the nature of his difficulties in executive functioning. During the assessment his awareness decreased, to the point that physical gesturing had to be used to point out a home storage problem and that he had been given too much change during the shopping exercise. His problem-solving skills proved to be limited, as he chose to mail bills using two 27-cent stamps instead of one 42-cent stamp.

He was unable to follow the verbal directions given to him regarding the radio broadcast and newspaper article subtasks, instead adding information he had previously learned. Rather than checking to see if the batteries were dead in the flashlight, Charles chose to take the entire flashlight apart to examine the bulb and determine whether it was in working order before attending to the batteries.

Throughout the assessment, Charles made comments on the tasks being "out-dated." Even when he made only a slight mistake, he had a hard time admitting to being wrong, instead trying to blame someone or something else for the problem. He was extremely confident throughout the assessment, to the point of being patronizing. His inability to be open to making mistakes stops him from seeking out help in learning life skills.

THE EFFECTS OF ATTENTION DEFICIT DISORDER ON A BRIGHT YOUNG WOMAN

Angie is a very bright young woman with severe Attention Deficit Disorder (ADD). Prior to Yellowbrick Angie had been in a series of treatment centers for substance abuse and mood disorder. Her ADD made performance on the PASS very difficult, many of her executive functions were impaired, leading to dangerous situations. Young adults with ADD can begin a task, but are not capable of seeing it through to the end, and are often prone to making a multitude of mistakes. Angie had difficulty attending to the radio broadcast, she was unable to identify the underlying subject matter, and was not able to provide a reasonable solution to the problem. Home tasks were helpful in identifying Angie's difficulties.

During the cooking activities, Angie was haphazard, unable to pay attention to detail, and created several unsafe situations, and incured a slight burn to her hand. She almost walked into a pair of scissors that were poking out of a drawer. She seemed unaware of messes on countertops and did not clean them when instructed to clean up after herself.

In emerging adulthood when independent living skills are developed, it is alarming how many highly intelligent young adults experiencing severe mood dysregulation do not know how to do simple tasks such as turning on a gas oven, know whether or not canned goods should be refrigerated, or how to write a check. They may have been able to do these things in the past, but experiencing extreme emotions can cause severe dysregulation of behavior. The effect on self-esteem is severe, and many young people state they felt ashamed of not being knowledgeable or experienced in some life tasks. This can be true even if they complete them correctly. The effect on those around them is also significant. Parents, in particular, may become very distressed and feel like the future for their child is hopeless. Whether it is lack of experience, poor executive functioning, or ADD, these emerging adults are unable to perform in the basic areas of life skills. When their self-esteem is adversely affected, they may not reach out for help, therefore never learning adequately. What this means for the life trajectory for emerging adults is that they will not be prepared to live independently without a greater appreciation and attention to building these skills.

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LITERATURE REVIEW:

Building a foundation of knowledge of emerging adult mental health

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This LITERATURE REVIEW is the first of what is to be a repeated feature of Yellowbrick Journal. Dr. Jesse Viner, Founder and Executive Medical Director of Yellowbrick, had the vision to include in each issue an overview of important contributions to our growing understanding of mental health and adaptation in emerging adulthood. It is my good fortune to have the opportunity to provide an annotated bibliography of this literature. Scholarship on emerging adult mental health and development is accumulating rapidly. Yet, relevant work is published using a wide-range of terms, coming from disparate points-of-view. The goal of LITERATURE REVIEW is to bring together key contributions, and to integrate, interpret, and organize what we are learning. For each LITERATURE REVIEW, approximately ten resources will be selected and reviewed with a focus on the contributions the work makes to our understanding of emerging adult mental health and development.

The works for this first LITERATURE REVIEW reflect our foundation of knowledge about emerging adult mental health and development. In the future, when we look back on this era of scholarship, I expect that we will view a number of these works as "classics." But for now, they are reviewed here to help us build a collective, shared understanding of emerging adults, provide insight into their needs, and focus our efforts on facilitating successful and healthy transitions to adulthood.

Cohen, P., Kasen, S., Chen, H., Hartmark, C., & Gordon, K. (2003).

Variations in patterns of developmental transitions in the emerging adulthood period. Development & Psychopathology, 39(4), 657-699.

Dr. Cohen and colleagues utilize the emerging adult framework to investigate the autonomy and individuation of a community sample from ages 17 to 27. Modeling pathways to financial independence, romantic commitments, residential independence (not living with parents), and family formation, this study reveals significant variation in progress toward these markers of adulthood. In the 10 years between late adolescence and the late twenties, we see considerable change; aggregate movement toward independence characterizes the overarching trend while ebbs and flows, progressions and regressions mark the diversity of ways young people move toward adult independence. No significant differences in pathways are attributed to education; some effects of SES are noted. In sum, this study demonstrates that there is no single, normative or expected route to adulthood and supports the theory of emerging adulthood showing heterogeneity in pathways to self-sufficiency.

Grant, J. E., & Potenza, M. N. (Eds.) (2009).

Young adult mental health. NY, NY: Oxford University Press.

This is the first and currently the only text focusing specifically on mental health between the years 18 to 29. The text is comprehensive in scope, offering a one-stop reference on specific psychiatric disorders, factors that influence emerging adult mental health, and reviews of emerging adult functioning when psychiatric disorder occurs. Each of the 26 chapters provides a thorough overview on the selected topic. In addition, each chapter wraps-up with "Key Points" and "Practice Guidelines" which makes the content of these chapters immediately useful.

In some chapters, the focus fails to fall on the 18 to 29 year-old age period. This is, in some part, due to the lack of research on and treatment of 18 to 29 year-olds, specifically. However, rather than acknowledge the lack of information specific to this age group, some reviews focus on what we know about adolescent mental health with the assumption that symptoms, disorders, or issues manifest the same in emerging adulthood. Keeping this last point in mind, much of Young Adult Mental Health can fill a gap as a handbook for clinical work with this "in-between" age group.

National Comorbidity Survey Replication (NCS-R) studies

Kessler, R.C., Berglund, P.A., Demler, O., Jin, R., Merikangas, K.R., Walters, E.E. (2005).

Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). Archives of General Psychiatry, 62(6), 593-602. PubMed Abstract, Lifetime prevalence of DSM-IV disorders by sex and cohort Table 1

Kessler, R.C., Chiu, W.T., Demler, O., Merikangas, K. R., Walters, E.E. (2005).

Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). Archives of General Psychiatry, 62(6), 617-627. PubMed Abstract, Erratum, 12 month prevalence of DSM-IV disorders by sex and cohort Table 2

Green, J.G., McLaughlin, K.A., Berglund, P.A., Gruber, M.J., Sampson, N.A., Zaslavsky, A.M., Kessler, R.C. (2010).

Childhood adversities and adult psychopathology in the National Comorbidity Survey Replication (NCS-R) I: Associations with first onset of DSM-IV disorders. Archives of General Psychiatry, 67(2), 113-123.

McLaughlin, K.A., Green, J.G., Gruber, M.J., Sampson, N.A., Zaslavsky, A.M., Kessler, R.C. (2010).

Childhood adversities and adult psychopathology in the National Comorbidity Survey Replication (NCS-R) II: Associations with persistence of DSM-IV disorders. Archives of General Psychiatry, 67(2), 124-132.

McLaughlin, K.A., Green, J.G., Gruber, M.J., Sampson, N.A., Zaslavsky, A.M., Kessler, R.C. (2010).

Childhood adversities and adult psychopathology in the National Comorbidity Survey Replication (NCS-R) III: Associations with severity of DSM-IV disorders. Psychological Medicine. doi:10.1017/S0033291709992121

The National Comorbidity Survey Replication provides national estimates of the prevalence, onset, persistence, and treatment of psychiatric disorders in the U.S. adult population. This nationally-representative survey was conducted between 2001 and 2003 yielding the first published results in 2003 (http://www.hcp.med.harvard.edu/ncs/publications.php).

The 2005 papers provide the most recent estimates of 12-month and lifetime psychiatric disorder. Neither paper focuses on the emerging adult age period exclusively, but data provide the opportunity to compare data for 18 to 29 year-olds with data for older adult age groups. What we can learn from these data and reports is that 12-month prevalence is highest in emerging adulthood, 75% of episodes onset before age 24, there is significant failure and delay in treatment of these disorders, lifetime prevalence approaches 50% for the 18 to 29 year-old age group, and anxiety, then substance, and mood disorders are most common during this critical age period.

Three 2010 reports detail associations between childhood adversity and features of adult psychiatric disorders. Given that the majority of psychiatric disorders onset in childhood and adolescence, are un- or undertreated, spillover into adulthood, and clearly undermine functioning in emerging adulthood, the issue of continuity and persistence of disorder across the transition to adulthood is a significant concern. These studies focused on the potential for childhood family adversity to explain \onset, persistence, and functional impairment attributable to childhood family risks.

Childhood adversities involving maladaptive family functioning (parental mental illness, substance use disorder, criminal activity, family violence, physical and sexual abuse), but not other childhood adversities, were the strongest, most significant predictors of onset and persistence of psychiatric disorder, respectively. Likewise, childhood adversities related to family (but not other childhood adversities) positively and significantly predicted impairments in adult role functioning. All together, these studies underscore the strong linkages between early family risk exposure and psychopathology that persists into adulthood.

Schilling, E. A., Aseltine, R. H., & Gore, S. (2008).

The impact of cumulative childhood adversity on young adult mental health: Measures, models, and interpretations. Social Science & Medicine, 66(5), 1140-1151.

The 2009-2010 NCS-R studies linking childhood adversities to outcomes in adulthood provide us with a foundation of knowledge about the potential of family risks to lay a pathway to poor adult mental health. The NCS-R studies do not focus exclusively on emerging adulthood. Schilling and colleagues' (2010) study does focus on emerging adults two years after high-school graduation, followed as part of a community sample. Specifically, childhood adversities in both number and severity exacerbated risk for psychiatric disorder and impaired functioning in emerging adulthood. It is important to interpret results in the context of effects of adversity on proximal emerging adult adjustment, only 2 years after high school graduation. Youth-era adversities may still have a direct effect on emerging adults, e.g., family conflict if the emerging adult lives in the parental home. How emerging-adult era experience can mediate links between childhood adversity and psychopathology is not considered in this study.

Schulenberg, J. E., Sameroff, A. J., & Cicchetti, D. (2004).

The transition to adulthood as a critical juncture in the course of psychopathology and mental health. Development & Psychopathology, 16(4), 799-806.

This editorial provides a framework for thinking about the unique contributions that emerging adult-era experiences have on mental health trajectories. The lead author, Dr. Schulenberg is a Co-Principal Investigator of the Monitoring the Future Study (MTF; http://monitoringthefuture.org/) a survey study of high school graduates who are followed for a number of years after graduation. Based on his empirical studies with MTF data, his work has demonstrated normative increases in well-being and decreases in problem behaviors after adolescence into emerging adulthood. Based on this research and a review of the literature, Schulenberg and colleagues offer this editorial to draw attention to the lack of correspondence between youth-era and adult-era problems. The potential for emerging adult experiences to have a positive, transformative effect on pathways of adaptation is a salient issue to raise in the context of studies that show strong continuity in psychopathology across the transition to adulthood.

Sacker, A., & Cable, N. (2010).

Transitions to adulthood and psychological distress in young adults born 12 years apart: Constraints on and resources for development. Psychological Medicine, 40, 301-313.

Independent of the effect of mental health problems, this study looks at the influence of timing of entries into adult roles can have on emerging adults' psychological distress. Regardless of how normative delayed transitions to adult roles have become in contemporary cohorts of emerging adults, the question remains whether delayed transitions have an impact on adjustment.

Findings from this study compares associations between timing of transitions and psychological distress in two British cohorts, one born in 1958 (ages 18 to 29 from 1976 to 1987) and one born in 1970 (ages 18 to 29 from 1988 to 1999). Findings revealed that, for both groups, earlier transitions into adult roles and failure to commit to adult roles were both associated with psychological distress. There appears to be a positive effect of "on time" transitions on mental health. In addition, for those who are at-risk for early entry into adult roles (more socioeconomically disadvantaged backgrounds predict this), education helps delay entry into roles and is therefore "protective" against early transitions. These findings support the contention that emerging adulthood has the potential to be a window of opportunity for individuals to get on pathways predicting better mental health than their pre-adult backgrounds would forecast.

Author Bios

Umee A. Davaé, D.O.

Dr. Umee Davaé has grown from a unique, diverse background that has molded her outlook and career experience. Dr. Davaé was born in Kenya, grew up in Belize and England then moved with her family to Miami in the mid-1990s.

After graduating with a bachelor's degree in biology with a minor in computer science, Dr. Davaé worked for 3 years in the IT field before completing medical school at Nova Southeastern University College of Medicine in Ft. Lauderdale, Florida.

Dr. Davaé has attended psychiatry residency at Chicago Medical School and has earned several honors and awards during residency, including serving as the Chief Resident and receiving the department's Marc Fahami award given annually to a senior resident for demonstrating a passion for the field of psychiatry and care of psychiatric patients. Dr. Davaé was recently inducted into the Alpha Omega Alpha medical honor society by students at Chicago Medical School. Dr. Davaé has research interests in mood, anxiety and substance related disorders.

In 2007, Dr. Davaé was awarded the nationally competitive American Psychiatric Association's Psychiatric Leadership Fellowship which offers leadership, advocacy and team-building opportunities within the APA; it has enabled Dr Davaé to visit Capitol Hill advocating for various mental health issues.

Arlene S. Hirsch, M.A., LCPC

Arlene Hirsch is a recognized expert in the field of career psychology. A licensed clinical, professional counselor, Arlene specializes in individual career counseling and psychotherapy, outplacement consulting, job search coaching, and resume preparation. She often coordinates her services with diverse healthcare and human resources professionals. In 1983 she founded Arlene S. Hirsch & Associates, a Chicago-based career and psychological counseling firm and is the author of four best-selling career books: Job Search and Career Checklists (2005), How To Be Happy At Work: A Practical Guide to Career Satisfaction, Love Your Work and Success Will Follow, and The Wall Street Journal Premier Guide to Interviewing. She is also a regular contributor to Career Journal, a Wall Street Journal internet publication. Arlene has taught career counseling to graduate students at Northwestern University and management courses in the executive MBA program at Lake Forest Graduate School of Management. She also consults to corporate, academic, and professional organizations on workplace matters, organizational development, and leadership development. www.arlenehirsch.com

Joseph Palombo, M.A., LCSW

Joseph Palombo is a licensed clinical social worker. He received a master's degree (philosophy) from Yale University and a master's degree in social work from the University of Chicago, School of Social Service Administration. Mr. Palombo specializes in the assessment and treatment of children, adolescents and adults with learning disabilities. Additionally, Mr. Palombo is the founding dean of the Institute for Clinical Social Work in Chicago, and is on the faculty of the Child and Adolescent Psychotherapy Program at the Institute for Psychoanalysis in Chicago. At the Rush Neurobehavioral Center, Rush-Presbyterian-St. Luke's Medical Center, Department of Pediatrics, he serves as consultant to the staff and provides in-service training. He is on the Board of Trustees of the Accreditation Council for Psychoanalytic Education, Inc., and was the Co-Chair of the committee on Child and Adolescent Mental Health Disorders of the Psychodynamic Diagnostic Task Force of the Psychodynamic Diagnostic Manual (PDM). www.josephpalombo.com

Jennifer L. Tanner, Ph.D.

Dr. Jennifer Tanner received her doctorate in Human Development and Family Studies from The Pennsylvania State University. Dr. Tanner is an applied developmental psychologist whose work focuses on developmental and clinical issues of emerging adulthood (ages 18 to 29). She is co-chair of the Society for the Study of Emerging Adulthood (www.ssea.org) and has authored numerous publications on emerging adult development and adaptation including the co-edited book, *Emerging Adults in America: Coming of Age in the 21st Century* (APA Books). She serves on executive boards and provides consultations to organizations whose missions are to design and develop programs to benefit emerging adults. She has taught and supervised emerging adults at Boston College, Tufts University, The Pennsylvania State University, Farleigh Dickenson, and Drew University. In addition, Dr. Tanner delivers programs on emerging adulthood and writes a blog on these issues for Psychology Today, Becoming Adult. www.jenniferltanner.com

Paule Verdier MOT, OTR/L

Occupational/Life Skills Therapist

Paule Verdier earned her Master's Degree in Occupational Therapy from Governors State University in 2007. Her education has prepared her for 'client-centered practice,' focusing on working alongside patients and utilizing their expertise of themselves in order to achieve competence. Ms. Verdier has experience working with both adolescents and adults and is proficient in American Sign Language.

Ms. Verdier is currently the treasurer for the Gamma Kappa Chapter of Pi Theta Epsilon, a national honor society for occupational therapists.

Jesse Viner, M.D.

Dr. Jesse Viner created Yellowbrick in recognition of the specialized needs of emerging adults and their families, and the necessity for a treatment system that addressed the unique challenges of the transition into adulthood. A recognized expert in the treatment of eating disorders, difficulties resulting from trauma and bipolar disorder Dr. Viner has three decades of experience applying the knowledge of psychiatry and psychoanalysis to the challenge of creating meaningful and pragmatically effective treatment programs.

Following his education at Yale, The Chicago Medical School, Northwestern University Medical School Psychiatry Residency and The Chicago Institute for Psychoanalysis, Dr. Viner has served as Director of Adult Psychiatry Inpatient Services for Northwestern University Medical School; Medical Director of Four Winds Chicago, a private psychiatric healthcare system; and Director of University Behavioral Health, a group practice on the North Shore of Chicago. He is on the faculty of the Chicago Institute for Psychoanalysis, an Assistant Professor of Psychiatry at Northwestern Feinberg School of Medicine, Rush Medical College, and on faculty at The Family Institute at Northwestern University. Dr. Viner is a Distinguished Fellow of the American Psychiatric Association.

Dr. Viner is the father of three emerging adult daughters.

Laura Viner, PhD

Dr. Laura Viner is a Clinical Psychologist and tenured Associate Professor of Psychiatry and Behavioral Sciences and Northwestern University Medical School. For over 25 years, Dr. Viner has done clinical research, teaching of Psychology and Psychiatry students, assessment and clinical treatment of individuals, families and groups with adults, adolescents, and children. She has published over 50 scholarly articles in scientific journals and books, including her recent popular psychology book on psychoneuroimmunology, *The Joy Formula for Health and Beauty*. Dr. Viner also gives scientific presentations to professional audiences around the country.

Prior to Yellowbrick, Dr. Viner was Senior Staff Psychologist at The Family Institute at Northwestern University where she also developed and directed a program for inner city children and their families to prevent violence and antisocial behavior. Earlier at Northwestern, Dr. Viner was Director of the Outpatient Eating Disorders Program.

Dr. Viner is a mother of one emerging adult son, one adolescent son, and a pre-teenage daughter.

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