I. Acknowledgment

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Abstract

This article reports on strategies for educating and providing mental health services to children diagnosed with Fetal Alcohol Spectrum Disorder, Executive Dysfunction, or Learning Disability. In America, emotional and social impairments are amongst the fastest growing childhood problems. This article explores symptoms, provides insight and offers strategies that can aid children in their efforts to move forward emotionally and academically.

II. Introduction

Initiated at the request of two students at the University of Michigan Law Clinic, this article reports on the nature of Fetal Alcohol Spectrum Disorders (FASD’s) and poor Executive Functioning (EF).

Within American culture, childhood mental health symptoms and disorders (e.g. ADHD, Bi-Polar, Anxiety) are increasing. As well, for student learner’s grades K-12 learning disability, emotionally impaired and otherwise health impaired certifications are increasing. In some instances, associated with childhood mental health symptoms and K-12 academic impairments is FASD’s and inadequate EF.

A thorough neuropsychological evaluation can identify and determine if an individual suffers from FASD’s or EF deficits (Stanberry, 2007). Currently there is not a test available that measures the stated conditions. A child’s EF profile typically isn’t utilized to help identify the presence of learning disabilities or ADD/ADHD (Stanberry). As a result, when discussing and addressing a child’s functioning, there is dependence of task completion, observation and neuropsychological testing (Brown, 2006). The gathered information can assist parents in working with their child within the home and
communicating with school officials. It is held that typically, medication does not addresses FASD or EF deficits. In some cases medication can be used to address emotional symptoms (e.g. hyper, forgetful, impatient) that are a by-product. Outside of ADHD, there is little research on how psychotropic medication might affect FASD’s and EF deficits in children and adults.

FASD’s is a medical condition. It is a leading preventable cause of birth defects and developmental disabilities that can have a lifetime effect on an individual’s mental faculties, behaviors and learning outcomes (American Journal of Health Education, 2007). Inadequate EF is also a medical condition. It does not affect psychological health. It is held that approximately 30 percent of all children have EF problems, especially those who suffer from ADHD, Fetal Alcohol Syndrome or brain damage/injury (Chandler, n.d.).

At one point when servicing FASD’s/FAS and poor EF clients, I often found myself perplexed as to why the selected counseling interventions were not effective. On occasion, it seemed liked the more I poured myself into the sessions, the less progress the clients made.

One day, the light finally came on. I was in counseling session with a 10 year-old male. I had seen the youngster in home-based sessions approximately 17 times in a 12-month period. By chance in the middle of the 11th session, I asked him what my name was. To my surprise, he could not recall my name. Believing that he was joking or caught off guard, a few minutes later I asked him the same question.

On this particular day for whatever reason, he could not remember my name. To my additional surprise, he was not ashamed or embarrassed about his inability. He sort of stared at me with very little expression when I kept asking him to state my name. His failure to remember my name helped me to finally realize that FASD’s/FAS and EF deficits are truly medical conditions and not mental health symptoms.

III. Methodology

A review of the literature and current research was utilized to report on this subject. Within the field of education and health and human services, existing literature and current research studies serve as the foundation and guide for discussing and addressing mental health status. Specifically, the literature review explored FASD’s/FAS and EF deficits.

IV. Orientation of Researcher

Off and on since 1990, I have provided clinical counseling services to the general population, specifically to children and adolescents. As a professional counselor (in public & private practice), to date over 2,000 youth have taken part in individual counseling, family counseling, treatment group activities, youth programming or
community referrals. Of this number, approximately 50 FASD’s/FAS and 200 youth with a history of poor ER have been serviced.

V. Background of FASD/FAS

FASD’s is not intended for use as a clinical diagnosis (Sokol, et al. 2003). Rather it describes a series of conditions that are the by-product of the effects that can occur from an individual’s exposure to alcohol in utero. One such condition is Fetal Alcohol Syndrome (FAS). FAS effects can include growth restrictions, cranio-facial abnormalities and central nervous system abnormalities (Sokol).

Within the mental health treatment setting, professional counselors and psychologists document (not diagnosis) the presence of FAS on Axis III as a medical condition. The initial diagnosis of a medical condition on Axis III is typically reserved for practicing medical professionals. The status is recognized and documented on assessments and treatment reports by mental health practitioners such as counselors. The recognition and documentation serves as the foundation for counselors to address the mental health symptoms exhibited by FAS clients.

The American Psychiatric Association (2002) reported that mental health symptoms exhibited and associated with FAS varies (see Table 1). The identified mental health symptoms are also often found with clinical diagnosis such as ADHD, Bi-Polar and Oppositional Defiance. For example, it is reported that upwards of 73% of children with FASD’s/FAS may also have ADHD (Burd et al. 2005).

Table 1

Mental Health Symptoms Associated With FASD’s/FAS

<table>
<thead>
<tr>
<th>Aggressive Actions</th>
<th>Poor Boundaries</th>
<th>Intensive Anger Episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Concentration</td>
<td>Impulsive Acts</td>
<td>Underdeveloped Social Skills</td>
</tr>
<tr>
<td>Insufficient Reasoning</td>
<td>Developmental Delays</td>
<td>Excessive Forgetfulness</td>
</tr>
<tr>
<td>Lying &amp; Deceit</td>
<td>Inner Insecurity</td>
<td>Blaming Others</td>
</tr>
<tr>
<td>Poor Processing</td>
<td>Defiance</td>
<td>Manipulation</td>
</tr>
<tr>
<td>Stubbornness</td>
<td>Indifference</td>
<td>Being Overwhelmed</td>
</tr>
<tr>
<td>Self-Defeating Behaviors</td>
<td>Poor Judgment</td>
<td>Regular Impatience</td>
</tr>
</tbody>
</table>

Educational barriers exhibited and associated with FAS can include learning disabilities such as cognitive impairment and emotional impairment (American Journal of Health Education, 2007). In addition, poor academic progress by FAS clients can be caused by several concepts including poor concentration, impulsive acts, poor social
skills, under-developed reasoning, developmental delays, forgetfulness, poor processing and poor problem solving.

VI. Background of Executive Functioning

According to the National Center for Learning Disabilities (n.d.), EF is a term used to describe a set of mental processes that helps connect past experiences with present action as it relates to planning, time management, multi-tasking, retaining past knowledge, engaging in group activities, assessing ideas, reflecting and analyzing, making mental adjustments, completing task, requesting help, displaying patience and ability to seek new information.

EF is referred to as the orchestra conductor or CEO of the brain (K & M, 2005). It has the ability to delay responses and sustain or shift attention so that an individual can set priorities. Typically poor EF is identified in middle school age children who now have to work independently, transition from activity to activity and follow a sequence of instructions.

Chandler (n.d.) argued that when there are conflicting reports or demands, the EF aspect of the frontal lobe and basal ganglia area of the brain makes decisions, allocates resources and surveys possible options. In truth, EF deficits lead to individuals having additional problems that highlight the presence of psychiatric and emotional symptoms. The deficits associated with poor EF are:

1. The inability to plan or determine which duty to perform first. This leads to poor time management and tardiness.

2. The inability to prioritize or determine the importance of responsibilities. This leads to incomplete task, forgetfulness and excuses.

3. The inability to persist or stay focused on a task. This leads to being distracted and wasting time.

4. The inability to organize or place things in order. This leads to lost assignments and failure to turn in projects.

5. The inability to multi-task in terms of listening, talking and taking notes about critical events. This leads to excuses and inadequate information.

VII. What is Executive Functioning?

EF involves clusters of cognitive abilities that interact in a dynamic manner when performing a variety of daily tasks that require the usage of attention and memory (see Table 2). It explains an individual’s working memory and recall in terms of the ability to
retain facts while manipulating information (Brown, 2006). It refers to the ability to access facts stored in the long-term memory, describes levels of activation arousal and facilitates the ability to pay attention. In addition, EF paints a picture regarding an individual’s ability to control their emotions, tolerate frustration and think before acting or speaking. Likewise EF encourages the utilization of internalization language and affects the process of analyzing and organizing information as it relates to problem solving.

**Table 2**

**Cognitive Function of Executive Functioning**

<table>
<thead>
<tr>
<th>Cognitive Cluster</th>
<th>Executive Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation</td>
<td>Organizing, prioritize, initiate work and planning.</td>
</tr>
<tr>
<td>Focus</td>
<td>Sustaining interest and shift attention to task.</td>
</tr>
<tr>
<td>Effort</td>
<td>Regulate alertness, processing, pacing, managing time, and resist distractions.</td>
</tr>
<tr>
<td>Emotion</td>
<td>Managing frustration and regulating emotions.</td>
</tr>
<tr>
<td>Memory</td>
<td>Utilizing working memory and accessing recall.</td>
</tr>
<tr>
<td>Action</td>
<td>Monitoring and self-regulation actions.</td>
</tr>
</tbody>
</table>

In a similar fashion, Brown (2006) reported that EF effects common daily life task and situations (see Table 3). I can recall specific reading and writing comprehension experiences involving youth that have been serviced.

“Kyle is a 11-year-old elementary student who is an adequate reader and takes joy in pronouncing big words. However, when asked to verbally summarize a page or chapter just read, he struggles to recall important fact such as names of character, main topic of the discussions, etc.”

“Susan is a 13-year-old middle school student who attends our weekly treatment groups. When asked to summarize in writing her feelings about a group assignment just participated in, she regularly leaves the page blank.”

**Table 3**

**Childhood Task & Executive Functioning (Reading & Writing Comprehension)**

<table>
<thead>
<tr>
<th>Executive Functioning Utilized</th>
<th>Signs of Executive Dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working memory and</td>
<td>By the end of the chapter, child forgets accessing recall the key points they just</td>
</tr>
</tbody>
</table>
understood while reading.

<table>
<thead>
<tr>
<th>Executive Functioning Utilized</th>
<th>Signs of Executive Dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focusing</strong></td>
<td>Misses valuable instructions due to poor focus and easily being distracted.</td>
</tr>
<tr>
<td><strong>Strategizing</strong></td>
<td>Lacks the ability to develop a plan of action to that is derived from skimming the test, asking questions or paying attention.</td>
</tr>
</tbody>
</table>
| **Working memory**            | Working memory  
  When answering a test question, has accessing recall trouble recalling info and fails to manipulate related facts. |
| **Pacing**                    | Fails to budget time, thus spends too much time on some questions and then rushes to |

As well, Brown (2005) indicates that EF helps negotiate task such as test taking and organizing long-term projects (see Table 4). As an example, the following recent clients come to mind.

“Shane regularly struggled to respond to my inquiry and to stay focused during counseling sessions. When asked about his inabilities, he stated that the ticking sound from the clock on my desk and ventilation system were too loud.”

“It was near the end of the semester and Amanda was in a tizzy. She could not find her research paper that she had been working on all week. The misplacing of her papers had happened before, but never for such an important college assignment.”

Table 4

Childhood Task & Executive Functioning (Test Taking & Long Term Projects)
There are indications that EF aids in the ability to shift between tasks and function within a group/team setting (see Table 5). I recall two incidents worth sharing.

“Susan’s inability to bring closure to written cognitive behavior assignments was first believed to be a sign of her being a perfectionist. However, further investigation led to understanding that she struggles with moving from an enjoyable task to the next required task.”

“Mark’s parents were amazed at the 12-year-olds decrease in temper tantrums and emotional meltdowns over petty issues. They credited the counseling sessions as if some sort of miracle had taken place in the three scheduled appointments. When viewed more closely, Mark’s progress was a result of counseling sessions teaching him how to successfully shift from task to task.”

Table 5

Childhood Task & Executive Functioning (Shifting Between Task & Function Within Group)

<table>
<thead>
<tr>
<th>Executive Functioning Utilized</th>
<th>Signs of Executive Dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shifting attention</td>
<td>Fails to properly let go of previous task so as to attend to another instructed task, selects favorite task and doesn’t move in timely fashion to next instructed task.</td>
</tr>
<tr>
<td>Managing frustration</td>
<td>When required to shift gears, experiences frustration, stressors and anger.</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>Struggles to work in groups and has a difficult time waiting their turn (impatience).</td>
</tr>
<tr>
<td>Managing frustration</td>
<td>When frustrated, becomes impulsive, jump to conclusions or makes excuses.</td>
</tr>
</tbody>
</table>

VIII. Solutions For FASD’s/FAS & Poor EF
The EF of those who suffer from learning disabilities, closed head injuries or FASD’s/FAS can and should improve with normal development (K & M, 2005). This is held to be true because of on-going cerebellum growth and individual maturation.

The National Center for Learning Disabilities (n.d.) reports that the EF of individuals who suffer from learning disabilities and FASD’s/FAS can improve by:

1. Approaching task in a step-by-step manner and relying on visual aids. This intervention helps to process information.

2. Utilizing equipment/tools that helps keep track of time and task. The usage of timers and stopwatches serve as reminders and learning cues.

3. Reviewing materials on a daily basis. As a tool, repetitive exposure to materials enhances confidence, recall and familiarity.

4. Requesting written and oral instructions. The dual presentation of information can reinforce critical points that are often forgotten.

5. Taking part in planned transition times, change and shifts in activities. This intervention promotes ideas associated with completing task and self-monitoring.

6. Creating checklist and things to do list. Gentle reminders of duties can help stay focused and on task.

7. Breaking assignment down into smaller chunks. This concept builds stamina and success stories.

8. Minimizing clutter in the work area. A work environment that is clean, well-lit and organized relives the brain of trying to figure out where things are.

**IX. Games & Activities That Enhance EF**

It is possible that intentional brain exercises can improve EF. A review of the literature reports that brain exercises can help in several ways (see table 6).

<table>
<thead>
<tr>
<th>Brain Exercises</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiate Task</td>
<td>Develop Self-Restrain</td>
</tr>
<tr>
<td>Organize Activities</td>
<td>Manage Emotions</td>
</tr>
<tr>
<td>Recall o Information</td>
<td>Builds Confidence</td>
</tr>
<tr>
<td>Move From Task to Task</td>
<td>Self-Assessment</td>
</tr>
<tr>
<td></td>
<td>Re-Trains The Brain</td>
</tr>
</tbody>
</table>
Learning Able Kids (n.d.) reports that to build their level of confidence and functioning, individuals who suffer from poor EF can take part in specific brain-based learning objectives and cognitive enhancement activities (see table 7). The objectives and activities can improve auditory processing, visual discrimination, processing speed, phonological awareness, planning, sequencing and attention to detail.

When selecting activities and interventions that address poor EF, parents and providers should be aware of the required time commitment and how well the child works alone or with close supervision.

**Table 7**

**Brain-Based Learning & Cognitive Enhancement Programs**

<table>
<thead>
<tr>
<th>Program</th>
<th>Designed To Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexia Learning’s Cross Trainer</td>
<td>A software that improves cognitive development, strengthens thinking, memory, enhances problem-solving skills and helps to improve performance in reading, math, science and social studies.</td>
</tr>
<tr>
<td>Audiblox</td>
<td>Administered by parents/providers, this program builds capacity in the areas of prioritizing, organizing, speed and recall.</td>
</tr>
<tr>
<td>Earobics</td>
<td>A computer-based program that features games that increase cognitive skills and audio processing difficulties.</td>
</tr>
<tr>
<td>Brain Gym</td>
<td>A home-based program that doesn’t particularly target poor EF. However, it promotes physical movement that integrate body and mind that enhances concentration, memory, reading, writing, organization and listening.</td>
</tr>
<tr>
<td>Interactive Metronome</td>
<td>A computer-based program that requires participants to synchronize a range of hand and food exercises to a tone. Over a course of time, participants learn to focus, attend for longer periods of time, filter out distractions and monitor their actions.</td>
</tr>
</tbody>
</table>

**X. Closing**
The very nature of FAD’S/FAS and ER is understudied and goes beyond the scope of most individuals. What can be gained from this article is a better understanding of the stated subject matter.

FASD’s/FAS and poor ER are medical conditions. The resulting mental health symptoms can be looked at from many perspectives. As a result, by the nature this article is narrow in scope. There are several limitations in this article. There is reliance on the literature and the clients that have been serviced by this writer resided in a large urban area in the Midwest. In addition, this article is not based on empirical research/data performed by this writer and the research methodology is not substantial. Based on the stated limitations, the presented information may not be able to be generalized.

FASD’s/FAS and individuals who suffer from poor EF typically have a host of on-going mental health symptoms and educational needs that at times can be intense in nature. What has been witnessed is the client’s responses and reactions in counseling sessions and other settings (e.g. school) being dependent on their socio-emotional functioning level, environments, level of attachment/bond, etc. At any given time, their dominant symptoms could rage from impulsiveness and sadness to poor processing and forgetfulness.

When servicing this population, it appears that working closely with the parent/legal guardian, school officials and the assigned medical doctor is important. To gain a well-rounded view of a client’s progress and functioning, information sharing amongst the previously identified team members is beneficial.

The literature and critical research-based outcomes are not definitive on the underlying processes associated with FASD’s/FAS and poor EF. As a professional counselor, neither is this writer definitive regarding the underlying processes. However, it is becoming clear as to how FASD’s/FAS and poor EF clients react in various situations or environments. The client’s social skills, problem solving skills, language comprehension, intellect and functioning play a role in a their reactions and responses (Aragon et al. 2008; McGee et al. 2008).

Further studies are needed on this subject. The studies should report on:

1. FASD’s/FAS and poor EF client’s school-based academic progress, standardized test scores, special evaluations, learning needs, educational certifications, etc. This would possibly shed light on client’s aptitude, intellectual functioning, processing, maturity level, etc.

2. Insight regarding medical profession’s strategies for diagnosing FASD’s/FAS and EF deficits. This would possibly shed light on the medical model associated with the disorder.
3. Expert testimony of individuals who have dedicated their work profession to the cause and advancement of FASD’s/FAS and EF. This would possibly shed light on executive functioning and underlying processes that govern the actions and reactions of clients.

XII. References


XII. Other Scholarly Articles By Recco S. Richardson


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