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ABSTRACT

The information needs of regular elementary teachers concerning the special needs of students who have Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) were assessed. A literature review covers means of identification of these disorders, intervention, effective instructional strategies, and issues involved with FAS and FAE. Observations were undertaken with a first grade teacher and a child who is alcohol-affected but not yet identified as having FAS/FAE. An informal interview was also conducted with a special education teacher who was helping the first grade teacher in having the child tested to receive special services. Additionally, a questionnaire was completed by nine teachers in the same elementary school regarding the extent of teacher knowledge concerning FAS/FAE as well as information needs. It was concluded that alcohol-affected children have learning disabilities, poor social skills, and disruptive behavior. Forty-four percent of the teachers had a student suspected of having either FAS or FAE, and 11 percent had a student who had been identified. Appendices include an observation form, a questionnaire, interview questions, and a handout for educators on FAS and FAE. (Contains 22 references.) (SW)

Running Head: FETAL ALCOHOL SYNDROME

What Educators need to know about Having Students with Fetal Alcohol Syndrome and Fetal Alcohol Effects in the Classroom: issues, Identification, Intervention, & Instructional Strategies

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Abstract

Each year knowledge is growing about Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE). As more alcohol affected children are entering the school system, educators need to gain knowledge about the means of identification, the process of intervention, and methods of instruction. From the study, it is concluded that alcohol affected children have learning disabilities, poor social skills, and erratic, disruptive behavior. From a survey of teachers conducted in an elementary school, 44% had a student they had suspected of having either FAS or FAE, and 11% had a student that had been identified. 55% of the teachers surveyed wanted to gain more knowledge about FAS/FAE, and their effects on the regular elementary classroom. The purpose of this study is to produce an easily readable and accessible resource guide for educators to use in order to learn more about the effects of FAS and FAE.

Chapter I

The Problem

A. Need for Study

As knowledge about the prevalence and impacts of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) is gained, it is increasingly recognized as having an impact on societal and educational systems. According to Kleinfeld and Wescott (1993), it is estimated that FAS occurs in 1 per 500 live births, or approximately 7000 per year in the United States. FAE occurs three times more often than FAS (Kleinfeld and Wescott, 1993,). Many young people may be affected yet unidentified due to difficulties with labeling and identification. Therefore, it is assumed that this syndrome is having a greater effect on society and educational services than is currently recognized (Burgess and Streissguth, 1992). FAS and FAE are issues that merit better understanding because of the numerous challenges they bring to the classroom.

FAS is a cluster of congenital birth defects caused by consumption of alcohol by the mother during pregnancy. To be labeled FAS, the child

needs to have the birth defects of prenatal and postnatal growth deficiencies, a particular pattern of facial malformations, central nervous system dysfunction, and varying degrees of major organ malformations (Rice, 1994). However, one can be diagnosed with FAE if his mother drank alcohol while pregnant, and he has some but not all of the birth defects associated with FAS.

The implications of FAS and FAE are far reaching to the field of education. Since the central nervous system is damaged, individuals with FAS often exhibit hyperactivity, have attention deficiencies, and suffer from mental impairments (Williams, Howard, and McLaughlin, 1994). The study by Williams et al. (1994) states that FAS is the leading cause of mental retardation, and its prevalence outnumbers Down Syndrome, Cerebral Palsy, and Spina Bifida. It also causes less severe problems such as delays with development, which result in motor dysfunctions and language disability. Children with FAS as well as those with FAE experience learning disabilities and behavioral problems.

Diagnosing and identifying children who suffer from FAS and FAE is difficult. According to Ann Streissguth, a specialist in FAS behavior at the University of Washington, it is "really sad how many FAS and FAE

kids go through life undetected" (Steinmetz, 1992). This lack of accurate diagnosis exists for different reasons. FAS and FAE are difficult to diagnose conclusively because doctors must observe both morphological and behavioral characteristics rather than a single observable feature (Shelton and Cook, 1993). Also, few physicians are specifically trained to identify it, and history of alcohol consumption is difficult to obtain. Due to these medical limitations in diagnosis, children who have FAS and FAE may remain unidentified until they display developmental delays and physical problems which brings them to the attention of the educational system. Once recognized alcohol affected children can still slip through the educational system because there is not a unifying label that addresses all of the aspects of FAS and FAE. Rather they are often labeled as having learning disabilities or attention deficit disorders which does not address all of the educational needs of children with FAS and FAE.

Although many FAS and FAE affected children are present in school systems, there is little assistance and guidance provided for educators to help them bring success to these students in the classroom. Many educators remain unaware of FAS and FAS, so they are unable to

recognize it and intervene on the child's behalf. "I had read articles in the paper and seen documentaries on television about alcohols detrimental effects on unborn children, but I had never had to deal with a child with FAS before. I hardly knew where to begin," explained Gerry Parmet, a kindergarten teacher, who had a student with FAS in her class (Parmet, 1993). Since FAS and FAE have only recently been brought to the attention of educators, the available research is limited. FAS and FAE is barely addressed in college curricula for future educators (Rice, 1994). Since teachers lack the knowledge about FAS and FAE, they are unprepared to recognize alcohol affected students and unaware of how to best instruct them in the regular elementary classroom.

B. Purpose of Study

As knowledge about the prevalence and impacts of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) is gained, both are increasingly recognized as having an impact on societal and educational systems. FAS and FAE are issues that merit better understanding because of the numerous challenges they bring to the classroom. The purpose of this study is to determine what knowledge is necessary to

educate teachers on the special needs of students who have FAS/FAE in the regular elementary classroom, so the educational experience can be more beneficial for all involved. From observations in a regular first grade classroom, a survey of teachers, an extensive literature review, and interviews with teachers and a parent of a suspected child, it is anticipated that this project will help prepare teachers for the labeled and unlabeled child in the regular elementary classroom. The research is further intended to assist teachers in the means of identification, the process of intervention, the methods of instruction, and the issues related to FAS/FAE. A resource guide will be produced that can easily be used as a resource for teachers who are facing the challenges of educating the labeled and unlabeled student with FAS/FAE.

C. Hypothesis

From observations in a regular first grade classroom, an extensive literature review, a survey of elementary teachers, and interviews with teachers and experts in the field of special education, this project will help prepare teachers for the labeled and unlabeled child in the regular elementary classroom. The goal of this study and literature review is to

educate teachers about FAS/FAE. The research is further intended to aid teachers in the identification, intervention, and instruction of FAS and FAE students in the classroom by producing a packet that can be easily used as a resource. It is believed that this resource guide will help teachers increase their knowledge about how to educate children with FAS and FAE in the regular classroom.

Chapter II

Review of the Literature

The purpose of this literature review is to illustrate why educators need to learn more about the effects of FAS and FAE. It will provide a deeper understanding of the issues involved when teaching an alcohol affected student in the regular elementary classroom. This review will focus on the means of identification, the process of intervention, the effective strategies of instruction, and the issues involved with FAS and FAE.

A. Identification

The prevalence of children with Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) is increasing and having a significant impact on school systems of the United States. It is estimated that 7,000 children are born each year with FAS, while FAE is three to five times as likely to occur (Kleinfeld and Wescott, 1993). In some populations, the figures are even higher such as one in twenty-eight births among the Southwestern Native Americans (Shelton and Cook, 1993). Due to this

prevalence, research needs to be conducted, so teachers can best address the needs of the identified and unidentified students in the regular classrooms. Educators need to be aware of the syndrome and its effects. With this knowledge, the teachers can better meet the needs of all students in the regular elementary classroom by having a greater understanding of FAS and FAE.

Although the risk of drinking alcohol during pregnancy has been recognized, it was not until 1973 that FAS was defined. It is a pattern of congenital malformation associated with fetal exposure to alcohol (Shelton and Cook, 1993). Medical research has been unable to determine exactly when and how the alcohol consumption during pregnancy has its detrimental effects. It is also unclear what causes the abnormalities associated with this syndrome, but it may be the teratogenic effects of alcohol, placental dysfunction, or metabolic and nutritional factors associated with alcoholism (Williams, Howard, and McLaughlin, 1994). Williams et al (1994) found cases in which FAS/FAE have been triggered by one to two alcoholic drinks while in other cases the mother consistently consumed alcohol with no effects. Children of alcoholic mothers do have a 44% chance of having the syndrome and a

66% chance of showing partial effects (William et al, 1994). The first trimester is considered the most critical, and fetal exposure to alcohol can be most damaging. Toxins from the alcohol pass from the mother's bloodstream through the placenta into the fetus' bloodstream.

For an individual to be identified with FAS or FAE, a behavioral or general pediatrician, a geneticist, or other specialists must test the child and provide a clinical diagnosis. The diagnosis is given when an infant's mother is known to have consumed alcohol during her pregnancy and the characteristics of being alcohol affected are shown. The characteristics the doctor must observe are growth deficiency, a pattern of abnormal facial features, other physical effects, and central nervous system dysfunction. FAS effects include decreased birth weight, growth abnormalities, and behavior problems. Those identified with FAS often have small skulls and the unusual facial features of widely spaced eyes with hooded lids, flattened noses, and large spaces between the lip and nose.

A less severe diagnosis of FAE is given when medical doctors observe some but not all the characteristics of FAS and know the mother drank during pregnancy. The common characteristics of FAE are low

birth weight, behavioral problems, and partial physical malformations.

The prevalence and potency of this disease merit more research and attention particularly insuring accurate and early diagnosis of children with FAS and FAE. Black (1993) urges physicians to look for the problem where they least expect it and not to succumb to the assumption that poor, minority, inner-city women are the only ones who drink during pregnancy. Since social drinking is considered a norm, doctors have a difficult time questioning and obtaining a woman's history of alcohol consumption. If the woman seems successful, the doctor may hesitate assigning the social taboo and negative labels of FAS and FAE to her infant. Therefore, these children often remain unidentified, experience problems in school, and miss out on helpful intervention strategies.

The damage done by fetal exposure to alcohol can range from subtle to severe, but it is currently known to be the leading cause of mental retardation in the United States (Kleinfeld and Wescott, 1994). If the child is diagnosed with FAS or FAE, he is likely to have severe learning disabilities in school (Black, 1993). In addition to learning disabilities, behavior problems result. They often exhibit hyperactivity and impulsivity which prevents them from remaining on task for any

length of time. FAS and FAE are lifelong disabilities caused by prenatal brain damage, and they cannot be outgrown (Burgess et al, 1992). Attention must focus on how educators can teach the affected children how to cope with this life long problem.

Steinmetz (1992) in his research states that FAS and FAE are also difficult to identify because they show themselves differently in every child especially as they grow older. As Steinmetz (1992) vividly explains:

> In the Soviet Union, I met a boy, a teenager, who was continuously trying to stab his playmates with scissors; in Sweden, I met a wonderful little girl who was so sweet and beautiful I felt I was photographing an angel. (p. 38)

Since the range of characteristics is so broad and shows itself differently in each child, it makes precise and accurate diagnosis difficult for doctors.

"Many FAS children go undiagnosed because of other intellectual, physical, and emotional characteristics they possess that make it difficult to exclusively diagnose FAS" (Shelton & Cook, 1993, p. 45). Examples of other factors that may influence these characteristics are home environment and nutrition.

Research has mainly focused on the medical and physiological aspects of FAS and FAE. Less research has been conducted on the wide spectrum of the behaviors and needs of the identified child. With every diagnosis, educational and social service professionals are asking more questions about the appropriate educational and social models for these children who suffer from FAS and FAE (Rice, 1994). According to the study by Rice (1994), the professionals in the field often find themselves being educated by the biological, adopted, and foster parents. Although not formally trained, they have a vested interest in seeing their children grow up to be caring, competent people. "Although my son's brain has been irreversibly damaged by alcohol, his soul has not," writes Sally Cadwell, the mother of a boy who has the syndrome (Kleinfeld& Wescott, 1994, 18). Through trial and error, the parents invent strategies to overcome their children's obstacles then exchange them with the professionals.

Since FAS and FAE are difficult for medical professionals to identify conclusively at early stages of life, educators must be aware of the effects that prenatal exposure to alcohol has on a child's educational experience, even if the student has not been diagnosed. Teachers need

to know the observable indicators of FAS and FAE, so they can identify and help the undiagnosed child as well as the one who is labeled. Behavior problems which commonly have a negative impact on the student's educational and socialization experience are hyperactivity, eating problems, poor personal hygiene, difficulty with speech and hearing, head and body rocking, impulsivity, impaired concentration, and erratic sleeping problems.

Hyperactivity and distractibility are two main behavioral indicators of FAS and FAE. Alcohol affected children are oversensitive to stimulus, hypersensitive to criticism, and unable to remain focused on the task. If they are distracted, they cannot remember the task (Rice, 1994).

As they progress in school and the demand for concentration increases, attention deficits are more apparent and acute. Educators state throughout the literature that the affected student's outbursts, impulsivity, and short attention span negatively impact their academic as well as social achievement. Poor impulse control and social intrusiveness, often leads to poor peer relations and social isolation (Schenck, 1994).

Dr. Robin A. LaDue, a clinical psychologist at the University of

Washington, addressed the topic of "Substance Abuse, Child protection, and Law" in 1991. La Due spoke of lying, stealing, and shoplifting as examples of inappropriate behaviors (Rice, 1994). In a study of children with FAS, 13 out of the 14 individuals have or had problems with shoplifting, stealing, inappropriate friends, and inappropriate sexual behaviors regardless of the stable secure environment provided by care givers (Rice, 1994). The care givers explained that the affected children's impulsivity and inability to understand consequences for their actions made it easier to comprehend why these inappropriate behaviors occurred. Educators need to know that inappropriate behaviors are often the result of their disease.

A main educational concern is the inability of affected children to grasp the relationship between actions and consequences. They are unable to see the wrong and thus cannot learn from their mistakes. Children with FAS and FAE make weak connections. Therefore, what they learn in one situation is not often transferred to the next one. As one teacher explained, "they often need reteaching; seem to be starting from scratch" (Rice,1994, p. 9). They know the alphabet one day and the next day they are unable to say it. It has to be retaught starting from the

beginning. Then in a few days, they remember the whole alphabet only to forget it the next time.

Teachers need to recognize that alcohol affected children make weak connections between situations and often cannot see differences or similarities. For example, one six year old was found walking to his friend's house in the middle of the night. Although he knew it was dark, he could not make the connection that darkness would mean his friend was asleep and unable to play. He could not pick up on cues that made this situation different from playing with his neighbor during the day (Kleinfeld and Wescott, 1994).

Educators also note that these students have a difficult time with information processing skills such as input, integration, memory, and output. As Dr. Barbara A. Morse (1994) , an assistant research professor of psychiatry and program director of the Fetal Education Program at Boston University School of Medicine, says:

> Many people have a learning disability in one or two areas; children with FAS seem to have processing deficits in all areas. They have difficulty recording, interpreting, storing, retrieving, and using information. Many children will function well one day and

poorly the next (p. 32).

Their weak processing skills makes it difficult for them to follow through and complete a task.

The inability to follow directions causes children with FAS and FAE to be inaccurately labeled as forgetful, lazy, and defiant by teachers who lack knowledge about the effects of this disease. The information has been stored somewhere in the brain, but it is not accessible to the child (Kleinfeld & Wescott, 1994). Educators typically interpret behavior problems as malicious or attention-getting. When in reality, the literature reveals that the student may be trying to communicate any one of a thousand messages (Burgess, 1992). The difficulty with information processing affects their written as well as spoken language which makes communication difficult for the student with FAS or FAE. Mathematical concepts are also usually more difficult to master than language skills because they are more abstract (Schenck, 1994).

Identification is difficult, but it is the first step in helping these children cope with FAS and FAE. Therefore, it is necessary for educators as well as doctors and parents to be aware of the red flags that signal that a child may have FAS or FAE. Once identified or suspected, the

teachers need to adopt special instructional strategies and push for further intervention.

B. Intervention

Developing an effective plan for managing a student with FAS/FAE requires the collaboration of a team of staff members who are working to understand FAS/FAE. The research reveals that due to the alcohol affected children's wide range of academic and behavioral problems that it is hard to manage just one or two affected children in a regular class. It takes a great deal of time and energy away from the rest of the students. Therefore, according to Davis (1994), changes have to be made in the way the current system is set up. More support, assistance, and intervention strategies need to be incorporated into the present educational system to help better serve the academic and emotional needs of children with FAS/FAE.

With respect to FAS/FAE, there are at least three possible scenarios that an educator may face in the regular elementary classroom: scenario A is a child who comes to the classroom with a medical diagnosis and label of FAS or FAE; scenario B is a child who is

suspected of having FAS or FAE and undergoes the process of identification and is eventually diagnosed; and scenario C is a child who is suspected of having FAS or FAE but never receives the label. The process of developing a plan to intervene on these children's behalf and provide them with the services they need will be a challenge.

Since having children with FAS or FAE affects the entire educational system, teachers cannot initiate change on their own and intervene on behalf of a child suspected or known of having FAS or FAE without the support of an Intervention Team. The typical Intervention Teams consist of the school's principal, psychologist, nurse, counselor, classroom teacher, and special education teachers (Davis, 1994). Since many students in the regular elementary classroom are undiagnosed, parents, teachers, and Intervention Team members are leaders for initiating change and working together to develop a plan to bring these children special services.

If a student is known to have FAS or FAE or is suspected due to his unusual facial features, his disruptive behavior, and lack of academic progress, then the teacher should begin the intervention process. The teacher needs to document academic progress, disruptive behavior, and

other information that could help this child receive the services he needs. After the teacher presents documented evidence, school administrators need to establish screening and intervention teams to deal with the needs of students who have FAS/FAE. Teachers must communicate with the parents and involve them in the actions being taken to help their child. The school psychologist then decides which academic and psychological tests to administer and then discusses the results with both the parents and the team (Davis, 1994). According to Davis (1994), the goals of the intervention team should be to discuss effective teaching strategies, plan an appropriate curriculum, communicate openly with the parents, and provide support for each other. It is important to choose a team member who will be sensitive and non-threatening when communicating with the parents.

One teacher, faced with scenario A, followed five steps once she realized that one of her first grade students, Will, had been diagnosed with FAS at birth (Parmet, 1993). She started with a call to Will's adoptive parents. According to Parmet (1993), it is key to communicate with the parents because it can only help the child if the school and parents work together and cooperate. However, if faced with scenario B,

it is not as easy to meet and talk with the parents. Guilt and shame are associated with the disease of alcoholism, and the parents might resent being told their child is suspected of having FAS or FAE. Since Will was labeled and did not live with his biological parents, it was easier to work with them. However, whether labeled or unlabeled, sensitive communication with the parents is an essential component to any effective intervention program. Many parents who have children with FAS/FAE are the best resources for helping the faculty understand what their children need in school and how to handle certain behaviors (Davis, 1994).

The next step Will's teacher followed to intervene on his behalf was to meet with the principal. She detailed Will's diagnosis, disruptive behavior, and academic problems and explained her uncertainty of how to best help this child while teaching the rest of the class. The principal then set up a support committee to help her determine the best ways to handle this child (Parmet, 1993). The committee met several times to develop a game plan, offer suggestions, discuss strategies, and provide support. After working with Will, his teacher talked to the nurse and together they wrote an agency to obtain state funding for an assistant to

give him the one-on-one attention he needed (Parmet, 1993). If a student like Will comes to school identified with either FAS or FAE, school personnel need to establish goals and develop a plan toward obtaining special services for the child.

The literature reveals that even if a medical diagnosis of FAS/FAE has not been obtained and there is no official documentation of the mother's history of alcohol use, the teacher still needs to document information that would support having this child tested for special services. Then the child needs to be reviewed by the Intervention Team and a recommendation needs to be given to the parents. If the parents cooperate, then testing for special services can begin. When meeting with the parents, it is important to be sensitive to their feelings while finding out as much as possible about the mother's pregnancy in a non-threatening way. General questions to ask might include: "Tell me about your pregnancy." or "How would you describe your nutrition during pregnancy?" (Davis,1994).

If the parents refuse to cooperate and accept the concerns of members of the school faculty, then there are some special services that the student can receive without parental consent. Again, in this situation,

the teacher needs to be certain to document all incidents that are of concern and work with a support team to develop alternate strategies. Some of the options might include: a tutor or assistant to work one-on-one with the child, close supervision to eliminate behavior problems, regular meetings with supportive school faculty, and written contracts of expectations between the teacher and the student (Davis, 1994).

In many cases, a medical diagnosis may never be obtained because of all the issues involved. If that is the case, the teacher needs to work with the parents and the Intervention Team to develop a plan so that the child can receive special services for Learning Disabilities (LD), Attention Deficit Disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD), or other behavior disorders. Currently, there is no FAS/FAE label in the educational system. Therefore, without a referral by the parents for a medical diagnosis, it is impossible for them to receive special services for their specific problem. Since this problem is relatively new, it is still uncertain what special service label they will be placed under. Even though the child with FAS or FAE has many diverse problems, they may be placed under current labels such as LD, ADD, and ADHD which meet some but not all of their needs. It is still better for

them to receive these special services than none at all.

According to Davis' handbook for educators (1994), students with FAS/FAE have problems learning and behaving when they are placed in the regular classroom because they are unable to filter out stimulation. As a mother of a child with FAS described it,

> "When my son is put into a busy classroom, it can be as unnerving for him as it would be for you or me to be stuck in the middle of a shopping mall with a migraine headache, on an exceptionally busy day" (Davis, 1994, p. 60).

It is also hard for the teacher and the other students since the child with FAS or FAE demands extensive one-on-one attention and is disruptive to the environment. Therefore, it seems that intervention for these children to create the optimal learning environment means a self-contained classroom.

Teachers and educators can be more beneficial if they have the knowledge to identify and the support to intervene. Frustration can be minimized for everyone involved if the teacher is knowledgeable and well prepared. The teacher will be able to incorporate more instructional strategies into her teaching if she has a better understanding of how to

address these children's special needs.

C. Instructional Strategies

Teachers need specific knowledge about how to instruct children with FAS/FAE in the regular classroom. If a teacher learns of or suspects an alcohol-affected child is in her classroom, she needs to individualize her program and plan ways to help this child learn appropriate behaviors and functional skills. Adjustments are necessary to address the needs of a child with FAS or FAE, but an established plan is yet to be developed by researchers in the field. Because there is not a clear and established method of instruction for teachers to follow and try to implement, teachers have to adopt many of their own ideas through trial and error. Since these alcohol affected children suffer from a wide array of multiple problems that cannot always be dealt with in a standard, straight-forward way, helping them to succeed often proves to be a challenging task.

Davis (1994) asserts that school districts nationwide have only recently begun to understand the seriousness of FAS and FAE and the fact that both are life-long, irreversible birth defects. With this growing recognition teachers are asking themselves what can they do for the

affected students in the classroom while still meeting the needs of the rest of the students. Districts, communities, and state funding sources are also trying to determine how best to serve the academic and emotional needs of students with FAS and FAE (Davis, 1994). Students with FAS/FAE are unique, can differ in learning abilities, and have erratic behavior, so it is difficult to come up with a specific curriculum for them. The earlier an attempt is made at developing instructional strategies the better their sociability and adaptability will be (Williams et al., 1994). While physicians have to make a medical diagnosis of FAS or FAE, educators have to understand the syndromes wide range of characteristics and serve the child's diverse educational needs.

People within the school system must be educated on the unique behavioral needs caused by the brain damage, and special programs within the school should be offered to target those needs. With outside guidance and support, there are strategies teachers can incorporate into the classroom. There are four essential components in creating the most successful environment where optimal learning will take place: creating a classroom with both structure and flexibility, being consistent in behavioral expectations, understanding the student's reaction to change,

and creating a warm and accepting environment (Rice, 1994)

The instructional strategies and programs that educators develop should also help increase student's chances of becoming as productive and as independent as possible. Academic skills must be combined with functional skills which help students live and succeed in the world beyond the classroom. An example of how a teacher can combine these two skills is having the class produce a puppet show that deals with the issue of stealing and lets group members act out situations where they need to use appropriate social skills. This activity could possibly integrate language arts, creative expression, and communication skills, while at the same time teaching life skills (Davis, 1994). According to Ann Streissguth and Robin LaDue (1987), "an increased emphasis on vocational training, adaptive living skills, and satisfying work experience will be necessary to bridge the gap into successful living as an adult. Management of money and time are two important skills for which early training can be particularly helpful." Teachers need to establish a basic foundation and practice new strategies that will allow FAS and FAE students to grow and develop a sense of independence.

Several basic elements are discussed in the literature that help to

create the ideal learning environment for children with FAS or FAE , yet it will be challenging for the regular teacher to include them all in a classroom full of many students with diverse needs. The ideal situation in which this child would have the most successful learning experience would allow for a small class size of eight to ten students, where stimulation is kept at a minimum. Unnecessary stimuli could then be removed and distractibility decreased by having a very structured routine and environment. In this structured environment , rules and guidelines need to be clear and consistent with a minimum amount of change in the daily routine. Once structure is established, realistic expectations need to be set so that children and teachers can reach a level of success with minimum frustration. FAS/FAE children need encouragement, positive reinforcement, and constant one-on-one attention to foster self-esteem (Davis, 1994).

Parents support these findings with more personal ideas on what makes for a successful experience. A parent described one successful teacher as "warm and caring and is willing to make adaptations and try new things. She gives him a constant build up. She is consistent and has set rules with set consequences which she follows through with and

is willing to work with me to problem solve and communicate" (Rice, 11).

It is essential that a teacher has strategies to use for students with FAS or FAE both inside and outside of the classroom. Dr. Patricia Tanner-Halverson (1993) is the project director of a grant funded by the state of Arizona for a pilot project to educate children with FAS/FAE and is nationally recognized for working effectively both in the community and at school. She divides the strategies for educating the affected children into eight categories: organizing the classroom environment, handling transitional periods, managing impulsivity, teaching generalization, teaching organizational and analysis skills, getting and maintaining attention, rewarding and disciplining, and controlling hyperactivity (Tanner-Halverson, 1993).

Dr. Tanner-Halverson (1993) states that careful consideration must be given to the classroom setting so sensory overload can be decreased and multi-sensory reminders of the routine can be provided. The teacher must maximize their intellectual capabilities by creating a classroom with both clearly labeled and well-defined areas. Research shows that focusing their attention with pictures and objects can be especially helpful. For example, the teacher could label the reading

materials with a green triangle and the math materials with a red square. Certain areas of the classroom need to be designated for these materials. This kind of structured organization and visual predictability increases these children's memory. These children become overstimulated if there are too many objects around the room that do not pertain to the specific lesson. It is essential that these children sit up front next to the teacher because attention can be better maintained with eye contact and facial expressions. In group activities, they should be put at the beginning or the end of the line or seated at the edge of a group of children on the floor, to minimize accidental bumping or touching and to give consideration to their need for expanded personal space (Tanner-Halverson, 1993).

Students with FAS/FAE often have difficulty understanding the concept of time, so they have trouble with transitions and change. Changing from the beginning, middle, to end of an activity and making transitions from one activity to another can overwhelm these children (Schenck, 1994). Alcohol-affected children are easily overwhelmed which results in misbehavior such as temper tantrums. Therefore, strategies need to be incorporated to handle transitional periods, so

minimum disruption occurs. Before beginning a new activity, it needs to be clearly introduced, thoroughly explained several times, and broken down into several steps. It is also helpful to limit the type and number of new situations to which the child is exposed. The teacher should prepare the child and then look for signs that he is becoming overwhelmed. A respite plan or a time-out is a good idea in case the child's negative behavior is increasing during the shift. It provides the child with a chance to adjust (Tanner-Halverson, 1993). A teacher's assistant learned to curb an alcohol-affected kindergartner's explosions by recognizing when he was becoming frustrated and then directing him to another activity (Parmet, 1993). Other useful strategies include using a timer and puppets to provide visual cues instead of only auditory cues. Another idea is to put three identical items in a cup and remove one at the beginning, middle, and end of different activities. All of these strategies help the affected children keep track of time relationships and adjust to transitions and changes (Tanner-Halverson, 1993).

Many disruptive, unruly, problem behaviors are symptoms of learning problems. Children affected with FAS or FAE often display by problems with impulsivity because they are frustrated and have a hard

time understanding the concept. Specific strategies can be used to help them understand the concepts of patience, delayed gratification, time, and impulse control. To help them understand these concepts of being patient and waiting their turn, a routine of expected behavior needs to be consistently established (Tanner-Halverson, 1993). If a child exhibits disruptive behavior, teachers need to recognize that behavior as his way of communicating "I didn't get that," or "I didn't understand," rather than as willful disrespect (Burgess and Streissguth, 1992). A routinized schedule get help to minimize unnecessary confusion. For example, it might be an effective strategy to use the Queen of Hearts as a visual reminder of when it is a certain child's turn. When a child responds out of turn, instead of lecturing him about wrong-doing, a teacher could simply ask, "Is the card in your hand?" (Tanner-Halverson, 1993). Impulsive behavior can also be better controlled by modeling and rehearsing social skills. These essential components need to be taught in the hallways, cafeteria, and community as opportunities occur so the students can learn more appropriate social behaviors that will help them succeed in the real world (Burgess and Streissguth, 1992). Some people believe that stealing results from this impulsive behavior, rather than a well

thought out process.

Since these alcohol-affected children make weak connections between different situations and relationships, teaching generalization skills should be emphasized. Dr. Tanner-Halverson (1993) stresses that educators need to help these children " to see the silver thread that binds experiences together to form a complex tapestry of life." She outlines specific activities that teachers can use in the classroom to help them make extensions outside the class. These examples include brainstorming with the child what he knows about a tree, a mountain, a house, a dog, and so on. Then have the child place his thoughts into different categories with a diagram showing the connections. It is important to think of strategies and games that teach generalizations so the students can learn to make the right decisions in different situations.

Teaching organizational and analysis skills is an area that Dr. Tanner-Halverson emphasizes. Instead of open-ended activities, it is better to have ones with clearly defined objectives. She thinks that is important to teach the students organizational skills and to review them (Tanner-Halverson, 1993). Ideas like putting all important papers in a giant paper clip and explaining to the child that "This is where the papers

go" will avoid lost and crumpled work. Activities like matching and sorting teach organizational skills, as well as other psychological processes like visual discrimination and concept formation that are needed. Specific analyzing and synthesizing skills should also be taught by having lessons on whole-to-part relationships. Phonics which requires analysis and synthesis should be avoided as a method to teach reading since most children with FAS/FAE lack these necessary processing skills (Tanner-Halverson, 1993). Educators cannot assume that affected children have organizational and analysis skills. Instead teachers should use methods, like the whole language approach, which teach these skills.

Another large obstacle facing educators is how to get and maintain the affected child's attention. Some of the most difficult behaviors of children with FAS/FAE are poor concentration and high distractibility. Dr. Tanner-Halverson (1993) emphasizes making sure the child is focused before giving directions. She suggests using eye contact, touch, the child's name, and phrases such as "One, two, three, look at me!" to help the child focus (Tanner-Halverson, 1993, p. 217). Giving directions individually and using novel approachers are also

helpful attention getting tools. She also discusses that material should be presented visually and kinesthetically as well as auditory. Sensory stimulation is also important. Affected children have high levels of curiosity, so teachers should try to engage them by presenting material with a riddle or a guess box. Dr. Tanner-Halverson (1993) suggests incorporating methods like singing, feeling, incorporating tactile means, using tape recorders and ear phones, and saying rhymes into instruction because it helps the children to focus and understand the information .

Related to the issues of helping children with FAS/FAE to focus is getting hyperactivity under control. Lessons that incorporate physical and manual involvement allow the children to express their energy in a positive way. Scheduled physical activities like walks should be built into the routine. Dr. Tanner-Halverson (1993) suggest that when all strategies have been tried to no avail that medicine should be prescribed and used. If carefully monitored, she has noted "dramatic improvement" in the children controlling their hyperactivity (Tanner-Halverson, 1993) But she emphasizes that prescription medication must be done on an individual bases since it has can either have no effect or a bad one in some children.

The last strategies that Dr. Tanner-Halverson discusses are rewards and discipline. Redirecting behavior is a strategy that reduces the amount of negative attention many children with FAS/FAE receive (Tanner-Halverson, 1993). By focusing the attention back on the students, the teacher is able to provide positive feedback about the correct action and redirect behavior. Anticipating negative behavior is important. Clear rules with consistent consequences can reduce confusion. Set the rules, review them, and ask the children to explain them in their own words. Explain to the children that they are responsible for the decisions they make and the consequences that follow. If negative behavior occurs, try to ignore it if possible. When it must be dealt with, do not ask "Why?" questions which cause the children to shut down. Separating the affected child can allow them to focus and reflect. Help the child to learn from their mistakes, so it can have some positive value. It is important when negative behavior does occur to make certain that it is not the result of unmet need. Frustration levels need to be kept low because a frustrated child cannot learn and is apt to act out in a negative way. As with all children, positive attention and rewards are beneficial. A neat idea is to create a "things to do" list with visual cues.

When the child crosses an item off the list, the child is praised with positive reinforcement. Provide positive incentives, like free choice time, for finishing a task. Help the children use positive self-talk through difficult situations. The best strategy is to be firm and supportive (Tanner-Halverson, 1993)

As with all children, being supportive, firm, and flexible is essential. Teachers must individualize their instruction to meet the needs of children with FAS or FAE. If a child is suspected but not identified, these strategies can still be incorporated to meet his needs. The expectations need to be set, so they can be reached and achieved by both the teachers and the students. Special education is necessary for these children since their needs are diverse and extensive. The regular classroom teacher must work with administrators, other teachers, and parents to incorporate these strategies into the regular classroom so the affected children can learn which will build their self esteem. These children with FAS/FAE need a supportive, giving environment so they can develop to their full potential (Rice, 1994). A structured classroom with clear guidelines and good communication will provide the most optimal environment.

E. Issues

Since FAS and FAE have such detrimental effects, there are other issues that must be addressed in addition to how to educate the elementary age child. Although evidence suggests early intervention helps many drug-affected children to learn and grow at normal rates, these interventions are less likely to alter the course of individuals who have either FAS or FAE (Black, 1993). Literature reveals that since FAS and FAE cause permanent, lifelong damage, they have an effect on society. Adam, who is 21, cannot tie his shoelaces or use a salt shaker while another young adult cannot make change for a dollar, tell time or understand the plot of a TV movie (Shelton & Cook, 1993). Many adults cannot live independently and have to be supported by society. According to Williams et al. (1994), the cost of serving individuals with FAS has been estimated to range from $321 million upwards per year in the United States. Including the cost of providing medical care, foster care, special education, and other services for the milder FAE adds another two to four billion dollars per year in the United States (Williams et al., 1994).

Another issue is what services should and can be given in the home. It is vital that families receive current information on FAS/FAE and ways to help these children (Shelton & Cook, 1993). Many family environments are unstable and worsen the problems of these children with FAS/FAE. Many affected children go through an average of five different primitive homes in their lifetimes and 50% are in foster care (Williams et al., 1994). Only 9% live with both biological parents while [illegible] live with their biological mother (Williams et al., 1994). What these affected children need most is stable, structured environments yet only a few have these homes. Many of these children are put up for adoption and adopted by people who have no idea that the biological mother drank while pregnant. It is important that these adopted parents be given the support and education they need to provide the environments these affected children need to reach their optimal ability.

The most tragic issue facing society is that all of FAS/FAE is completely preventable and its prevalence could be greatly reduced if more people understood what happens to produce FAS/FAE, how children with FAS/FAE could be most effectively treated, and what could

be done to prevent it (Williams et al., 1994). Prevention holds the most hope of reducing the occurrence of FAS/FAE. Therefore programs need to be developed and implemented that teach young people about the effects of drinking alcohol. Information needs to be disseminated into communities about the danger of drinking. Based on a study by the Surgeon General, the American Medical Association, and the March of Dimes, the Congress passed an order that alcoholic beverages display a label warning pregnant females not to drink alcohol during pregnancy (Williams et al., 1994). Educators as well as doctors and social workers must take a proactive stance in establishing preventive efforts against FAS and FAE (Shelton & Cook, 1993).

Chapter III

Design of the Study

A. Sample

For the study concerning what educators need to know about FAS/FAE, a regular elementary classroom teacher, who had an at-risk student in her class, was observed. The teacher, who is referred to as "Mrs. Clark," teaches first grade in an affluent, suburban county outside of a college city. Mrs. Clark has taught for 15 years and has her Master of Reading from the Curry School of Education at the University of Virginia. In order to protect the student's identity, he will be called "Jay." Jay is a six year old, white male who lives with his mother and two older brothers. Jay is an alcohol-affected child, yet he has not been identified as having FAS/FAE. It is documented the mother has admitted to "occasional drinking" during her pregnancy, and Jay does show many of the physical, mental, and behavioral characteristics of FAS/FAE. But Jay does not have a medical diagnosis. Since Jay has not been labeled, he does not receive any special services. When tested in kindergarten for Learning Disabilities, his scores were too high to qualify him for special education. His current teacher Mrs. Clark has struggled with him this year. Since he

does not have the medical diagnosis and has not qualified for special services, Mrs. Clark has had to adopt techniques and strategies through trial and error. She is having him retested for Attention Deficit Hyperactivity Disorder the spring of this year. Mrs. Clark has worked regularly with the administration and special education teacher. The Assistant Principal has frequent and consistent contact with Jay due to discipline problems. Mrs. Clark has tried to maintain regular and open communication with his mother. His mother, who is from a middle class family, has problems with drugs and alcohol. She wants Jay to receive services. Although she expresses good intentions, her follow through is poor.

An informal interview of the special education teacher, who works with two of Mrs. Clark's students, was also conducted. She is helping Mrs. Clark in the process of having Jay tested to receive special services for Attention Deficit Hyperactivity Disorder.

In addition to observations of Jay and Mrs. Clark, a survey of the teachers in this affluent county school was conducted. The range in grade levels taught was kindergarten through fifth. The anonymity of the teachers was preserved throughout the study. Thirty surveys were

distributed, and nine completed surveys were returned. The number of years teaching ranged from three to nineteen years. On average the teachers who returned the survey had taught for ten years.

The sample for this study consisted of Mrs. Clark, Jay, Jay's mother, the special education teacher, and the nine teachers who participated in the survey.

B. Measures

In order to conduct the study, three devices were utilized: observational charts, a survey of the teachers in the school, and interviews.

Two different observational charts were developed from the information learned from reading the current literature on FAS and FAE. In one chart, the instructional activity, the student's response, and the teacher's response were documented. The student's response to the instructional strategies of the teacher was then noted. In the other chart, examples were listed of how students with FAS/FAE commonly behave according to Dr. Barbara A. Morse (1993), who is a research professor of psychiatry and a program director of the Fetal Alcohol Education

Program at Boston University School of Medicine (see Appendix A for the charts). It was also noted when the behaviors occurred and how the teacher and student responded.

For the survey of the teachers, a one page survey with eight questions was distributed. After gathering information from the literature review, eight questions were developed. The data gathered from the survey questions was used to discover the extent of teacher knowledge concerning FAS/FAE and what else they wanted to know about this subject. Nine teachers returned a completed survey (See Appendix B).

Structured interviews were conducted with Mrs. Clark and Jay's mother. An informal interview was conducted with the special education teacher. The questions asked were focused on their areas of expertise. The answers were written down and analyzed (See Appendix C for the interview questions asked to Mrs. Clark).

C. Design

Eight separate observations of the teacher's techniques and responses to Jay's behavior were conducted. The observations occurred at different times and days of the week in order to see how he responded

to different academic subjects and instructional strategies. Both observers took notes on the two different observational charts. The data from the observations was qualitatively analyzed by themes. It was noted what instructional strategies best worked with him, what techniques did not work, and when negative behavior was exhibited by the child.

The data from the survey of the teachers was analyzed according to themes and frequency charts. Results from analyzing the survey were both qualitative and quantitative . Through content analysis, conclusions were drawn from the interviews.

D. Analysis

Data retrieval charts, content analysis, and frequency charts were the methods used to systematically organize all of the information and evaluate it.

After obtaining nine of the teacher surveys, the information was compiled and the responses analyzed. For questions two, five, and seven the data was quantitatively analyzed by using data retrieval charts to determine percentages. The teachers' responses to question two, which asked them to list the signs and characteristics of a child with FAS

or FAE, were compared to nineteen characteristics commonly listed in the literature review. The percentage of characteristics they knew was then determined. For questions five and seven, their answers were tabulated in order to calculate the frequency of different responses. For the other questions on the survey, their answers were organized into common themes and quantitatively analyzed.

From the data on the observation charts taken from the visits to the classroom, common and reoccurring themes were determined. Specific attention was paid to the teacher's techniques or responses to Jay's behavior, so that conclusions could be drawn about which teacher strategies are effective. The information from the interview s with his mother, his regular classroom teacher, and the special education teacher were reviewed in much the same way. Common themes were found in order to draw conclusions about academic and behavioral problems of alcohol-affected children.

E. Summary

In Chapter IV and Chapter V, the data found in the field will be related to the information found in the literature review in order to help

educators gain more knowledge about the methods of identification, strategies of instruction, methods of intervention, and issues related to having students with FAS or FAE in the regular classroom.

Chapter IV

Analysis of Results

As knowledge about the prevalence and impacts of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) is gained, both are increasingly recognized as having an impact on societal and educational systems. FAS and FAE are issues that merit better understanding because of the numerous challenges they bring to the classroom. The purpose of this study is to determine what knowledge is necessary to educate teachers on the special needs of students who have FAS/FAE in the regular elementary classroom, so the educational experience can be more beneficial for all involved. From observations in a regular first grade classroom, a survey of teachers, an extensive literature review, and interviews with teachers and a parent of a suspected child, it is anticipated that this project will help prepare teachers for the labeled and unlabeled child in the regular elementary classroom. The research is further intended to assist teachers in the means of identification, the process of intervention, the methods of instruction, and the issues related to FAS/FAE. An information packet will be produced that can easily be

used as a resource for teachers who are facing the challenges of educating the labeled and unlabeled student with FAS/FAE.

The focus of the survey questions was to discover what teachers knew about FAS/FAE, whether they thought this disease deserved more attention, how they would instruct affected students, and whether they had faced the effects of this syndrome in their classroom. The nine teachers who returned the survey have been teaching on average for about ten years. When asked to list the signs of FAS or FAE, 33% of the teachers knew none of the eighteen characteristics of FAS or FAE. The most characteristics that any one teacher could name was seven (see Figure 1).

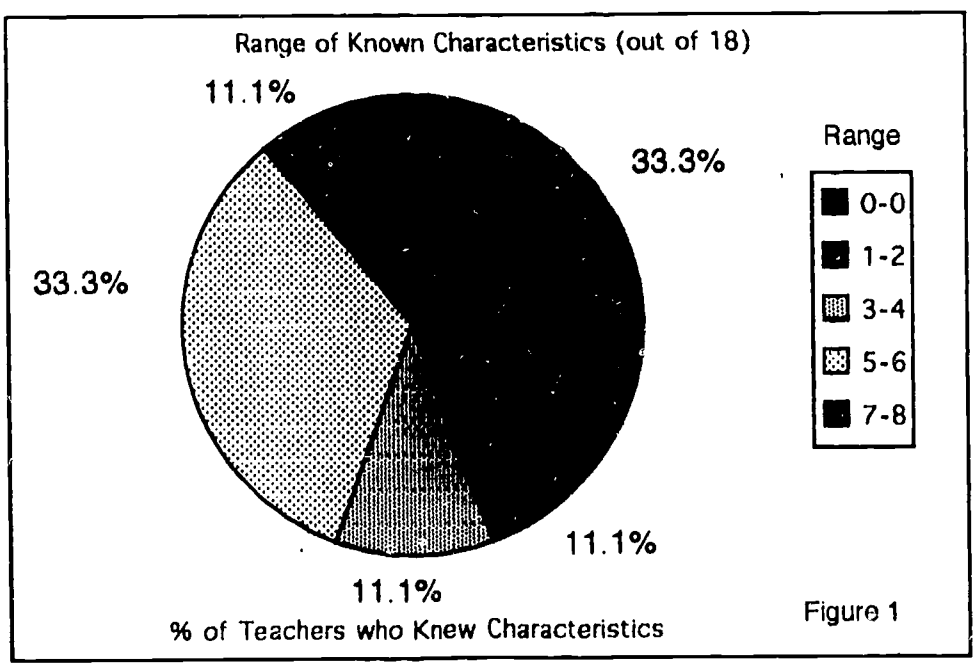


Figure 1

The average teacher could name about three characteristics. The most commonly listed characteristic that 55.5 % of the teachers recognized was the physical feature of widely spaced eyes. None of the teachers listed a flattened nose, small skull, impulsivity, poor judgment, weak causal connections, or inappropriate behaviors such as stealing and lying as signs of FAS or FAE (see Figure 2).

Results of Teachers' Responses to Listing the Characteristics of a Child with FAS or FAE

(T/A = Teacher A)

	A	B	C	D	E	F	G	H	I	J	K	L
1	CHARACTERISTICS	T/A	T/B	T/C	T/D	T/E	T/F	T/G	T/H	T/I	TOTAL #	TOTAL %
2	widely spaced eyes			X	X	X	X			X	5	55.6
3	hooded lids						X			X	2	22.2
4	flattened nose					X					0	0
5	no ridge bt. nose and lip						X			X	2	22.2
6	small skull										0	0
7	mental retardation			X		X	X				3	33.3
8	poor motor coordination				X					X	2	22.2
9	slow growth rate						X	X			2	22.2
10	hyperactive			X							1	11.1
11	impulsive/outburst										0	0
12	attention deficits			X							1	11.1
13	phsical defects			X			X			X	3	33.3
14	impaired memory				X						1	11.1
15	poor judgment										0	0
16	weak causal connections										0	0
17	poor processing skills				X	X				X	3	33.3
18	learning disability			X	X					X	3	33.3
19	innappropiate behaviors										0	0
20												
21	TOTAL# each (T) knew	0	0	6	5	4	6	1	0	7		
22	TOTAL % each (T) knew	0	0	33.3	27.8	22	33.3	5.5	0	38.9		Figure 2

From this survey information, it was realized that teachers need education about the indicators and signs of FAS and FAE in order to be able to recognize it.

Another conclusion drawn from quantitatively analyzing the survey was alcohol affected children are present in the school system. When asked if the teachers had ever had a student identified with FAS or FAE in their class, 44% answered they had students whom they had suspected of being alcohol affected. 11% of those surveyed had had an identified student in their class (see Figure 3).

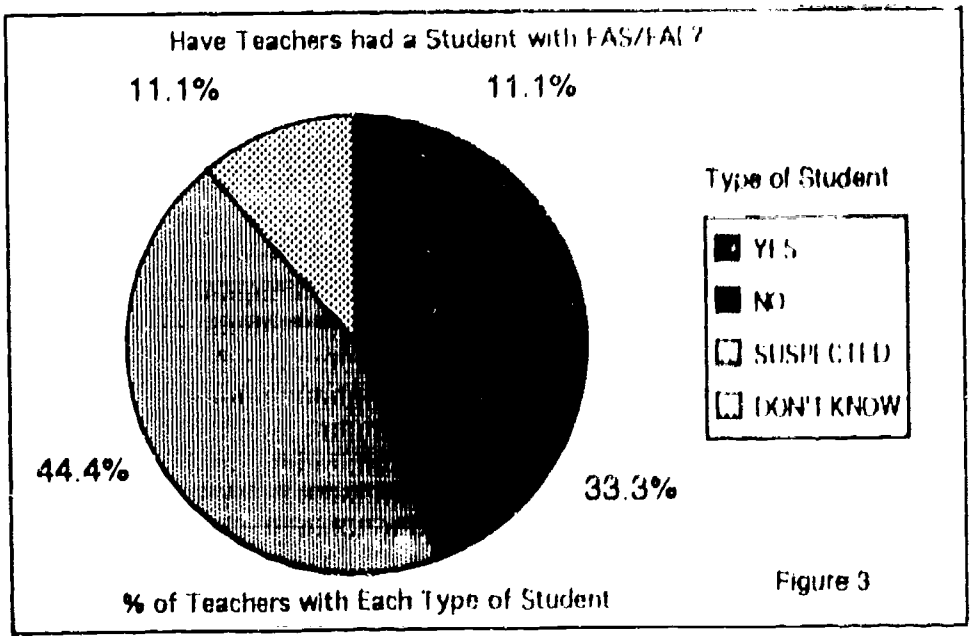


Figure 3

The information in Figure 3 verified the difficulty in identifying a student with FAS and FAE. Obtaining a medical diagnosis, linking the causes of the student's problems to one effect, and approaching the parents is hard for educators to do especially if they lack the knowledge about FAS and FAE. This data showed that the challenge of identifying and intervening on a child's behalf may deny many alcohol affected children and teachers the support they need in the regular classroom. It is most likely for this reason that over half of the teachers in the survey stated that FAS and FAE need more attention in the schools.

To further this study information gathered from interviews, surveys and observations provided a rich source of qualitative data. A content analysis of this information was conducted in order to establish consistent and reoccurring themes. The interviews with [illegible] and the special education teacher provided information about [illegible]'s academic and behavioral progress in the classroom. The interview with her mother provided insight to the difficulties and challenges she has with [illegible] at home. The surveys provided an overall guide for what administrators knew and wanted to know. The observations allowed the researcher to see the challenges that educating a child suspected of having FAS/FAE at the

[illegible]

tries many instructional strategies, such as memory and matching games, to help him make connections between symbols and what they represent. As Mrs. Clark explained, Jay understands that 3+2=5 but he does not know the symbols that represent the actual numbers. The observers noted that Jay was incapable of arranging magnetic letters into words. Even after being given individual directions, he shook the letters around in the box and spilled them on the floor. His mother has also noted that he makes weak connections. She explained,

> "For example, when I ask him to feed the cat, I have to ask him to get the can. After he gets the can, I have to tell him to open it. Then I have to ask him to put it into the dish. He gets confused thinking about the next step."

Since he forms weak causal connections, he cannot generalize from one situation to next, he is unable to understand symbols, and he cannot follow through on a multi-step task.

Another challenge facing Mrs. Clark is how to effectively manage Jay's inappropriate behaviors. Ongoing problems in the classroom are his lying and stealing. As she explained, Jay's backpack has to be next to her desk instead of in the coat closet with the other students'

belongings. "I hate to do it, but I have to keep a close eye on his stuff. He takes markers, pencils, ink pad stamps, or whatever else he finds interesting," said Mrs. Clark. His mother admitted to Mrs. Clark that Jay had a problem with stealing in the past and continues to lie at home. It was observed that when Jay is questioned about his incomplete work, he lies and says another teacher told him that he did not have to do it.

Throughout the study, the most effective strategy to deal with his behavior and academic problems was one-on-one attention. In twelve observed instances, one-on-one attention had a positive effect on both Jay's academic and behavioral performance. Mrs. Clark finds this strategy difficult to implement because of the needs of the nineteen other students. She says, "Jay has a sweet disposition if I could only hold his hand all day long." It was noted during observations that when Jay was ignored during word study, he colored, scribbled, and crumpled his assignment sheet. After the teacher gave him individual attention, he became engaged, and they made sentences together. Observations of Mrs. Clark and Jay provide evidence that one-on-one attention, eye contact, and close physical contact are ideal strategies to execute in academic situations. A common strategy that four teachers in the survey

said they would try to incorporate into the class to help a student with FAS/FAE was to touch base as often as possible, to individualize teaching, and to provide one-on-one attention.

Mrs. Clark expressed that she is frustrated. She tries to help him succeed in the regular classroom but has not been able to find both effective and realistic strategies that consistently work with Jay. She is seeking help from the resource teacher and having Jay tested. When the teachers in the survey were asked what strategies they would incorporate into the class to help a student with FAS/FAE, they also responded that they would seek resource help. Another teacher expressed her frustration, "I have no idea what I would do. There are already so many things demanded of me as a teacher. I don't have time to incorporate anything else. I already do not have enough time to TEACH!" The special education teacher also expressed her frustration because it is difficult to have these children identified for special services. There is no specific FAS or FAE label in the educational system. The only label in the school system that somewhat fits FAS's description is Other Health Impaired (OHI). Since the FAS/FAE label is dependent on a medical diagnosis and carries a social stigma, many children like Jay

are labeled LD or ADHD.

In order to gain further knowledge about what educators need to learn about how to effectively respond to the academic and social needs of alcohol affected children, eight classroom visits were made, interviews were conducted, and a survey was implemented. From the survey, it was realized that teachers have limited awareness of FAS/FAE and want to increase their knowledge. From the observations, interviews, and surveys, the common behaviors displayed were hyperactivity, lying, stealing, and weak causal connections. The strategies that are found to be most effective are individualized teaching and one-on-one attention. The work in the field supported the information that had been gained from the literature.

Chapter V

Conclusions

A. Conclusions

The conclusions drawn from analyzing the data and reviewing the literature confirmed that educators need to learn more about FAS and FAE. Educators need to gain knowledge about the means of identification, the process of intervention, strategies of instruction, and the issues related to FAS and FAE.

The prevalence of children with Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) is increasing and having a significant impact on the school systems of the United States. As previously stated, it is estimated that 7,000 children are born each year with FAS, while FAE is three to five times as likely to occur (Kleinfeld and Wescott, 1993). Educators need to be aware of the syndrome and its effects. The survey results showed that teachers lack the knowledge to recognize the syndrome, as 33% were unable to list any of the characteristics. Identification is difficult, but it is the first step in helping children cope with FAS and FAE. Therefore, educators need to be informed about the red

flags that signal that a child may have FAS or FAE.

Developing an effective plan for managing a student with FAS/FAE requires the collaboration of a team of staff members who are working to understand FAS/FAE. Since alcohol affected children have a wide range of academic and behavioral problems, trying to manage one or two affected children in a regular class takes a great deal of time and energy away from the rest of the students. Mrs. Clark explained in her interviews that if she is working with other students and cannot provide one-on-one attention, then Jay exhibits behavioral and academic problems. Therefore, changes have to be made in the way the current educational system is set up (Davis, 1994). More support, assistance, and intervention strategies need to be incorporated into the present educational system to help better serve the academic and emotional needs of children with FAS/FAE.

Teachers and educators can be more effective if they have the knowledge to identify and the support to intervene. Frustration can be minimized for everyone involved if the teacher is knowledgeable and well prepared. The teacher will be able to incorporate more instructional strategies into her teaching if she has a better understanding of how to

address these children's special needs.

Davis (1994) asserts that school districts nationwide have only recently begun to understand the seriousness of FAS and FAE and the fact that both are life-long, irreversible birth defects. With this growing recognition teachers are asking themselves what can they do for the affected students in the classroom while still meeting the needs of the rest of the students. Students with FAS/FAE are unique, can differ in learning abilities, and have erratic behavior, so it is difficult develop a specific curriculum for them. Teachers should learn methods of how to instruct children with FAS/FAE in the regular classroom. If a teacher learns of or suspects an alcohol-affected child is in her class, she needs to individualize her program and plan ways to help this child learn appropriate behaviors and functional skills. Adjustments are necessary to address the needs of a child with FAS or FAE, but as with all children, being supportive, firm, and flexible is essential. Realistic expectations need to be set, so they can be achieved by both the teachers and the students. Special education is necessary for these children since their needs are diverse and extensive. The regular classroom teacher must work with administrators, other teachers, and parents to incorporate

effective strategies into the regular classroom. Incorporation of effective strategies will help affected children learn and build self esteem. Children with FAS/FAE need a supportive, giving environment so they can develop to their full potential (Rice, 1994). A structured classroom with clear guidelines and good communication is optimal and all the more a necessity.

Since FAS and FAE have such detrimental effects, there are other issues that must be addressed besides how to educate the elementary age child. Studies reveal that since FAS and FAE cause permanent, lifelong damage, they have an effect on society. Many adults cannot live independently and have to be supported by society. As Shelton and Cook (1993) vividly describe, one twenty year old cannot make change for a dollar, tell time, understand the plot of a T.V. movie, or live independently. According to Williams et al. (1994), the cost of serving individuals with FAS has been estimated to range from $321 million upwards per year in the United States. Another issue concerns the services that should and could be provided in the home. Many family environments are unstable and worsen the problems of children with FAS/FAE. Many affected children go through an average of five different

principle homes in their lifetimes and 50% are in foster care (Williams et al., 1994). What affected children need most is stable, structured environments, yet only few are provided this all important factor. It is important that parents be given the support and education they need to provide the environments affected children need to reach their optimal ability.

The most tragic issue facing society is that all of FAS/FAE is completely preventable. Therefore programs need to be developed and implemented that teach young people about the effects of drinking alcohol. Information needs to be disseminated into communities about the danger of drinking. Educators as well as doctors and social workers must take a proactive stance in establishing FAS and FAE preventative efforts (Shelton & Cook, 1993).

Based on the literature review and field work, it was concluded that educators need an accurate, accessible resource guide to educate them about the means of identification, the process of intervention, the strategies of instruction, and the issues involved with FAS and FAE. When educating a child with FAS or FAE, teachers need knowledge and support . 44% of the surveyed teachers suspected they had taught a

child with FAS or FAE, and the majority wanted more attention paid to this issue. Teachers have expressed concern about finding instructional strategies that work with alcohol affected children in the regular classroom. Therefore from the literature review and research in the field, a resource guide was compiled to educate about the needs of students who have FAS or FAE (see Appendix D for the resource guide).

B. Recommendations

From this study, it is recommended that in-service be provided for educators about the subject of FAS/FAE. Educators need to gain knowledge about the means of identification, the process of intervention, the methods of instruction, and the issues involved. Through education, teachers will be better able to address and meet the needs of children who are alcohol affected. It will decrease frustration and may lead to a more successful educational experience for the educators and students.

Another recommendation is that educators take a pro-active role in educating students and community members about the dangers of consuming alcohol while trying to conceive or being pregnant. FAS/FAE are totally preventable. It is hoped that if teachers work with other

professionals, this disease may cease to exist.

Finally, it is recommended that support be provided for both educators and parents as they struggle to meet the challenges of having a child with FAS or FAE in the classroom or at home. Educators and parents need to work together. A workshop should be provided for parents and teachers that helps them to exchange ideas and techniques. They need to work together to provide stable, secure environments for children with FAS/FAE.

The tool of education is a powerful one and should be used to build a foundation that prepares teachers to meet the needs of the child with FAS or FAE in the regular classroom.

Appendix A

Observations

date: **time:**

activity	student's response	teacher's technique or response	student's response

Appendix M

Survey about Awareness of Fetal Alcohol Syndrome

[illegible]

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible]

5. [illegible]

6. [illegible]

7. [illegible]

8. [illegible]

Appendix C

Interview Questions for Classroom Teacher

1. When Jay was tested last year for special services, what were his scores?

2. How many teachers are at your school?

3. Do you know what would have happened if he had come to school with a label of FAS or FAE?

4. Do you think there is any reason to get Jay identified and labeled with FAS/FAE?

5. What first made you suspect that Jay had FAS or FAE?

6. What instructional strategies do you find work with Jay?

7. Have you had a support/intervention team to help you deal with Jay's behavior and academic problems?

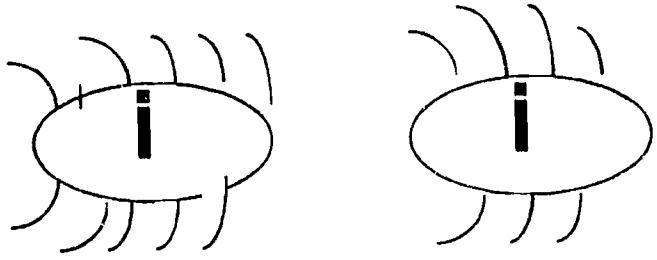
8. What steps have you taken to intervene on Jay's behalf?

9. How have you dealt with Jay's family?

10. Do you think schools will ever push for a FAS/FAE label, due to the stigma attached?

Appendix D

All



on FAS and FAE:

issues
identification
intervention
instructional strategies

A Handout for Educators

April 1995

by Gwathmey Finlay and Amy Sorenson

issues

•INFORMATION

- •FAS and FAE are on the rise (average is 28,000 born with them each year)
- •they are currently the leading cause of mental retardation
- •they can affect any child no matter what socioeconomic group

•PREVENTION

- •It is totally preventable (don't drink while pregnant)
- •It holds the most hope for reducing the occurrence of FAS and FAE
- •prevention depends on education being given to adults and children
- •warning labels on alcohol telling about the dangers of drinking while pregnant
- •physicians, educators, researchers, and social service need to work together

•DIAGNOSIS

- •can only be made by trained professionals in the medical field
- •difficult to obtain mother's history of alcohol consumption while pregnant
- •stigma of being labeled
- •wide range of academic and behavior skills

•FAMILY

according to B. Williams, V. Howard, and T. McLaughlin in Education and Treatment of Children, 1994.

- •many affected children go through average of 5 principal homes
- •only 9% live with both biological parents
- •50% live in foster care
- •many are adopted by parents who are unaware of the biological mother's history of alcohol consumption and do not know the child has been affected
- •unstable family environment compounds the problems of affected child
- •unable to obtain diagnosis and support the family needs to raise the child
- •difficult for child to ever become independent (lack life skills)

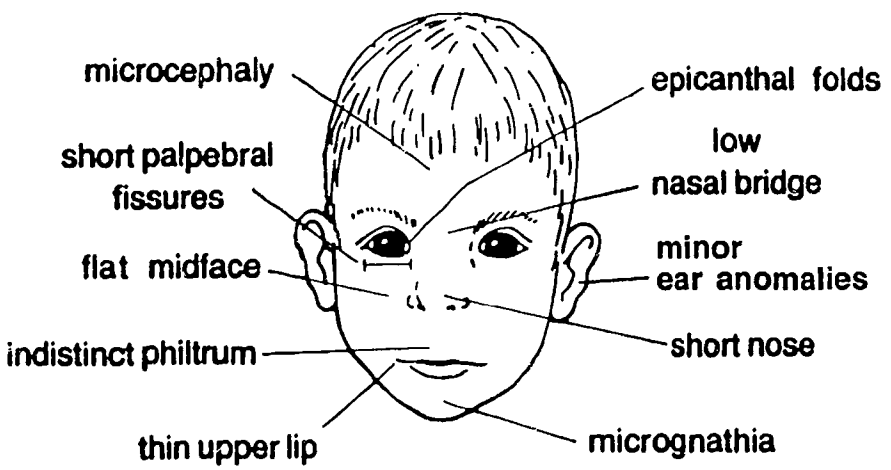
•EDUCATION

- •teachers lack knowledge to educate affected child in regular classroom
- •it may be difficult to approach parents
- •lack the support within the school system
- •research seems to prove that mainstreaming does not work for the children
- •how to balance affected children's needs with the other children's needs
- •how to insure the affected child receives special services
- •there is not a special education label that addresses all of these affected children's needs
- •the cost of serving an individual with FAS has been estimated to range from $321 million per year in the US (Williams et al., 1994)

identification

•PHYSICAL FEATURES

- •widely spaced eyes
- •hooded lids
- •flattened nose
- •absence of a ridge between nose and upper lip
- •small skull
- •slow growth rate
- •poor coordination



From Fetal alcohol in Toxic Substances and Mental Retardation (1987)

•BEHAVIORAL CHARACTERISTICS IN GRADE SCHOOL

- •need one-on-one attention
- •attention deficits (unable to stay on task)
- •hyperactive (easily distracted/distracts others)
- •low social skills
- •can become easily upset (outbursts/impulsivity)
- •inappropiate behaviors (lying, stealing)

•MENTAL CHALLENGES IN GRADE SCHOOL

- •poor processing skills (impaired memory)
- •learning disabilty
- •inability to make causal connections
- •mental retardation
- •poor judgment
- •can read and write, but tend to be slow

intervention

according to Diane Davis in Reaching Out to Children FAS/FAE

- DEVELOPING A PLAN
  - follow guidelines established by individual school district
  - if student arrives with diagnosis, make certain he receives special services
  - gather data and information about suspected child (documentation)
  - form intervention team (principal, psychologist, nurse, counselor, classroom teacher, special education teacher)
  - goals of the intervention team
    - develop IEP
    - discuss strategies that will provide the student with a safe, positive atmosphere
    - plan a curriculum that includes teaching basic living and social skills
    - be aware of cultural diversity and understand stigma
    - be updated on current research
    - network with community resources
    - provide support for each other

- COMMUNICATION WITH PARENTS
  - be sensitive and non-threatening but find out information about mother's pregnancy
  - ask general questions
    - Tell me about your pregnancy
    - How would you describe your nutrition during your pregnancy?
    - How would you describe your emotional state during pregnancy?
    - What is your family's medical history?
    - Are there medical problems that your child may be affected by?
    - How would you describe the use of drugs or alcohol in family?
    - What were your drinking patterns during pregnancy?
  - recommendation needs to be made to the parents that child be diagnosed by trained physician.
  - after permission is gained, school psychologist decides which academic and psychological test to administer and discusses results with team

- WHEN PARENTS WILL NOT COOPERATE
  - intervention team must consider its options
    - discuss special services child can receive without parental consent (tutor or aide)
    - determine ways to monitor child more closely to eliminate behavior problems
    - document all incidences of concern
    - schedule regular staffings so all staff is up to date
    - drawing up a written contract between the student and appropriate staff
  - ultimately the principal has to make the final decision as to how much the school can do

instructional strategies

according to Dr. Tanner-Holverson in Fantastic Antone Succeeds!

- **ORGANIZING THE CLASSROOM ENVIRONMENT**
  - minimize sensory overload (limit visitors, limit decorations)
  - provide multisensory reminders of classroom routine (pictorial cues)
  - minimize amount of material child must deal with at one time
  - use special seating (up front, edge of group)
  - use same staff consistently
- **HANDLING TRANSITION PERIODS: CHANGE AND TIME**
  - use a timer or cue to clearly define the beginning and ending of activities
  - explain new situations thoroughly, several times, before they occur
  - have a respite plan in place if child becomes overwhelmed
  - limit the type and number of situations encountered at one time
  - break anything new into small pieces
  - do not assume the child has prerequisite information
- **MANAGING IMPULSIVITY**
  - establish a routine
  - model and rehearse social skills
- **TEACHING GENERALIZATION**
  - develop activities that help make connections between experiences
    - brainstorm with the child similarities and differences between objects
    - play twenty questions
    - practice games that use daily living skills
    - compare what to do in various situations ("What if")
- **TEACHING ORGANIZATIONAL AND ANALYSIS SKILLS**
  - assign short tasks with clearly defined objectives
  - post schedule of days activities
  - provide list of homework, readings, and rules
  - help students distinguish between foreground / background
  - specifically teach analyzing and synthesizing skill (part to whole)
  - use whole language rather than phonics approach to reading
- **GETTING AND MAINTAINING ATTENTION**
  - test knowledge not attention span (avoid timed tests)
  - use tape recorder, ear phones, songs, music, and rhythm cues
  - use eye contact, touch, child's name, focus words
  - give directions individually
  - present information visually and kinesthetically as well as auditory
  - know length of attention span (balance structure and free time)
- **REWARDS AND DISCIPLINE**
  - redirect negative behavior (turn focus back on the child)
  - try to be positive and teach the child positive self talk
  - make "things to do" list with visual cues (choice and accomplishment)
  - provide positive incentives for finishing work
  - be firm, but supportive
  - do not argue over rules or infractions
  - make certain negative behavior is not result of child's unmet needs
- **GETTING HYPERACTIVITY UNDER CONTROL**
  - provide lessons that emphasize manual or physical expression
  - use medication (if all else fails)

Observations

date: **time:**

examples of classroom behavior	activity	teacher's response or strategy	student's response or other
become confused with directions involving more than one step			
appear to know something one day, forget it the next, know it again (especially if not interested in task)			
repeat exactly what you have asked them to do, but they still can't (or at least do not) complete the task			
have difficulty doing anything that involves arranging, sequencing, or taking turns			
repeat words, questions, or actions over and over			

according to Barbara A Morse in Fantastic Antone Succeeds!

Observations

date: **time:**

activity	student's response	teacher's technique or response	student's response

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