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# Parent Knowledge of FAS and the Risks of Heavy Drinking During Pregnancy

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PARENT KNOWLEDGE OF FAS AND THE  
RISKS OF HEAVY DRINKING  
DURING PREGNANCY

Kimberly Lynne Springer

Summer, 1995

MASTERS THESIS

Submitted to the graduate faculty at

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Grand Valley State University  
School of Education  
Assessment for EDG 695/EDR 695/EDS 695  
Research Applications

Student Name Kimberly Springer Social Security # 375-82-9289

**CHAPTER ONE**

**(Objective 2 An understanding of current issues in their field.)**

**Student**      **Faculty**  
(put pages  
where found)

Demonstrates in-depth understanding of at least one issue in their field.

- |  |            |       |
|--|------------|-------|
| 1. Describe why this problem/issue is worthy of study. | <u>4-5</u> | _____ |
| 2. Identify resources that strengthen the case.        | <u>5-6</u> | _____ |
| 3. Give a succinct history of the problem/issue.       | <u>5-8</u> | _____ |
| 4. Describe options for addressing the problem/issue.  | <u>7-8</u> | _____ |
| 5. Articulate why the option selected was chosen.      | <u>8</u>   | _____ |

**CHAPTER TWO**

**(Objective 1 An understanding of the recent research in their field.)**

**(Objective 4 Demonstrate the ability to critically analyze and synthesize existing and emerging knowledge and pedagogy in their major area.)**

- |   |             |       |
|---|-------------|-------|
| 6. Includes recent and seminal sources in review of literature.                   | <u>9-21</u> | _____ |
| 7. Includes statement of generalization that are supported by the cited research. | <u>9-21</u> | _____ |
| 8. Finds, integrates and evaluates related work (compare/contrast, categorize).   | <u>9-21</u> | _____ |
| 9. Provides a summary of their literature.  | <u>21</u>   | _____ |

**CHAPTER THREE**

**(Objective 3 Demonstrate the effective use of research methods appropriate to their field of concentration.)**

**(Objective 5 The ability to communicate concepts germane to their major area effectively to others through various kinds of literacy e.g. numeracy, graphics, printed text, computers and electronic data.)**

**(Objective 6 Demonstrate the ability to adapt their work to the needs of their clients.)**

- |  |              |       |
|--|--------------|-------|
| 10. Gives insight into the methods of other researchers.   | <u>25</u>    | _____ |
| 11. Systematic and comprehensive description of the development/design of the project.   | <u>21-25</u> | _____ |
| 12. Communicates findings in the context of past work.   | <u>23-24</u> | _____ |
| 13. Written in a style that addresses the needs of the clients (students, teachers, administrators, parents, school board, etc.) | <u>21-25</u> | _____ |
| 14. Provides recommendations for further research and/or dissemination.  | <u>25</u>    | _____ |

Faculty Signature \_\_\_\_\_ Date Reviewed \_\_\_\_\_

Approved SOE Graduate Committee 2/14/94

### Abstract

The purpose of this mini-study was to determine the level of parent knowledge of FAS and the risks of drinking during pregnancy.

The parents involved in this mini-study were members of a small, primarily rural community and had one or more children enrolled in grades kindergarten through four in the Hart Public School District.

A questionnaire was developed and mailed to a random sample of parents who were chosen from the school enrollment lists. Results of the survey indicated that the majority of parents had some basic knowledge of the term FAS; however they felt that they lacked enough knowledge to identify a child with FAS.

The results of this mini-study were incorporated into a macro-research project by Dr. Faite Mack of Grand Valley State University.

### **Problem Statement**

Drinking alcohol during pregnancy can cause serious physical and mental problems in the unborn child. Full-blown fetal alcohol syndrome manifests itself in facial abnormalities, low birth weight, small size, mental and emotional problems, and a chronic inability to cope in school and on the job. Even those less fully affected, possibly the children of women who drank only intermittently, may end up with lifelong learning disabilities and behavioral problems.

### **Importance & Rationale**

The problem of alcohol use during pregnancy and its effects on the developing fetus is worthy of further study when we consider the cost to society that FAS children represent.

The aftermath of alcohol use in the United States last year cost the nation more than \$85.8 billion dollars, or an average of \$404 for every man, woman, and child, not including pain and suffering.

Many of the children with FAS require surgeries to correct organ deformations. Also typical in FAS children are vision, hearing and speech problems. Other costs to society include those associated with mental retardation and low birth weight. The estimated cost for these FAS-related problems is about \$12.4 million annually.

About 53% of FAS patients are eligible to be placed in a residential facility each year. The estimated annual total cost for full-time residential patients is about \$33.8 million.

Conservatively, the annual cost for FAS in the United States is approximately \$74.6 million and constitutes a high cost by any reasonable standard.

The tragedy of FAS and its cost to society, is that it is entirely preventable. If no more women drank alcohol during pregnancy, or while trying to get pregnant, there would never be another child born with FAS.

#### **Background**

The set of physical and mental deficiencies that doctors call Fetal Alcohol Syndrome has been a recognized pitfall of pregnancy since Old Testament times, when Samson's mother was warned by an angel to avoid wine while carrying her unborn child.

The syndrome was first described and labeled in the early 1970's and has become one of the most actively investigated congenital anomalies in the last 2 decades.

Seventeen years of research, most of it supported by the National Institute on Alcohol Abuse and Alcoholism has proved beyond the shadow of a doubt that alcohol can and does damage fetal development.

No one knows exactly how many individuals are afflicted with fetal alcohol damage, but the estimates are staggering.

The Centers for Disease Control estimate that more than 8,000 alcohol-damaged babies are born each year, or 2.7 babies for every 1000 live births. Others feel that these figures are low.

In addition, another 3 to 5 individuals per 1,000 may show less severe effects of exposure, which may have been termed alcohol-related birth defects or fetal alcohol effects (FAE). Finally, there appear to be more subtle effects on the central nervous system and other organ systems whose consequences for behavior and development are still under investigation.

According to some U.S. studies, Fetal Alcohol Syndrome may be the third most common cause of mental retardation in the Western world (after Down's Syndrome and neural tube defects).

Scientists still do not know why FAS strikes the children of some alcoholic mothers but not others, and why susceptibility varies among different ethnic groups. Most identified cases of FAS in North America still come from sites where the majority of mothers are black or Indian, or where socioeconomic status is low.

Native Americans, for example, are 33 times as likely as Caucasians to have a child with FAS. For blacks, the rate is 6.7 times as high as for Caucasians. Women who give birth to a child with FAS have a greater-than-average risk of bearing additional children with the affliction.

Such evidence suggests there may be a genetic predisposition to FAS, but scientists have not been able to identify the offending genes. A diagnosis of FAS or FAE is often a welcome relief to parents and children because it offers an explanation for the academic and social difficulties that the youngsters experience in school. Students with FAS or FAE are likely to be found in all types of educational programs and may fall anywhere along the range from normally skilled to severely disabled.

These students tend to be fairly concrete and may do well academically during the early years of school. When subject matter becomes more abstract, however, they may have increasing difficulty keeping up.

By far their greatest area of deficit is in functional skills. Even FAS/FAE students with seemingly normal academic skills may have difficulty generalizing them to settings outside the classroom. The inability to predict consequences or to use appropriate judgement in daily life makes it difficult for these young people to achieve favorable outcomes in vocational settings. It is critical to realize the seriousness of students' functional skill deficits if we are to implement effective educational programs.

There is no treatment for FAS and so the only way health officials can fight the scourge is to step up educational efforts.



All alcoholic beverages must now carry warning labels and in New Hampshire, couples must read a pamphlet on FAS before they can obtain a marriage license. But for women who are addicted to alcohol, the need to drink often overcomes caution and reason. Until better ways are found to identify and treat alcoholics, they will continue to inflict a devastating toll on their children.

#### Statement of Purpose

The purpose of this study is to develop and distribute a parent survey which will assess the level of knowledge about Fetal Alcohol Syndrome.

More specifically, this survey will assess whether or not parents are aware that FAS exists, what FAS is, and if they realize the effect that alcohol consumption has on a developing fetus during pregnancy.

This survey is not attempting to determine the rate of occurrence of FAS in this particular community.

The final product will be a table, showing by percentage how parents responded to each question.

The findings of this mini-study/survey will be incorporated into a macro-research project by Dr. Faite Mack.

## Chapter Two: Literature Review

Because the terms "fetal alcohol syndrome" and "fetal alcohol effects" were only introduced some 20 years ago, many people believe the disease is a recent phenomenon. Actually, for centuries writers have commented on the connection between alcohol and poor pregnancy outcome. The direct connection between maternal alcohol intake and poor pregnancy outcome remained undocumented until rather recently.

From the research of Ernest Abel and Robert Sokol (1991) one learns that in the Middle Ages Francis Bacon recognized the negative impact of alcohol on pregnancy. Bacon was astute in warning against consumption of alcohol by pregnant women on the grounds that it could affect the fetus via the nutritional status of the woman.

An interesting epidemiological study by Bezzola (as cited in Seitz de Martinez, 1995) noted a higher rate of retardation and malformation among babies born after periods of seasonal drinking than during the months of heavy labor (e.g. planting and harvesting times).

In the United States, the name "fetal alcohol syndrome" was coined by Jones et al. (1973). They identified the source of the insult to the fetus as prenatal exposure to alcohol (Seitz de Martinez, 1995).

When a pregnant woman sips a glass of wine or has a shot of bourbon, the alcohol passes through her bloodstream to the placenta and into the baby's bloodstream.

And because fetal metabolism is 50 percent slower than the mother's, the effects of the alcohol are likely to stay with the baby long after Mom's morning after headache.

The news media have not covered fetal alcohol exposure to the degree coverage has been given to "crack babies", so many people who work closely with children may know little of how it can cripple a child's physical, social, and academic development (Black, 1993).

Every 90 seconds a baby is born in the U.S. suffering from exposure to cocaine. Overall, the number of drug-exposed babies jumped to an estimated 375,000 last year, up 300 percent since 1985. Meanwhile, roughly two out of every 1,000 kids are born disabled because of excessive drinking by expectant mothers (Brower and Wilhelm, 1990).

Consuming large amounts of alcohol can result in mental retardation, spinal curvature, and facial abnormalities in the fetus; a moderate to small amount of imbibing may produce a child who has emotional problems, insomnia and a chronic inability to cope in school and on the job. This less severe form of FAS, known as Fetal Alcohol Effect, apparently can be brought on at certain critical stages of development by a single glass of champagne (Leerhsen and Schaefer, 1989).

According to an article in McCall's (1985), a pregnant woman's consumption of alcohol can also affect the size of her baby. A study conducted at the University of Washington measured 450 eight-month-old babies. Women who reported having at least one to two drinks a day had smaller babies than those who did not drink.

The more a pregnant woman drank, the smaller the infant's head circumference, height and weight. However, if a pregnant woman has been drinking and stops—even as late as the beginning of the third trimester—some ill effects, particularly stunted growth, can be prevented or lessened.

In terms of prevention, it has been recommended that since a safe limit of alcohol consumption during pregnancy has not been defined, abstinence is the most prudent preventive measure. Warren and Bast (as cited in Hawks, 1993).

Researchers are also trying to determine whether fathers drinking habits play any role in FAS. At Wayne State University, studies of male laboratory rodents have shown that alcohol exposure affects their sperm as well as the immune system and behavior of their offspring (Dorfman, 1989).

Do children eventually outgrow prenatal alcohol exposure? According to Black, (1993) usually not.

Rather, FAS and FAE traits associated with newborns and youngsters are part of a predictable long-term progression that carries over into adolescence and even adulthood.

In fact as alcohol-affected children grow older, their symptoms might become even more debilitating. By contrast, some babies prenatally affected with cocaine or other drugs outgrow their early symptoms. Although evidence suggests early interventions help many drug-affected children learn and grow at normal rates, such interventions are less likely to alter the course for FAS and FAE kids (Black, 1993).

Abel and Sokol (1991) estimated the total annual cost to society for FAS is \$74.6 million. Of this, 18% is accounted for by costs associated with mental retardation and low birth weight. Pain, suffering and other aspects contributing to the value of human life were not taken into account.

Harwood and Napolitano (as cited in Bloss, 1994) have estimated the lifetime cost to age 65 associated with a typical case of FAS for a child born in 1980. The total (undiscounted) lifetime cost was estimated at \$596,000 for each case of FAS, of which 68 percent represents direct expenditures necessary for treatment and residential care necessitated by FAS. The remaining 32 percent represents the value of FAS-related productivity losses.

FAS is an entirely preventable form of mental retardation. All of the other alcohol-related effects associated with moderate drinking levels could also be prevented if women abstained from drinking during pregnancy (Streissguth, 1991a).

Have FAS, FAE, and lesser forms of fetal alcohol exposure increased in the United States in recent years? In 1991 May reported that, overall, the number of alcohol-affected or alcohol-impaired children among women who drink moderately during pregnancy might be several times greater than the rates of FAS and FAE.

In overall American society, where about 40 percent of women are light drinkers, 18 percent are moderate drinkers, and 4 to 7 percent are heavy drinkers, the alcohol-affected population might be much greater than the currently reported rates of FAS and FAE, but the effects are more subtle or much less severe in each child (May, 1991).

Prevention efforts attempt to reduce the incidence of FAS and FAE by making women in the childbearing years aware of the hazards of drinking during pregnancy. Because abstaining from alcohol prior to and throughout pregnancy is the only way to guarantee the birth of a child free of FAS/FAE, prevention programs try to target women before they become pregnant. However, the programs also should target women who are drinking during pregnancy,

to increase their likelihood of having healthy babies in the current as well as subsequent pregnancies (Hankin, 1994).

One such measure, alcoholic beverage warning labels, reaches all drinkers but is a passive technique that relies on the drinker to read, understand, and comply with the warning. Also at issue is whether the woman sees the label (some are hard to find) and whether someone else pours the drink from the bottle for the woman (e.g. a waiter in a bar) (Hankin, 1994).

Educational campaigns will persuade millions of moderate drinkers of the danger. However, a study by Hankin (1994) of pregnant women in Detroit demonstrated that the alcoholic beverage warning labels resulted in only a small decrease in drinking.

But what of the "lush" or the "cokehead" beyond the reach of warning labels, public service ads and doctors' admonitions? Clearly, if she won't stop drinking or using drugs to save herself, she won't stop to save her child.

So how can a public menace who can't control herself be controlled? Those who have studied the problem . . . argue for incarceration of pregnant drinkers. But, draconian programs, though they might do much to assuage public outrage, would do little to enhance public health (Benderly, 1989).

Under the Sandinistas, Nicaragua developed a program in which pregnant women had to leave their villages and move into a hospital for the final months of pregnancy so they could receive guidance in child care. An added advantage to the mother, her child, and the community was that the mother's eating and drinking habits could be controlled. A democracy would probably not accept such control, but desperate situations sometimes drive a community to desperate solutions (Wall, 1994).

A very brief overview of the literature on FAS prevention indicates several common approaches. Obstetricians and gynecologists in their offices and clinics are in the most feasible and beneficial sites to implement FAS prevention measures. Not surprisingly, however, many physicians hesitate to ask patients about alcohol use because of an array of administrative, personal and motivational problems. Among these problems are: 1) inadequate knowledge about the problem; 2) the effort seems time consuming and difficult; and 3) it is believed that denial will undermine the treatment or preventive regimen (Donovan, 1991).

Furthermore, it is widely recognized that patients will seldom tell physicians, nurses, or other health professionals the amount of alcohol that they are drinking (Sokol, 1981).



Accordingly, several tools exist for assessing a pregnant woman's drinking habits, including tests for biochemical indications of alcohol-related damage to body systems and screening procedures based on questionnaires about drinking behaviors. Screening refers to the mass administration of a test for a health problem to people who have not already been identified as being at risk for that problem.

Routine assessment of alcohol intake during pregnancy can be thought of as screening for risk drinking during pregnancy. The ideal screening test would be both highly sensitive and highly specific, but in actuality, there is a tradeoff between sensitivity and specificity for any given test.

Usually, screeners give priority to sensitivity, and, given the importance of identifying risk drinkers, this should be done whenever possible. However, specificity becomes more critical in situations in which resources are not available to follow up adequately on patients who screen positive.

Questionnaires currently are the tools most frequently used in prenatal clinics. Brief questionnaires represent the most effective method of screening for risk during pregnancy (Russell, 1994).

The Pregnancy and Health Program (PHP) in the state of Washington developed several alternatives to relying on physicians to screen patients. These alternatives help the busy doctor to handle this important aspect of prenatal care as efficiently as possible, and a patient's possible reluctance to report drinking to her physician can be avoided. The PHP provided health care professionals with the opportunity to use a brief questionnaire about alcohol consumption in their waiting rooms. Patients complete the questionnaire and leave them in sealed envelopes for delivery to the PHP. The staff reviews the questionnaire and contacts any woman who appears to be creating a risk for her unborn child (U.S. Department of Health and Human Services, 1987).

One important prevention strategy involves family practitioners and obstetricians in counseling their patients regarding alcohol use. Physicians can educate pregnant women about the potential hazards of excessive alcohol consumption during pregnancy. This type of secondary prevention serves to educate the people at risk for the disorder, and can be a cost effective way of addressing the problem.

Education about alcohol must be an integral part of all medical school curricula. Our doctors must know how to recognize, diagnose, refer and treat alcoholics-

both male and female--and the children of alcoholics, particularly those with FAS and FAE. These patients with FAS and FAE are at high risk for developing alcohol problems themselves--doctors must learn to identify patients with FAS, not just as children, but as disturbed teenagers, as alcoholics, and even as pregnant women. Recognition of their cognitive limitations should enable the development of more appropriate and specialized treatment programs (Streissguth, 1991b).

Primary preventive education can also occur at the school and community levels. In several states the effects of public education have been studied and some positive changes were found among the general public opinion. Unfortunately, according to Little and Streissguth's study (as cited in May and Hymbaugh, 1989) those found least likely to change their opinions toward advocating abstinence when pregnant were younger, low socioeconomic persons who drank.

The National Institute on Alcohol Abuse and Alcoholism (as cited in Hankin, 1994) shows that King County, Washington launched a public health campaign that provided information about alcohol and pregnancy to 1 in 44 pregnant women in the Seattle area between 1974 and 1981. As a result, awareness and knowledge increased among these women regarding the risks of drinking during pregnancy.

Masis and May 1991 (as cited in Hankin, 1994) give another example of a successful community-based program; the Tuba City, AZ, Fetal Alcohol Syndrome Prevention Project, which focuses on preventing FAS among Navajo and Hopi Indians in Arizona. The project operates prevention programs that involve community-wide FAS education, prenatal clinic screening for alcohol use, and education for women in prenatal clinics. For women identified as high risk because they drink heavily during their pregnancies and previously gave birth to a child with FAS and FAE, the prevention program includes detoxification, individual and group therapy, and voluntary birth control or sterilization services.

According to Rosenthal (1990), the Boston University group has led the way in calling for better counseling and improved drug-treatment opportunities for pregnant women. "Pregnancy is a time of incredible motivation for women," says Dr. Barbara Morse, (program director of the Boston Univ. Fetal Alcohol Education Program) noting that of those heavy-drinking women in the program who received counseling, two-thirds were able to cut down considerably or stop altogether. Unfortunately many in-patient alcohol rehabilitation programs exclude pregnant women, she said. Massachusetts recently opened four residential programs to

treat pregnant alcoholics and other substance abusers, making that state the leader nationwide.

Fortunately, programs for prevention and treatment of alcohol abuse during pregnancy are under way at this time, and the evaluation of these programs may provide us with valuable techniques for prevention of FAS/FAE (Coles, 1992).

Accordingly, a national agenda aimed at considerably reducing preventable death and disability and enhancing quality of life by the year 2000 has been initiated. Healthy People 2000, U.S. Department of Health and Human Services (as cited in Dufour, 1994), is a substantial effort involving health professionals and citizens, public agencies and private organizations from all over the United States.

More than 300 specific objectives in 22 priority areas were identified in Healthy People 2000 as goals targeted for achievement by the year 2000 (as cited in Dufour, 1994). One of these objectives is to reduce the incidence of FAS to no more than 0.12 per 1,000 live births. A step toward attaining this level would be to ensure that all prospective mothers know what FAS is. Although increased knowledge and awareness do not necessarily lead to changes in behavior, it is unlikely that changes such as decreasing or eliminating alcohol consumption during pregnancy will occur in the absence of knowledge of the risks of not doing so.

Increases since 1985 among women ages 18 to 44 years of age regarding their agreement on the risks of heavy drinking, their awareness of FAS, and their ability to correctly describe FAS are encouraging. The level of knowledge among these women regarding what FAS is, however, is still disturbing. Obviously, more prevention and education efforts are needed to inform women of the dangers of heavy drinking and of any drinking during pregnancy.

Weiner and colleagues (as cited in Hankin, 1994), suggest there is a need to go beyond educational campaigns such as beverage warning labels. They argue for programs tailored to intervene directly with pregnant women who are risk drinkers. For example Masis and May, (as cited in Hankin, 1994) promote a multi-faceted approach that includes "outreach, case finding, and some community awareness."

This literature review has described only a few FAS programs. Through the efforts of these programs, and others like them, they hold the promise for reducing the incidence of heavy drinking during pregnancy and improving birth outcomes. When it comes to stopping FAS, prevention is key.

## Project Components

### Survey Group

The survey group consisted of parents who had one or more children in grades kindergarten through four, enrolled in the Hart Public School District. A random sample was drawn by selecting every fourteenth name from the enrollment lists.

The random sample consisted of three men, nine women and forty-eight couples. The ethnic distribution of the sample group is as follows: Hispanic-American-26 percent, other-74 percent.

In addition, 63 percent of the sample group resides in a rural area and 24 percent in an urban area. The remaining 13 percent is unknown due to the fact that those addresses did not contain a street name or route number.

The total number of surveys administered was 70, and 14 (20 percent) were returned for data analysis.

### Survey Instrument

A three page questionnaire was developed (see Appendix A). The questionnaire contained 32 questions about FAS. Questions 1-13 were multiple choice and the respondents were asked to circle the appropriate letter that reflects their answer. The next fourteen items (questions 14-27) asked parents to mark the response which best reflects their opinion using strongly agree, agree, disagree, strongly disagree. The last five questions (#28-32) listed characteristics of FAS and asked parents to

respond yes or no based on whether they thought the feature was indeed a characteristic of FAS.

### Project Methodology

#### Data Collection

Using a cover letter (see Appendix B), parents were informed that the survey would take approximately 15 minutes to complete and all responses would be kept confidential. They were also given a stamped envelope to return the questionnaire in. Whereas the questionnaire was distributed on May 30, 1995, the survey group was requested to return their responses by June 6, 1995.

#### Data Analysis

Data was tabulated and compiled into a table (see Appendix C) using percentages and frequencies based on responses for each question.

#### Survey Findings

The purpose of this mini-study was to assess the level of knowledge of FAS by parents in one school district. The majority of the survey respondents were female and had no teaching experience.

The parents surveyed agreed that:

1. Interview forms gathering information on a child's developmental history should include questions on prenatal history and alcohol consumption.



2. FAS is equally prevalent in all ethnic groups.

3. FAS children are identifiable.

4. FAS is a childhood and also a lifelong disability.

5. The condition does not subside with age.

6. FAS can result from even the smallest consumption of alcohol. The minimum level of alcohol consumption that would place the fetus in danger of FAS was one to two drinks daily.

7. Fetal development was most at risk during the first trimester of pregnancy.

8. FAS children benefit best from early interventions.

9. FAS children may exhibit motor delays, hyperactivity, attention deficit problems, learning impairments and facial abnormalities.

While the majority of those surveyed felt that FAS children are identifiable, they also felt very strongly that they themselves do not have the ability to identify a child with FAS.

There were a few survey items that a majority of parents disagreed with:

1. All FAS children exhibit the same behavioral characteristics.

2. FAS children have better expressive than receptive language.

In addition, the parents surveyed were divided on their responses to the following items:

1. FAS is the leading cause of mental impairment.

2. FAS/FAE are the same condition.

### Conclusions

Children with fetal alcohol syndrome and fetal alcohol effect can be found in all communities and school systems. Parents need knowledge about FAS in order to understand the risks of alcohol consumption during pregnancy. The parents surveyed seemed to have some basic knowledge about FAS but did not have full knowledge of the characteristics of FAS, or how to identify children with FAS.

We are able to conclude from this study that the parents are lacking specific knowledge about FAS/FAE and have no confidence that they can identify a child with this condition.

### Recommendations/Plans for Dissemination

Parents need to be adequately informed and trained to recognize, understand and deal with the needs of children with FAS/FAE, as well as how to prevent this condition from occurring.

There should be a coordination of services between health providers, social service agencies and schools to conduct inservice sessions for parents. Information can also be disseminated through the use of guest speakers, videotapes and reading material.

As a teacher, I am in a good position to inform my colleagues of the survey findings and I plan to work with others in my school district and community to find ways of disseminating information about FAS/FAE to parents.

The findings of this mini-study will be incorporated into a macro-study by Dr. Faite R-P Mack.

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## APPENDIX A

## FETAL ALCOHOL SYNDROME PARENT SURVEY

1995

Carefully read each question and circle the appropriate letter that reflects your answer. FAS refers to Fetal Alcohol Syndrome.

1. How many years of teaching experience have you had?  
 A - 0                      C - 4-5                      E - 11 or more  
 B - 1-3                    D - 6-10
2. What type of community best identifies your student population?  
 A - rural                    B - suburban                    C - urban
3. What is your level of professional education?  
 A - less than a baccalaureate degree  
 B - Baccalaureate degree      D - Specialist degree  
 C - Masters degree              E - Doctoral degree
4. What is your gender group?  
 A - Male                    B - Female
5. What is your racial/ethnic group?  
 A - Asian-American              D - Hispanic  
 B - African-American            E - Native-American  
 C - European-American          F - Other
6. When gathering information from a parent on a child's developmental history, should the interview form include questions on prenatal history?  
 A - yes                      B - no
7. When gathering information from a parent on a child's developmental history, should the interview form include questions on alcohol consumption?  
 A - yes                      B - no
8. Respond to the following statement: "I have the ability to identify a child with FAS"  
 A - strongly agree              C - disagree  
 B - agree                      D - strongly disagree
9. What is the prevalence of Fetal Alcohol Syndrome across the various racial/ethnic groups in the US?  
 A - all races are the same  
 B - most prevalent in Native Americans  
 C - most prevalent in African-Americans  
 D - most prevalent in Hispanic-Americans  
 E - most prevalent in European-Americans  
 F - most prevalent in Asian-Americans

10. What is the prevalence of Fetal Alcohol Syndrome across the various socioeconomic-economic groups in the US?  
 A - most prevalent in lower-economic groups  
 B - most prevalent in middle-economic groups  
 C - most prevalent in upper-economic groups  
 D - equal prevalence in all economic groups
11. During which period of fetal development is the risk of Fetal Alcohol Syndrome greatest for a pregnant woman to consume alcohol?  
 A - 1st trimester                      C - third trimester  
 B - second trimester
12. A conservative estimate of the prevalence of FAS is approximately:  
 A - one in 100 births                      C - one in 800 births  
 B - one in 500 births                      D - one in 1000 births
13. What is the minimal level of alcohol consumption that would place the fetus in danger of Fetal Alcohol Syndrome?  
 A - 1-2 drinks once or twice a week  
 B - 1-2 drinks daily  
 C - 3-4 drinks within a week  
 D - 3-4 drinks daily

Select the response that best reflects your opinion using the following scale:

- A - strongly agree                      C - disagree  
 B - agree                                  D - strongly disagree

14. FAS children are identifiable \_\_\_\_\_
15. FAS is a condition that tends to subside with age \_\_\_\_\_
16. FAS children exhibit the same behavioral characteristics \_\_\_\_\_
17. FAS is a lifelong disability \_\_\_\_\_
18. FAS is the leading cause of mental impairment \_\_\_\_\_
19. FAS children are characterized by a growth deficiency \_\_\_\_\_
20. FAS and FAE(fetal alcohol effect) are two names for the same condition \_\_\_\_\_
21. FAS children have physical features that may change as they reach adolescence \_\_\_\_\_
22. FAS children characteristically have better expressive language than receptive language \_\_\_\_\_
23. FAS is found in all ethnic and socioeconomic groups \_\_\_\_\_

24. FAS may result from even the smallest consumption of alcohol by the pregnant mother. —
25. FAS children benefit best from early intervention efforts. —
26. FAS is viewed as a childhood disability —
27. FAS is becoming more of a problem in the classroom —
- Which of the following features are characteristics of Fetal Alcohol Syndrome:  
A - yes      B - no
28. motor delays —
29. hyperactivity —
30. attention deficit disorder —
31. facial physical abnormalities —
32. learning impairments —


## APPENDIX B

Dear Parents,

I am conducting a survey to fulfill the requirements for a masters degree in early childhood education from Grand Valley State University. I would appreciate your assistance in filling out the survey - It will take only about 10 to 15 minutes.

Please complete the survey (there are questions on both sides of page 1) and return it in the envelope provided by June 6th.

Thank you for your time,

  
Kim Springer  
Teacher  
Hart Public Schools



APPENDIX C  
PARENT RESPONSES TO FAS SURVEY

Survey Question	Response Frequency/Percentage				
Years of teaching experience	<u>0</u> 9/64	<u>1-3</u> 3/21	<u>4-5</u> 0/0	<u>6-10</u> 1/7	<u>11+</u> 1/7
Student population	<u>Urban</u> 14/100	<u>Suburban</u> 0/0	<u>Rural</u> 0/0		
Professional education	<u>Less B.A.</u> 10/83	<u>B.A.</u> 2/17	<u>Masters</u> 0/0	<u>Masters+</u> 0/0	
Gender group	<u>Male</u> 3/21	<u>Female</u> 11/79			
Racial/ethnic group	<u>European</u> 6/50	<u>Nat. Am.</u> 4/33	<u>Other</u> 2/17		
Child's history should include prenatal info.	<u>Yes</u> 12/83	<u>No</u> 2/17			
Child's history should include alcohol consumption information	<u>Yes</u> 12/83	<u>No</u> 2/17			
Ability to identify child with FAS	<u>Strongly Agree</u> 0/0	<u>Agree</u> 3/21	<u>Disagree</u> 5/29	<u>Strongly Disagree</u> 6/36	
Prevalence of FAS across ethnic groups	<u>All races</u> 7/54	<u>Nat. Am.</u> 3/23	<u>Afr. Am.</u> 3/23	<u>Hispanic</u> 0/0	<u>Eur.</u> 0/0
Prevalence of FAS across SES groups	<u>Lower SES</u> 9/64	<u>Middle SES</u> 1/7	<u>Upper SES</u> 0/0	<u>All SES</u> 4/29	
Risk of FAS is greatest	<u>1st Trimester</u> 13/93	<u>2nd Trimester</u> 0/0	<u>3rd Trimester</u> 1/7		
Estimated Prevalence of FAS	<u>1 in 100</u> 7/50	<u>1 in 500</u> 4/29	<u>1 in 800</u> 2/14	<u>1 in 1000</u> 1/7	
Minimum level of alcohol endangering fetus	<u>1-2 drinks /week</u> 6/43	<u>1-2 drinks daily</u> 7/50	<u>3-4 drinks /week</u> 0/0	<u>3-4 drinks daily</u> 1/7	

FAS children are identifiable	<u>Strongly Agree</u> 0/0	<u>Agree</u> 10/71	<u>Disagree</u> 4/29	<u>Strongly Disagree</u> 0/0
FAS subsides with age	<u>Strongly Agree</u> 0/0	<u>Agree</u> 1/7	<u>Disagree</u> 9/64	<u>Strongly Disagree</u> 4/29
FAS children exhibit same behavioral characteristics	<u>Strongly Agree</u> 0/0	<u>Agree</u> 3/21	<u>Disagree</u> 9/64	<u>Strongly Disagree</u> 2/14
FAS is a lifelong disability	<u>Strongly Agree</u> 3/21	<u>Agree</u> 9/64	<u>Disagree</u> 2/14	<u>Strongly Disagree</u> 0/0
FAS-leading cause of mental impairment	<u>Strongly Agree</u> 0/0	<u>Agree</u> 7/50	<u>Disagree</u> 7/50	<u>Strongly Disagree</u> 0/0
FAS-growth deficiency	<u>Strongly Agree</u> 1/7	<u>Agree</u> 7/50	<u>Disagree</u> 6/43	<u>Strongly Disagree</u> 0/0
FAS/FAE-same condition	<u>Strongly Agree</u> 0/0	<u>Agree</u> 6/43	<u>Disagree</u> 6/43	<u>Strongly Disagree</u> 2/14
FAS children-physical features change	<u>Strongly Agree</u> 1/7	<u>Agree</u> 6/43	<u>Disagree</u> 7/50	<u>Strongly Disagree</u> 0/0
FAS-better expressive language than receptive	<u>Strongly Agree</u> 1/7	<u>Agree</u> 3/21	<u>Disagree</u> 9/64	<u>Strongly Disagree</u> 0/0
FAS found in all SES/ethnic groups	<u>Strongly Agree</u> 5/36	<u>Agree</u> 8/57	<u>Disagree</u> 1/7	<u>Strongly Disagree</u> 0/0
FAS results from smallest amount of alcohol	<u>Strongly Agree</u> 2/14	<u>Agree</u> 8/57	<u>Disagree</u> 4/36	<u>Strongly Disagree</u> 0/0
FAS children benefit from early intervention	<u>Strongly Agree</u> 5/36	<u>Agree</u> 6/43	<u>Disagree</u> 3/21	<u>Strongly Disagree</u> 0/0
FAS viewed as childhood disability	<u>Strongly Agree</u> 2/14	<u>Agree</u> 7/50	<u>Disagree</u> 5/36	<u>Strongly Disagree</u> 0/0

FAS is becoming greater problem in classroom	<u>Strongly</u> <u>Agree</u> 1/14	<u>Agree</u> 9/64	<u>Disagree</u> 4/29	<u>Strongly</u> <u>Disagree</u> 0/0
Motor delay characteristic of FAS	<u>Yes</u> 11/79	<u>No</u> 3/21		
Hyperactivity characteristic of FAS	<u>Yes</u> 10/71	<u>No</u> 4/29		
Attention deficit problems characteristic of FAS	<u>Yes</u> 11/79	<u>No</u> 3/21		
Facial abnormalities characteristic of FAS	<u>Yes</u> 8/57	<u>No</u> 6/43		
Learning Impairments characteristic of FAS	<u>Yes</u> 13/93	<u>No</u> 1/7		

ED 695 DATA FORM

NAME: Kimberly Lynne Springer

MAJOR: (Choose only 1)

- |                                  |   |  |
|----------------------------------|---|--|
| <input type="checkbox"/> Ed Tech | <input type="checkbox"/> Ed Leadership  | <input type="checkbox"/> Sec/Adult           |
| <input type="checkbox"/> Elem Ed | <input type="checkbox"/> G/T Ed         | <input type="checkbox"/> Early Child         |
| <input type="checkbox"/> Elem LD | <input type="checkbox"/> Sec LD         | <input checked="" type="checkbox"/> SpEd PPI |
|                                  | <input type="checkbox"/> Read/Lang Arts |  |

TITLE: PARENT KNOWLEDGE OF FAS AND THE RISKS OF HEAVY DRINKING DURING PREGNANCY.

PAPER TYPE: (Choose only 1) SEM/YR COMPLETED: Summer, 1995

- Project  
 Thesis

SUPERVISOR'S SIGNATURE OF APPROVAL \_\_\_\_\_

Using the ERIC thesaurus, choose as many descriptors (5 - 7 minimum) to describe the contents of your paper.

- |                      |                        |
|----------------------|------------------------|
| 1. Alcohol abuse     | 6. Health education    |
| 2. Drinking          | 7. Drug education      |
| 3. Substance abuse   | 8. Pregnancy           |
| 4. Alcoholism        | 9. Prenatal influences |
| 5. Alcohol education | 10.                    |

ABSTRACT: Two to three sentences that describe the contents of your paper.

A survey was done to determine the level of parent knowledge of FAS. Results  
indicated that survey respondents had some basic knowledge of FAS but lacked  
specific knowledge. The results of this mini-study will be incorporated  
into a macro-research project.

\*\*\*Note: This page must be included as the last page in your master's paper.