Fetal Alcohol Syndrome (FAS) is a relatively new diagnostic label. As more physicians become familiar with the diagnosis of this syndrome, schools will begin to see children with the label FAS and Fetal Alcohol Effects (FAE). Children with FAS often do not pick up skills from their environment as easily as some of their peers. They often need to be specifically taught behaviors that other children seem to pick up naturally. These youngsters need to learn to turn Elementary Secondary Education the urge to get up. The child also needs to learn how to match body motions to the requirements of the situation. These youngsters need to be given the opportunity to meet success and, hopefully, with these successes a positive self-image will develop. The counselor may be asked to fill a number of roles in adjusting the environment so successes are possible. Statistics show that the number of FAS and FAE children is growing. Society needs to work on eliminating this preventable birth defect, yet, must be prepared to meet the challenge of helping those affected to reach their potential and to have happy, productive school experiences. (LLL)
Intervention Strategies for School Age Children with Fetal Alcohol Syndrome

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Abstract

Fetal Alcohol Syndrome (FAS) is a relatively new diagnostic label. As more children are diagnosed with this syndrome, school personnel and school counselors in particular will need to be educated concerning the syndrome and the implications of meeting the educational and mental health needs of the diagnosed children. This paper reviews pertinent information concerning Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) as well as techniques that may prove helpful to school counselors in working with these children.
Intervention Strategies for School Age Children with Fetal Alcohol Syndrome

Concern for maternal alcohol consumption and its effect on future offspring has been known since antiquity (Elliott & Johnson, 1983). A warning in the Old Testament reads "behold, thou shalt bear a son: and now drink no wine or strong drink, neither eat any unclean thing" (Judges 7:12). "Some Navajo elders use to say years back that if a woman about to bear a child drinks crazy water, the newborn will be crazy in the body and mind" (Streissguth, LaDue & Randels, 1986 p.i). Many observers have described the effects of alcohol on newborns during the 19th and 20th centuries, yet these observations went largely unpublished or unnoticed by the scientific community (Clarren, 1982).

In contrast, a study of children of drinking mothers for the period between 1940 and 1950 reported that the use of alcohol during pregnancy had no adverse effect on the children (Elliott & Johnson, 1983). As recently as 1965, it was concluded that the unlimited consumption of alcohol by a pregnant woman posed no danger to her developing fetus (Clarren, 1982).

during the period of time from 1969 to 1973 was noted. She shared her observations with her colleagues Smith and Jones and their collaborative efforts were published in 1973 bringing "fetal alcohol syndrome" to the attention of the scientific community (Clarren, 1982). Since 1973, the scientific interest in the effects of prenatal alcohol exposure has intensified and over the next 12 years more than 2,000 scientific papers on the topic have been published (Streissguth, LaDue & Randels, 1986).

As more physicians become familiar with the diagnosis of this syndrome, schools will begin to see children with the label of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE). Estimates of the prevalence of FAS range from one in every 700 to 800 births. Attempts to determine the number of "normal" children suffering from alcohol related impairments might be as high as one in every 150 births (Lamanna, 1982). Although many of these children will qualify for special services, some youngsters who demonstrate borderline mental ability may not qualify for these services. As these children come to regular classes, teachers will be looking towards school counselors for help in understanding these children, as well as help in setting up appropriate programs. In addition school counselors will be asked to work with these youngsters in helping them deal with their own issues.

The purpose of this paper is to provide background information about Fetal Alcohol Syndrome (FAS) and Fetal Alcohol
Fetal Alcohol Syndrome

Effects (FAE). This information will include definitions of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) as well as the characteristics and prevalence of these syndromes. The school counselor's role in working with the FAS and FAE child will be reviewed and specific counseling techniques will be discussed.

Review of the Literature

Definition of Fetal Alcohol Syndrome

Fetal Alcohol Syndrome is a medical diagnosis that was coined in 1973 by Drs. Kenneth Jones and David Smith (Lamanna, 1982). It is a medical diagnosis for a type of birth defect caused by prenatal alcohol exposure and the diagnosis is based on a specific cluster of physical abnormalities, growth deficiency and central nervous system problems (Streissguth, 1986). The principle features needed for diagnosis of FAS are presented in Table 1.
Fetal Alcohol Syndrome

Table 1
Main Features of Fetal Alcohol Syndrome

<table>
<thead>
<tr>
<th>Growth Deficiency</th>
</tr>
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<tbody>
<tr>
<td>Prenatal and postnatal growth retardation for height and weight</td>
</tr>
<tr>
<td>Central Nervous System Dysfunction</td>
</tr>
<tr>
<td>Neurologic abnormalities, developmental delay, structural abnormalities (especially microcephalus)</td>
</tr>
<tr>
<td>Craniofacial Anomalies</td>
</tr>
<tr>
<td>Short palpebral fissures, frontonasal alterations</td>
</tr>
<tr>
<td>(epicanthal folds, flat nasal bridge, short and upturned nasal tip, hypoplastic philtrum), thin upper vermilion, flat midgace</td>
</tr>
</tbody>
</table>

From "The Diagnosis and Treatment of Fetal Alcohol Syndrome" by S Clarren, 1982, Comprehensive Therapy, 8 (10), p.42.

(See Appendixes A, B and C for additional information on the physical features of children diagnosed as Fetal Alcohol Syndrome.)

Babies who have some characteristics of FAS but not enough for a full diagnosis are termed possible Fetal Alcohol Effects (FAE). This term is not a medical diagnosis and specific differentiating criteria have not been clearly described (Streissguth, 1986). FAE cannot be reliably attributed only to prenatal alcohol exposure, yet from a mental health standpoint, children with FAE may be at increased risk for significant developmental handicaps (Streissguth, 1986). Marino (1987) states that "early recognition of children at risk may result in timely referral for evaluation and intervention, thus
preventing school drop out and failure" (p. 39).

**Prevalence**

Studies of the prevalence of FAS in several countries have averaged around one FAS child in 750 births (Streissguth, 1986). For each child diagnosed with full FAS there are probably at least twice as many who could be identified as having possible Fetal Alcohol Effects (Clarren, 1982).

This population may represent only the tip of the iceberg. Many physicians don't have the training to diagnose FAS and still others feel there may be legal ramifications if the diagnosis is not ironclad and, therefore, are reluctant to make a diagnosis (Dorris, 1990).

**Characteristics of the FAS child**

The mean intelligence quotient (IQ) as measured by an individual intelligence scale for individuals suffering from FAS falls between 65 and 80, although individuals with IQ's as low as 15 and as high as 105 have been positively diagnosed (Dorris, 1989). Many of these children have learning disabilities which become apparent around the third grade (Streissguth, 1989). In Streissguth's (1973) study of people with FAS, she points out that 42% of those individuals were not eligible for special services. These children are sitting in our regular classrooms.

Some of the behavioral characteristics of the early school years include poor impulse control, social intrusiveness, poor
Fetal Alcohol Syndrome

peer relations, trouble remembering social rules and excessive demands for bodily contact (Dorris, 1989). Hyperactivity is present during pre-school years in approximately 85% of children with FAS (Streissguth & Giunta, 1988). Severe behavior problems are not usually associated with this disorder (Clarren, 1982).

Despite the range in age and abilities, some common behavioral characteristics were noted among adolescents diagnosed with FAS. These included poor communication skills, impulsivity, lack of social inhibition, being overly tactile, difficulty in making friends and poor judgment or the inability to evaluate consequences (Streissguth, 1986).

Counselor's Role

The literature was searched in an attempt to locate information about the school counselor's role in working with these children. The search located very few studies which dealt with this issue. Lamanna (1982) reports that school personnel are generally aware of fetal alcohol problems but there is minimal transfer of that awareness to the implications of those problems for child development and school programming.

According to Streissguth (1986), the school counselor can serve as a liaison between school and home. She reports that the counselor can help devise a behavior management program for both home and school as well as serve as a consultant to parents in the area of parenting skills or at least be aware of outside referral sources. Because hyperactivity is so
prevalent an issue with many of these youngsters and because the effectiveness of drug treatment for hyperactive children with FAS is unclear (Streissguth & Giunta, 1988), the school counselor may be in a position to assist in the management of the child. They suggest the school counselor serve as a coordinator between the medical team, social agencies and the school for those children who do not qualify for special services so that the needs of the child are adequately met thus providing each child a better opportunity to develop to his/her potential. Because so few programs exist for these youngsters, their level of achievement if proper planning and programming are available to them throughout their school careers remains unknown (Streissguth, 1986). Because, like any child, children with FAS benefit from a warm nurturing environment where they are treated with respect and interest, the counselor should be an advocate for the child and assist in providing such an environment for the youngster (Streissguth, 1986).

Counseling Interventions
As in the search for the counselor’s role with children diagnosed with FAS, the search for information about counseling techniques to use with these children provided scant and general information. Streissguth (1986) states "those caretakers who have established clear consistent expectations and behavioral consequences are the ones who have the least problems and whose children appear to have done the best socially" (p.38). These
children tend to benefit from calm structured settings where expectations are clear and appropriate responses are reinforced (Dorris, 1989). The use of immediate consequences for both positive and negative behavior is extremely important when dealing with these youngsters (Streissguth & Giunta, 1988).

Frustration in finding counseling interventions that deal with FAS specifically led to a search in another direction for suggestions or techniques to work with these children. Many of the behavioral characteristics of these children are characteristic of children with Attention Deficit Disorder with Hyperactivity (ADHD). Garber (1990) mentions "that exposures to toxins such as lead and nicotine or alcohol passes through the mother to the fetus during pregnancy and may account for some cases of ADHD" (p.14). This information provided the impetus to look at techniques that are being used effectively with such children.

Techniques that deal with impulse control, hyperactivity, and the inability to evaluate consequences which results in poor judgment, all of which are characteristics of the FAS child, will be discussed. Dorris (1989) reports that a behavioral approach would be best meet the needs of the FAS child. Operant conditioning has been used effectively with these children for shaping new behaviors and eliminating undesirable ones (Dorris, 1989, Garber, 1990, Koester, 1981). Specific supplemental techniques which could be used in conjunction with a behavioral approach to deal with specific issues, such as impulse control,
judgment and hyperactivity, will now be considered.

**Impulse Control**

Meichenbaum's (1971) study deals with teaching cognitive skills to children with poor impulse control. The study suggests that self control can be managed by teaching the child some cognitive strategies. He recommends the child be taught what he/she should be saying to him/herself. Initially, this is done out loud and then more quietly until the child is able to process internally (Meichenbaum, 1971). The Picture Matching Test was used and the following is an example of the modeled verbalization:

"I have to remember to go slowly to get it right. Look carefully at this one, now look at these carefully. Is this one different? Yes, it has an extra leaf. Good, I can eliminate this one. Now let's look at this one. I think it's the one, but let me first check the others. Good, I'm going slowly and carefully. Ok, I think it's this one." (Meichenbaum, 1971, p. 121)

After the instructor models an item, the student is given the chance to perform on a similar practice item, verbalizing out loud the strategies being used. The student is encouraged and reinforced for using the strategies that were modeled and for the self verbalizing. Over the course
of eight practice trials, the child's self verbalizations are faded and the child can internally verbalize the strategies. The results of this study indicate that cognitive modeling and self instruction alters the attentional strategies of impulsive children.

Garber (1990) offers a multi-step technique for working with youngsters with poor impulse control. He feels that the concept of impulsivity should first be explained to the child giving specific examples of when he/she acted rashly and the resulting consequences. The next step is to prioritize the situations in which the child acts impulsively. Next the child will have to be taught a hesitation response to lengthen the time between impulse and action. Beginning with the first situation, simulate the natural circumstances as closely as possible. Demonstrate to the child how you wish him/her to hesitate and then practice the response a number of times under direct supervision. Praise and give specific feedback on what he/she is doing right. Each situation on the list is likely to require a different hesitation response, so each will have to be dealt with separately. It is imperative that one situation at a time be worked on until mastery. Each time the child uses his/her hesitation response he/she should be praised, given specific feedback and provided appropriate reinforcers. When the child acts impulsively in a situation in which he/she has already learned a
hesitation response, more rehearsal of the hesitation response may be needed (Garber, 1990).

It is apparent that children with poor impulse control must be taught specific techniques which enable them to stop and think before they act. Praise, specific feedback and a reinforcement schedule all motivate the children as they learn these needed skills (Garber, 1990, Meinchenbaun, 1971).

Judgment

"Streissguth identifies bad judgment as one of the most subtle, most difficult, but most telling symptoms of FAS and FAE. According to her, this condition had less to do with intelligence than it did with the inability of a person to evaluate the consequences of his or her own actions" (Dorris, 1989, p.179).

The literature revealed no information on early intervention programs dealing with judgment as it relates to the FAS child. Since no information was available, similar situations where programs have been developed were explored. Shure and Spivack (1975) conducted several studies using an approach which enhances the child's ability to think through and solve problems. This research demonstrated it was the child's own ability to generate solutions to interpersonal problems and the ability to foresee consequences that related to adjustment, and not
how well a child could verbalize the "best" way suggested, demanded or agreed upon by an adult.

The Shure and Spivack (1975) approach, Interpersonal Cognitive Problem Solving (ICPS) is for young children and focuses on the generation of multiple ideas, not for having the right one. The goal of this program is to increase the total solution repertoire of poor problem solvers. It appears to these researchers that the process of generating solutions may be more relevant than the content.

Glenn and Nelson (1989) believe judgment is a learned skill and the only way to develop it is to practice. Using judgment and controlling one's behavior depends on the ability to focus attention, understand causal relationships and anticipate future events. These authors believe these skills develop with age and are related to an individual's developmental level. They are of the opinion that a child needs practice and experiences to pass through the developmental stages. Table 2 traces developmental stages by age as discerned by psychologists Piaget and Kohlberg.
The Development of Judgement by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Type of Thinking</th>
<th>Judgment Types - Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>Sensorimotor</td>
<td>World of here and now.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pain/Pleasure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Can/Can't</td>
</tr>
<tr>
<td>2-6</td>
<td>Preoperational</td>
<td>Sees only one aspect at a time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thinking is rigid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black and White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safe/Dangerous</td>
</tr>
<tr>
<td>6-11</td>
<td>Concrete</td>
<td>Begins to understand relationships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Able to use logical thought only when solving problems involving concrete objects and events.</td>
</tr>
<tr>
<td>11+</td>
<td>Abstract</td>
<td>Cause and Effect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Legal/Illegal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What will happen if..?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capable of dealing with the hypothetical.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discriminates abstract concepts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appropriate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inappropriate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fair/Unfair</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How will.. feel about..?</td>
</tr>
</tbody>
</table>


Some steps suggested by Glenn and Nelson (1989) that can be taken by parents, teachers and counselors to improve judgmental skills will be reviewed. They report the child must be given the opportunity to consider consequences of his/her actions. This is done in dialogue fashion.
The child must be given the opportunity to be a decision maker. The child should be allowed to go at his/her own pace and make his/her own mistakes. This can be done by providing decision-making experiences that are safe for him/her to handle. The child needs to be given the opportunity to experience the consequences of his/her choices. The youngster should be actively encouraged to reflect upon the what, why and how of a situation. "Children need help in learning what is significant in a situation, why it is significant and how it can affect the outcome" (Glenn & Nelson, 1989, p.201). Decision-making appears to be an area where active adult involvement will be necessary to help the youngster develop solutions, evaluate the solutions, choose a solution and then live with the consequences (Glenn & Nelson, 1989, Shure & Spivack, 1975).

Hyperactivity

Before an intervention is planned for a hyperactive child the counselor should be aware of any medical intervention as well as possible side affects which may affect the child. Walden (1981) offers some techniques and strategies that can be used by counselors to bring about a more positive learning response from the hyperactive child. These techniques involve: 1. environmental manipulations, 2. curriculum modifications, 3. behavior management, and 4. affective attitude considerations.
Environmental manipulations. The counselor can assist in matching the child's individual needs to the most appropriate classroom environment (Koester, 1981). Once this match is made, the counselor may assist the teacher in making any additional adjustments which will enable the child to be successful.

The hyperactive child needs structure (Dorris, 1989, Koester, 1981). A routine should be established that is understandable and acceptable to the child; this routine should allow the child to work within limits that are consistently enforced. In addition, the hyperactive child should be provided with opportunities for movement.

The school counselor is in a position to help the child on a regular basis. Koester (1981) suggests that the counselor provide out-of-class activities before the child begins the day. These activities could include jogging, jumping rope, etc. The counselor can assist the child and teacher in recognizing warning signs that may precede outbursts of uncontrollable behavior. When the child shows signs of being overly restless, a non-punitive alternative environment can be offered. The child may be asked to run an errand, visit the counselor or engage in some physical activity.

Curriculum modifications. Koester (1981) suggests the hyperactive child be given some special considerations depending on his/her individual needs. He recommends
adjustments be made around the amount of work and the rate the child is expected to complete the work. The youngster may need more specialized attention and variety than other children (Koester, 1981). Activity-orientated learning centers should be available as a balance to seatwork and concrete manipulative aides can be provided to enhance learning and keep the child on task. The hyperactive child should be provided with short-term tasks and goals so he/she can be successful as these successes will help build confidence and a sense of acceptance (Koester, 1981).

**Behavior management.** Gumear (1984) suggests that before starting a behavior management program, a target behavior must be established and baseline data collected. This data enables the counselor to know whether progress is being made. The behavior should be charted throughout the change process. The next step in the process is to decide what reinforcement schedule and which reinforcers will be most effective with a particular child (Gumear, 1984). It is imperative when reinforcing a child that specific feedback about what the child is doing be given (Barber, 1990). Compared to other children, children with FAS or ADHD appear to need more positive and negative consequences to alter behaviors (Garber, 1990, Streissguth, 1986). Garber (1990) lists several negative consequences that have worked effectively with ADHD children. One might ignore a behavior and attend when the behavior changes.
Time out is also an effective technique.

Garber (1990) recommends that in the initial reinforcement schedule, it should be fairly easy to earn rewards. Gradually, the reinforcement schedule needs to be adjusted so rewards don't come as often. Rewards should gradually be phased out and replaced with natural consequences (Garber, 1990). Praise should be given when the appropriate behavior is demonstrated even after mastery is reached. To be most effective, the child should be included in the process of setting up a behavior plan (Garber, 1990, Gumear, 1984).

Affective attitude considerations. One of the most important classroom and home management techniques involves understanding and meeting the child's emotional needs. A great deal of patience, sensitivity, creativity and acceptance by significant adults is necessary if the child is going to be given the opportunity to be successful and feel good about him/herself (Walden, 1981).

Summary

There is a dearth of materials relating to programming for or counseling the Fetal Alcohol Syndrome child or the Fetal Alcohol Effect child. What information was found strongly recommended the use of behavioral counseling. This paper looked for specific techniques that could be used as a supplement to behavior management. These
techniques are offered with the ideal of adapting them to meet the individual needs of a particular youngster. This paper provides the school counselor with a base of knowledge that will serve as a starting point for working with a FAS or FAE child or for working as a consultant to teachers and parents. Since none of the research on any of these techniques deals with FAS specifically, any intervention will have to be carefully monitored to determine its efficacy.

The child with FAS is a child above anything else. He/she is a unique individual and any intervention must be done with this in mind. One factor that seems clear is that these children often do not pick up skills from their environment as easily as some of their peers. The child with FAS often needs to be specifically taught behaviors that other children seem to pick up naturally. For example Garber (1990) is of the opinion that these children are unaware that they can take control of their reactions - to be less active or to filter out distractions. These youngsters need to learn to turn their motions on and off, to consciously focus attention and resist the urge to go up. The child also needs to learn how to match body motions to the requirements of the situation (Garber, 1990).

These youngsters need to be given the opportunity to meet success and hopefully with these successes a
positive self image will develop. The counselor may be asked to fill a number of roles in adjusting the environment so successes are possible. Statistics show that the number of FAS and FAE children is growing. As a society we need to work on eliminating this most preventable of birth defects, yet, we also must be prepared to meet the challenge of helping those affected to reach their potential and to have a happy, productive school experience.
References


