

Fetal Alcohol Syndrome Awareness Among Educators

by

Kimberly D. O'Connor

Thesis submitted in
partial requirements for the degree
of Master of Education in School Psychology

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University of Manitoba

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**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree**

of

MASTER OF EDUCATION

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I find myself sitting here thinking of the things I could say and the people to thank. I left this section as the last thing to write and in some ways it is an overwhelming task... perhaps even more difficult than the rest of this work. Well, maybe not, but... When I stop and think about everything that has happened to bring me to this point I feel tears well up in my eyes. It has been a long journey that is soon coming to end so the next journey can start.

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Table of Contents

List of Tables	vii
Abstract	viii
Introduction	1
Fetal Alcohol Syndrome	2
Educators' Awareness of FAS and Related Deficits in the Classroom	5
Teacher Expectancies and the Potential Impact on Students	8
Potential Link Between Teacher Awareness of FAS and Teacher Expectancy Effects	15
Present Study	18
Method	21
Participants	21
Sample description.	21
Sample distribution and composition.	25
Survey Instrument	30
Questionnaire development.	30
Piloting of the questionnaire.	34
Procedure	36
Recruitment of participants.	36
Data collection.	37
Results	39
Data Analysis	40

Coding of responses.	40
What Do Educators Know About FAS?	43
What Do Educators Know and Do About the Learning Needs and Challenges Facing Students with FAS?	48
What are educators doing to help these students?	51
School factors to consider.	56
What Training and Resources are Available and Useful for Educators in the Area of FAS?	59
Are There Differences Among Role Groups?	63
Discussion	73
Quality of Data From Questionnaire Responses	73
What Do Educators Know About FAS?	74
What Do Educators Know and Do About the Learning Needs and Challenges Facing Students with FAS?	77
School factors.	79
What Training and Resources are Available and Useful for Educators in the Area of FAS?	80
Are There Differences Among Role Groups?	83
Implications of findings	86
Implications regarding teacher expectancies.	87
Limitations of the Present Study	89
Areas for Future Research	94
Summary and Recommendations	96

References	99
Appendix A – Questionnaire	106
Appendix B – Introduction letter to participants	117
Appendix C – Consent form	119
Appendix D – Thank-you letter to principals	122
Appendix E – Follow-up and debriefing letter	124
Appendix F – Codes and descriptions	126
Appendix G – Frequency tables for overall analysis (n=121)	145
Appendix H – Frequency tables for role comparisons (n=116)	170
Appendix I – Comments and responses of interest from participants	227

List of Tables

Table 1	Gender and age groups of participants	27
Table 2	Roles previously held by participants and length of time in role	27
Table 3	Levels of professional education reported by participants	28
Table 4	Grade levels worked with by educators (n=121)	29
Table 5	Comparisons between educators with or without experience with respect to feelings of preparedness and rating of the concern in the school regarding FAS.	60

Abstract

The characteristics associated with Fetal Alcohol Syndrome (FAS) create challenges for students in school; however, many educators lack awareness of the challenges and learning difficulties experienced by these children and the best approaches to use. Increased awareness may help educators develop appropriate expectations of students with FAS. Teachers' develop expectations, both positive and negative, for students which can translate into behaviours that convey the expectations to the student. Students may take the teacher's expectations for self-expectations resulting in behaviour and achievement consistent with these expectations which can serve as a self-fulfilling prophecy. This pathway accounts for a small portion of the variance in achievement; however, this educator factor (expectations) can be addressed and therefore deserves attention, while other child-factors are not easily tackled.

A potential chain may exist from knowledge of FAS ? an accurate understanding of difficulties for students with FAS ? willingness and caring to act understandingly ? acting according to appropriately formed expectations ? increase in the likelihood of positive student outcomes. If educators lack accurate understanding of challenges faced by students with FAS expectations may be inappropriate and thus impact the students' success.

This study addresses the first part of the chain by exploring educators' level of knowledge regarding FAS and the learning needs of students with FAS. Research questions posed are: (a) what do educators know about FAS? (b) what do educators know and do about the learning needs/challenges facing students with FAS? (c) what

training/resources are available/useful? and (d) are there differences among role groups (classroom teachers, educational program assistants, resource teachers, administrators)?

A convenient sample of Primary - Grade 4 educators (n=121; 101 females, 18 males, 2 no response) at the school level (classroom teachers, educational program assistants, resource teachers, administrators) completed a 10-page questionnaire (response rate = 16.55%).

Most educators demonstrated a basic understanding of FAS including causes, characteristics and a recognition of variability among individuals. However, they lacked information on identifying students and desired more strategies and training. The majority of responses reflected general areas of difficulties for students (e.g., "learning", "behavioural", "social"). There was a lack of training in the area of FAS, limited sources of information, and a desire for more information, particularly literature. Resource teachers tended to more experienced and have a more specific understanding of appropriate strategies/adaptations as compared to the other role groups. No other significant group differences were noted. Limitations include a small sample size and low response rate. Further work is needed to extend this research further along the possible chain between awareness, teacher expectations and student outcomes to help educators better meet the needs of students.

Introduction

Fetal Alcohol Syndrome (FAS; Jones & Smith, 1973), and other Fetal Alcohol Spectrum Disorders (FASD), are having an impact on a number of children in our society. There is a growing body of research that has emerged over the past three decades documenting the effects of prenatal exposure to alcohol on children (e.g., Brown, Coles, Smith, Platzman, Silverstein, Erikson, & Falek, 1991; Jones & Smith, 1973; Kaemingk & Paquette, 1999). This research has come from a variety of fields including cognitive deficits, special education, neuropsychology, mental health, addictions, and prevention. A prominent area of concern has been the educational needs of students with FAS (Burgess & Streissguth, 1990; 1992) and how schools can meet the challenges of educating these children (e.g., Kleinfeld & Wescott, 1993). While researchers are now considering life after school for students with FAS (e.g., Kleinfeld, Morse, & Wescott, 2000), school is still considered one of the most important institutions in the community that can mediate interventions for children with FAS and their families (Streissguth, 1997). Children with FAS experience difficulty in numerous areas of functioning including cognitive, academic, social, emotional, and behavioural with likely consequences for the child within the context of school and education.

Research has shown that teacher expectations impact the student's functioning and may help or impede appropriate programming for that student by altering teacher behaviour toward the student. If educators do not understand the needs of these students they may form expectations that are below or above what is appropriate for the student that may result in negative self-fulfilling prophecies or frustration and negative school experiences, respectively. Therefore, it is important for educators to be familiar with the

learning needs of students with FAS in order to form accurate expectations for each student in their classroom, including the student with FAS, and work to provide the most beneficial programming accordingly.

Fetal Alcohol Syndrome

The effects of alcohol on an unborn child have been recognized, at least to some extent, for hundreds of years (Jones & Smith, 1973; Streissguth, 1997) and the history of these effects has been reviewed by various authors (e.g., Abel & Sokol, 1991; Berg, Kinsey, Lutke, & Whewey, 1995). However, it has only been in the past thirty years that the condition has been recognized medically, defined scientifically and confirmed through research (Streissguth, 1997). FAS is a problem that impacts on the lives of many individuals including those with the condition, their families, their teachers, and other professionals involved in service provision. Therefore, it is important for professionals to be aware of the features of this condition and be cognizant of the impact it has on the individual and those in his or her environment.

It is widely accepted that FAS is characterized by four factors (e.g., Streissguth, 1997): (a) a history of prenatal exposure to alcohol, (b) growth retardation and/or deficiency (i.e., low birth weight, disproportionately low weight and/or height either pre- or post-natally), (c) facial abnormalities and (d) central nervous system (CNS) dysfunction. For a diagnosis of FAS an individual must meet certain criteria associated with each of these four factors (Health Canada, 2000b). Some children who were prenatally exposed to alcohol will exhibit some subset of these effects but not necessarily all of them. For example, CNS dysfunction and associated cognitive deficits may be

found without any of the physical malformations (Mattson, Riley, Gramling, Delis, & Jones, 1998). The term fetal alcohol effects (FAE) has been used in the past to describe this form of FAS which includes some effects from prenatal alcohol exposure without sufficient characteristics to warrant a diagnosis of FAS. This term has since been replaced by three new terms: Partial Fetal Alcohol Syndrome (PFAS), Alcohol-Related Neurodevelopmental Disorder (ARND), and Alcohol-Related Birth Defects (ARBD) (Stratton, Howe & Battaglia, 1996). All of these terms, as well as FAS, are used to describe individuals who have been affected by prenatal exposure to alcohol. When a diagnosis has not been made, although prenatal exposure has occurred, the description "alcohol affected" is employed (Manitoba Education, Training and Youth, 2001). Since the terms mentioned above are relatively new terms to most people, this study used the term Fetal Alcohol Syndrome, or FAS, to discuss the spectrum of disorders associated with prenatal alcohol exposure.

Fetal Alcohol Syndrome is a birth defect caused by prenatal exposure to alcohol without restriction to any race, ethnicity, gender, social class, or geographical region. The Institute of Medicine (1996) estimates the incidence of some degree of FAS to be between 0.5 and 3.0 per 1000 live births. Other estimates of FAS range from .33 to 1.9 per 1000 births in the western world (Abel & Sokol, 1987; 1991). Roberts and Nanson (2000) report that there are no reliable Canadian prevalence figures available for FAS. However, these authors indicate that rates are approximately .5 per 1000 although this estimate may be low due to a lack of diagnosis in the past. In addition, the prevalence among specific Canadian communities (e.g., native communities) is much higher (up to 1 in 4 births) (e.g., Robinson, Conry, & Conry, 1987; Williams, Odaibo, & McGee, 1999).

The effects of prenatal alcohol exposure are permanent and are manifested in various physical, psychological, and cognitive deficits at various ages (e.g., Burgess & Streissguth, 1992; Carmichael Olson, Feldman, Streissguth, Sampson, & Bookstein, 1998; Matson & Riley, 1998) including: (a) attention difficulties (e.g., Brown et al., 1991; Nanson & Hiscock, 1990), (b) memory deficits (e.g., Streissguth, Sampson, Carmichael Olson, Bookstein, Barr, Scott, Fledman, & Mirsky, 1994), (c) cognitive deficits (e.g., Kaemingk & Paquette, 1999), (d) deficits in executive functions (e.g., Kodituwakku, Handmaker, Cutler, Weathersby, & Handmaker, 1995), (e) response inhibition/hyperactivity (e.g., Clark, Li, Conry, Conry, & Looock, 2000), (f) specific learning disabilities (e.g., Goldschmidt, Richardson, Stoffer, Geva, & Day, 1996), and (g) behavioural problems (e.g., Streissguth, 1997). FAS has been designated the leading cause of mental retardation in the western world (e.g., Abel & Sokol, 1987). However, not all individuals with FAS fall in this range of intellectual functioning. The effects of prenatal alcohol exposure on individuals without mental retardation, including those who have average or above average intelligence, can be just as detrimental to their development and functioning as it is for individuals with intellectual impairment by impacting other areas in their lives such as social skills (Streissguth, 1997).

FAS difficulties, which may not have been diagnosed in infancy or the toddler years, will be most likely to show up in the school years (Streissguth, 1997). For the first few years of school, a FAS child may function at or close to grade level, but by grade three the demands associated with abstract thinking skills, multiple academic subjects, and an increase in the importance of peer relations, can set the stage for problems in academics as well as behaviour. It is at this point that schools attempt to determine

appropriate programming for the child (e.g., Manitoba Education and Training, 1996). However, in order to be successful in these programming efforts school divisions, school teams, and classroom teachers must have an understanding of the unique strengths and difficulties of a student with FAS from the earliest age.

Educators' Awareness of FAS and Related Deficits in the Classroom

With the increased attention that has been placed on FAS in the research literature and a growing recognition of the difficulties associated with prenatal exposure to alcohol it is important to consider how much is known about FAS by the general public and specific populations (e.g., educators, health professionals). Research into best practices needs to be translated into practical applications to be helpful to individuals with FAS and their families. Health Canada (2000a) surveyed the general public regarding their awareness of FAS and the effects of prenatal exposure to alcohol. This nation-wide survey found that although Canadians had heard of FAS, they did not really have a clear understanding of the full effects of alcohol on the fetus during pregnancy, especially with respect to alcohol in small amounts.

The fact that FAS has such an impact on an individual's functioning in a variety of areas makes it obvious that the context of the school and classroom likely will pose significant difficulties for the students, their teacher, and their peers. Streissguth (1997) indicates that teachers, as well as administrators and school divisions, are challenged by the task of identifying children who may potentially be diagnosed with FAS and planning for the educational needs of these children. Many of the children that school personnel are already concerned about may, in fact, constitute a number of children with

undiagnosed FAS. Consequently, programming for these children is not a new task to be added to teachers and support teams' busy schedules but rather having an insight into the functioning of the students for whom they are programming. In order to program appropriately for these children, and not misinterpret their difficulties or behaviours, educators must be aware of the characteristics that may be part of FAS (e.g., Streissguth, 1995; 1997).

In the early 1990s, Streissguth and Burgess (1992) surveyed educators and school personnel throughout Washington State about their knowledge, awareness, and concerns regarding FAS. Ninety-seven percent of the respondents believed that understanding and dealing with students who had been prenatally exposed to alcohol, or other drugs, were important educational issues; 96% reported having direct personal experience with prenatally exposed children; and 94% believed that these students experienced more problems in school compared to their peers. Almost half (46%) of those who responded to the survey felt overwhelmed by the challenges presented by the learning and behavioural needs of these students and more than 90% agreed that they needed more information on instructional techniques and behavioural management strategies. This suggests that FAS is a common condition that affects children in the classroom and that many teachers are not well enough equipped to deal with the needs of these students.

Mack (1995) surveyed preschool and kindergarten teachers (n=187) in Northern Michigan about their attitudes toward and knowledge of FAS. Based on the results of this survey, Mack concluded that the respondents had a "moderate" awareness of FAS. The majority of respondents answered general information questions correctly. However, there were other areas that were not as clearly understood. For example, over half of the

teachers did not think that FAS was associated with a mental impairment. A majority of the teachers in this study indicated that FAS is becoming more of a concern in their classroom. However, the majority also reported that they lacked the ability to identify a student with FAS and over half of the educators reported that they were either “somewhat unprepared” or “not prepared” to teach students with FAS. This suggests that teachers have a basic understanding of the characteristics of FAS and possess some general information about FAS. Yet, there is very likely a lack of understanding of educational needs and appropriate interventions for the classroom. It is this practical knowledge, beyond basic information, that will help teachers and schools program for students with FAS successfully (Streissguth, 1997).

Binns (as cited in Dissertation Abstracts International, 2001) surveyed Alaskan educators in an attempt to identify predictors of educators’ knowledge/awareness, perceived skill level, and ability to access resources for working with students with FAS. He also was interested in identifying previous training experiences and possible preferred methods for future training opportunities. Many of the aims of his research parallel the present study. Data was collected through a 64-item, self-report mail survey which was completed by 271 educators (49.5% response rate). He found that educators who had more direct, personal experience with students with FAS were more knowledgeable, had better perceived skills, and had more confidence in these skills than educators who had worked with fewer students with FAS. Significant positive predictors were participation in the special education process, self-directed training efforts, and the identification of FAS as a significant problem in one’s home community. Significant negative predictors, those predictors that predicted less knowledge and skills, included Alaska Native

ethnicity and high school diploma as the highest level of education. Binns concluded that the combination of negative predictors identified paraprofessionals with no college degree who worked in rural preschool settings as prime candidates for future training efforts on FAS.

Teacher Expectancies and the Potential Impact on Students

There are various factors that impact on the school experience of a child, among them is the effect of the classroom teacher. Teachers are the frontline workers with regard to the academic, social, emotional, and behavioural issues of the students in their classroom. Good and Brophy (1995) define teacher expectations as “inferences that teachers make about present and future academic achievement and general classroom behaviour of students.” (p. 379). These expectations can include a variety of beliefs including the changeability of students’ abilities, the potential benefit of instruction, and the appropriate difficulty of the tasks given to the student.

Teachers form expectancies about the students in their class rather quickly, both knowingly and unknowingly (Brophy & Good, 1974). These can be positive or negative depending on the accuracy of the expectations and the flexibility of changing these expectations if found to be inaccurate (Good & Brophy, 1995). Researchers have looked at the formation of teacher expectancies and have found that teachers form expectations based not only on past academic performance, but also on other student characteristics such as gender, socio-economic status, knowledge about the student’s family, and after school activities (e.g., Good & Brophy, 1995; Van Matre, Valentine, & Cooper, 2000). According to Brown (1976), these expectations, and the potentially subsequent

behaviours, lead students to develop self expectations similar to that of the teacher and, therefore, will result in academic performance consistent with such expectations.

In their landmark study, Rosenthal and Jacobson (1968) demonstrated that the teacher's expectations of a student impact the student's future achievement. In this experiment, known as the Oak School Experiment, the researchers wanted to test the proposition that within a given classroom children from whom the teacher expected greater intellectual growth would show greater growth. In essence, the concept is that people will get what they expect to get from others. In order to test this proposition the researchers randomly selected students who they identified as "special" students who would be expected to show dramatic intellectual growth in the following school year. This was supposedly based on the school wide testing at the end of the previous year using the "Harvard Test of Inflected Acquisition". This test was actually Flanagan's Test of General Ability (TOGA), however, the bogus name was chosen so that teachers would not be familiar with the measure. The students were chosen at random and, therefore, there were no differences between these "special" students and their peers. The teachers were told that these "special" students were expected to show a great increase in intellect although the only real difference between these children and their peers was the expectation of the teacher. The students were all retested with the same intellectual measure (TOGA) after one semester, one year and two years.

For the first two retests, the children were placed in a classroom where the teacher had been given favourable expectations of growth in intellect while during the third retest the "special" children were in a classroom where the teacher had not be given any special expectations. The IQ from the pre-test and retest were calculated for the "special"

children (experimental group) and the other children in the class (control group) and an expectancy advantage was computed (degree to which IQ gains from pre-test to retest differed between the experimental and control groups). After the first year, expectancy advantage was found for the "special children", especially those in younger grades. During the second year, the younger children lost their expectancy advantage, however, the older children continued to show a greater increase in intellectual growth. Other findings indicated that there did not appear to be a great difference in the gender of the child and the results of the study and those average ability children, as opposed to high or low achieving students, showed the greatest expectancy effects. All the groups improved, but the average students improved the most. The students improved not only in the IQ, but also were rated as having greater gains in reading ability as compared to the other students. Teachers also rated their "special" students as being more intellectually curious, happier, and less in need of social approval. More detailed findings of this study are available (Rosenthal & Jacobson, 1968). Overall, the findings of Rosenthal and Jacobson (1968) indicated that teacher expectancies impact the future achievement and growth of children in the classroom and this finding was stable over three retest periods.

Although Rosenthal and Jacobson (1968) derived strong conclusions from their findings, there were several criticisms of the study, particularly in the methodology and the overemphasis on small differences. Snow (1969) critiqued the methodology when he argued that TOGA was inappropriate for children in the younger grades. He claimed that the remarkably low initial scores of the children in the younger grades (grade one and two) were evidence that this intellectual measure was unsuitable for this age level. Wineburg (1987) examined the statistical results and found that the significant results

were found only for the first and second grades. He pointed out that the null hypothesis (no effect) could only be ruled out for a third of the grade levels studied. Wineburg (1987) also noted the lack of replication of the findings of the Rosenthal and Jacobson (1968).

Researchers have studied the area of teacher expectations by focusing on how these expectations affect students' achievement and behaviour, as was found in Rosenthal and Jacobson's (1968) study, despite the criticisms of this experiment. In a series of studies, researchers examined the ways teacher expectations translate into teacher behaviour (e.g., Brophy & Good, 1974; Brown, 1976; Good & Brophy, 1994).

Good and Brophy (1995) discuss ways that teacher expectations can be expressed through teacher behaviour, particularly toward high versus low achieving students (referred to as "highs" and "lows" by these authors to describe expectations not fixed abilities). Their research has found the following common ways that teacher expectations are expressed: (a) waiting less time for "lows" to answer questions as compared to how long the teacher waits for other students to respond, (b) giving "lows" the answer by calling on someone else instead of trying to guide the student to the answer through rephrasing of the question, (c) rewarding inappropriate behaviours of "lows", such as inaccurate answers, which the other students know are incorrect and, thus emphasizing the "low" student's weakness (overly sympathetic teachers), (d) criticizing "lows" more frequently for failure which will tend to reduce risk taking behaviour and initiative of "lows" (critical teachers), (e) praising "lows" less frequently for their success, (f) not giving feedback to public responses offered by "lows" which may result in confusion for the students who are unsure of the accuracy of their answer, (g) paying less attention to

“lows” and interacting with them less frequently, (h) calling on “lows” less often which implies that the teacher does not think the student can contribute, (i) interacting differently with high and low students, with low students receiving more private conferences with the teacher which may be a sign to others, and to the student, of the student’s inadequacy and result in embarrassment for the student, and (j) demanding less from “lows”, with regard to assignments or tests, which can result in the students expecting less of themselves. Some of these behaviours noted by Good and Brohpy (1995) could also be positive depending on the circumstances. For example, with respect to more frequent private conferences with a student (i), if more individual attention was necessary and in support of the student there would likely be a benefit to the student that could outweigh the possible embarrassment. Likewise, demanding less from “lows” with regard to assignments or tests (j) may be beneficial to the student and the chances of lower self-expectations would be reduced if the reduced demands were explained in an appropriate way.

Other forms of differential treatment of students based on teacher expectations (Good & Brophy, 1995) that are less direct as those listed above, but which could be just as detrimental, range from seating “lows” further from the teacher; giving “highs”, and not “lows”, the benefit of the doubt in grading materials; less friendly interactions with “lows”, including smiling; less eye contact and nonverbal communication of attention and responsiveness; less acceptance of “lows” ideas; and inadequate learning opportunities provided to the student, such as academic learning time. The teacher may be focused on the child’s ability *pre se*, rather than on the amount of time required for a student to complete a task or grasp a concept.

Students are aware of this teacher expectations-based differential treatment of students (e.g., “high” and “low” achievers) as early as grade one (Weinstein & Marshall, 1984; Kuklinsky & Weinstein, 2001) and the impact on students is maintained throughout grade levels and classrooms (Good & Brophy, 1995). This impact may change somewhat with age and grade level. In later elementary grades teacher expectations seemed to sustain achievement differences in students while in early elementary grades the expectations seemed to have strong self-fulfilling prophecy effects (Kuklinsky & Weinstein, 2001).

Through these behaviours, and perhaps others not included above, students are influenced and their own behaviour may be altered to fit their perception of the expectations expressed by the teacher. This is the basis used by Rosenthal and Jacobson (1968) to explain their findings as they discuss the idea that one person’s expectation for another’s behaviour could come to serve as a self-fulfilling prophecy. Good and Brophy (1995) describe a self-fulfilling prophecy as a prediction, be it positive or negative, that is actually fulfilled if it is accepted as true. Brophy and Good (1974; Good, 1987) developed a model to describe how teachers’ expectations can become self-fulfilling prophecies in their students. This model consists of five stages which are as follows: (1) the teacher forms an expectation regarding behaviour and/or achievement from particular students; (2) because of these expectations the teacher behaves differently toward different students in ways such as those described above; (3) this differential treatment conveys to the students the expectations the teacher has for their achievement and behaviour and affects the students’ self-concept, motivation, and ambition; (4) with consistent teacher behaviour over time, and students who do not resist or change it, the

behaviour, and essentially the teacher expectation, will shape the students' achievement and behaviour, positively and/or negatively; (5) over time the students' behaviour and achievement will become more in line with the teacher's expectations and, therefore, reinforce the teacher's expectations of the students. This model depicts a cycle of expectations shaping behaviour which reinforces and maintains the expectations; however, it is not an inevitable cycle. The teacher's expectations may be altered with new evidence of ability or behaviour; the students may resist the ways that teachers, knowingly or not, attempt to shape their behaviour; or others may intervene to help teachers develop more appropriate expectations by bringing to light inaccurate perceptions and understanding of students in their classroom. Such intervention is an ultimate end-product of the impetus for this research project as the aim here is to begin with the first step, that is, to assess the knowledge and understanding on the part of educators regarding a group of students, more specifically, students with FAS.

Teacher expectancies are not the only influence on a student's own self-expectations and achievement. There are various moderators and mediators of the effects of teacher expectations such as the salience of differential treatment by teachers toward students, grade level, and developmental differences among children (Kuklinski & Weinstein, 2001). Children come to school with their own expectations which are based on situations, experiences, and factors that are outside of the school and the teacher. These may include family factors such as the extent of support and encouragement, or lack of thereof, that the child receives; comparisons among children in the family; or the importance placed on academic achievement in the home environment. It may also include previous successes and failures experienced by the child both in and out of

school. These factors may interact with teacher expectancies influencing present and future achievement and behaviour.

Brophy (1983) reviewed the evidence and concluded that teacher expectations account for on average for 5% to 10% of the variance in children's achievement in a year. This is small percentage of the variance and while there are other factors which impact students' success, the impact of teacher expectations is a factor which can possibly be addressed more readily than other factors. Educators impact a great number of students each year and these educators serve as a channel by which to reach these children. There are a number of child-based factors that will impact achievement however, educator-based factors are more accessible and more feasible to address. By addressing areas and factors that are educator-based, such as expectations and subsequent effects of these expectations, the success of students can be impacted. Therefore, although the impact of teacher expectations may be small, it is one avenue that can have positive impacts on students and also reduce negative effects.

Potential Link Between Teacher Awareness of FAS and Teacher Expectancy Effects

The two lines of research described above show that teachers may lack a firm understanding of the abilities and deficits of a student with FAS and that teachers' expectations of students can lead to differential treatment and subsequent negative self-fulfilling prophecies for students. Therefore, is it possible that a lack of knowledge and awareness of the learning needs of students with FAS may translate into inaccurate expectations for these students? This connection is the essence of an issue of which this study is a beginning step. By looking at the knowledge and awareness of educators one

can speculate as to the potential impact this knowledge or lack of it, may have on teacher expectancies for students with FAS and their subsequent achievement. If teacher perceptions are influenced by being told that a student is expected to have certain capabilities and to function in a certain way (e.g., Rosenthal & Jacobson, 1968), then, a certain understanding of the abilities and functioning of a student could also have a direct, and indirect, impact on the expectancies of the teacher. This generalization does not always occur; however, it is reasonable to consider the situation where this generalization may hold true.

An underlying assumption of this research is that increased awareness and understanding will impact teacher expectations and behaviour. This may or may not be the case, however, it is an assumption frequently made in training of educators and the importance of professional development, etc. If the assumption that training educators will increase the likelihood of better instructional techniques and service to students is not held there may be little purpose in this training and professional development. Training continues under this assumption and efforts are made to better inform educators of the needs of their students. One way that educators may help students is through the development of appropriate expectations for students. Accurate expectations are important for all students; however, for students with other factors affecting their school success, such as behavioural difficulties, various cognitive deficits, and social skills problems, the more we can do to improve their situation the better. It is important to help teachers form these appropriate expectations for students with FAS in an effort to maximize the benefit to, and achievement of, these students. The earlier the child with FAS is identified, and an accurate understanding of the child's needs is assessed and

acted upon by utilizing the appropriate resources to help the child succeed, the better the long-term outcomes (Streissguth, 1997; Burgess & Streissguth, 1992).

With the evidence that teacher expectancies are likely to impact the academic achievement and behaviour of the child, the goal is to assess the teacher's expectations of students with FAS and intervene to modify these expectations as necessary to make them more appropriate. One method for achieving this is through training and educating teachers regarding FAS, the learning needs of these students and the appropriate ways to help them succeed. There are a wide variety of training efforts that have been developed over the past decade with respect to FAS (e.g., teacher workshops, professional development materials, books for teachers, summer courses, printed materials, internet resources, etc.) although it is difficult to determine how well these materials are meeting the needs of educators. Determining what educators know about FAS and what information and training they still require will help to inform us of the training needs of our educators in this area and serve to generate and provide useful information, materials, and suggestions for teachers. This knowledge would serve both a conceptual purpose, by suggesting links between two important areas of research (FAS and teacher expectancies) and a practical purpose, by helping point out possible ways to help teachers achieve success with their students.

From their situational analysis project, Health Canada (2000c) reported that according to their respondents, there are significant gaps and challenges in the area of FAS. At the top of this list was the lack of knowledge and skills necessary to identify individuals with FAS and the tendency for professionals, including educators, to not understand the full nature of FAS and how to effectively cope with, and manage, the

behaviours of individuals so affected. This report indicated that there is a need for more training for educators and that education policies need to be revised to consider the need for assistance for students with FAS. Further, this analysis identified the need for education systems to promote positive values and attitudes toward students with FAS, among educators, students, and the general community.

Present Study

This study is being undertaken with the assumption of a possible connection of the awareness and understanding of FAS to teacher expectations for students. Building on the research described above, there is a possible chain between knowledge of FAS -- an accurate understanding of the difficulties students with FAS experience -- willingness and caring on the part of educators to act on this understanding, as well as providing intervention measures to help and reinforce teachers to modify their expectations and behaviour -- actually acting according to appropriately informed expectations -- and thus increasing the likelihood for these students' success. Figure 1 represents this proposed chain and factors that may be influential at each stage.

This study addresses the first link in this chain by considering what, and how much, educators know and believe about the educational needs of students with FAS as well as considering what are the areas of weakness that need training and strengthening. It is a beginning step to further investigation of the impact awareness and knowledge may have on expectations, behaviour and student outcome.

It is recognized that there are several people involved in the lives and education of children with FAS (e.g., school board staff, provincial education department staff,

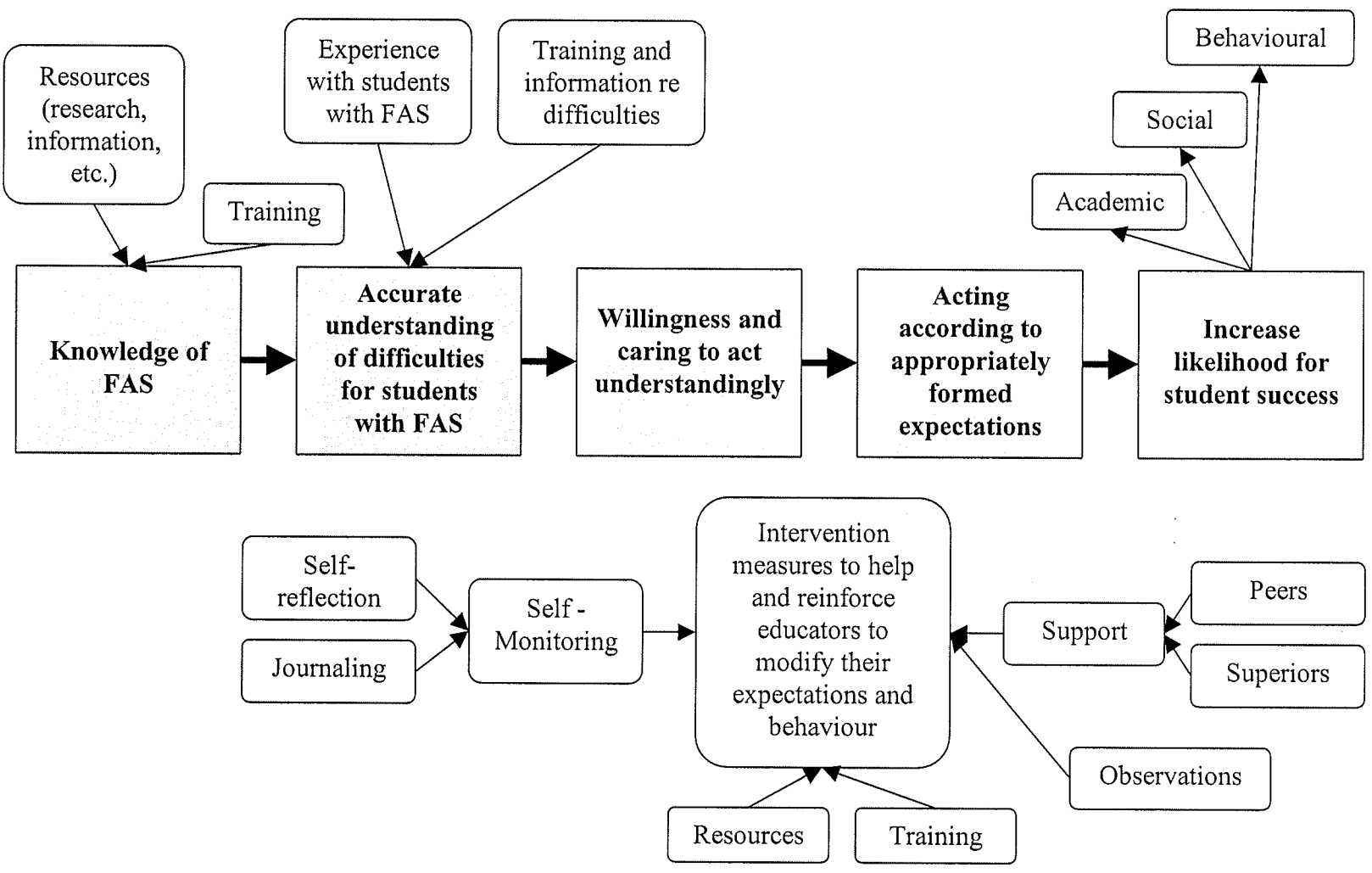


Figure 1 – Potential connection and factors related to the link between knowledge of FAS and likelihood for student success through teacher expectations and behaviour.

school staff, etc.) through advocacy, policy development and funding for programs, services and resources. It is also important to note that parents can play a significant role in the education of a child with FAS, or any other disability, and in helping the school understand the needs of their child. However, for the purpose of this study the focus was solely on the educators at the school level.

The target population was educators at the elementary level (Primary to Grade 4) to focus attention on the knowledge and understanding of the needs of children with FAS at this important age of development. The knowledge and understanding of educators beyond the elementary level continues to be important for these children as their learning and behavioural difficulties continue beyond childhood (e.g., Carmichael, et al., 1998), however, without a solid start in the early years of their education, the difficulties of students with FAS may exacerbate and secondary problems may develop later in life (Stressiguth, 1997).

An important feature of this survey is to assess not only general knowledge of FAS, but the deeper issues of the learning needs of these students and how to potentially address these needs in the classroom. It is presumed that teachers will have a general knowledge of FAS, but they still need more training in the areas of programming, both academically and behaviourally, for students with FAS. The findings of this study will provide a look at the awareness and knowledge educators have with respect to FAS which may, in turn, lead to subsequent research that builds on these findings to further consider the possible link between awareness, expectations and actual teacher behaviour. It is possible that this survey may serve as a catalyst for some educators to give greater consideration to the needs of students with FAS. The possible salutary side effect of

participation in the survey is beyond the scope of this study, but it may be worthwhile following up.

Due to the exploratory nature of this study, no specific hypotheses are put forth.

Rather, the research questions of this study are:

(a) what do educators know about FAS?

(b) what do educators know and do about the learning needs and challenges facing students with FAS?

(c) what training and resources are available and useful for educators in the area of FAS?

(d) are there differences among educator role groups (classroom teachers, resource teachers, educational program assistants and administrators) with respect to knowledge of FAS?

Method

Participants

Sample description.

The sample used for this study represents a cross section of the educators from all elementary schools (n=104) within the Halifax Regional School Board (HRSB) in Nova Scotia. This is the largest school board in Nova Scotia, serving more than 57,000 students in 140 elementary and secondary schools across the region (Halifax Regional School Board (n.d.) *Our Schools*. Retrieved February, 1, 2003, from <http://www.hrsb.ns.ca/schools/>). This sample included participants from elementary

schools within an urban area and schools that were situated in suburban and rural settings.

The sample was limited to educators at the elementary level (Primary to Grade 4) in order to focus attention on the needs of children with FAS at this important stage of development. The purpose of this research project was to focus on the frontline workers in the schools. The group selected represents the educators who have the most direct contact, although to varying degrees, with students, and likely, the most impact on the education of students in the schools. Therefore, the participants in this study consisted of administrators (Principals and Vice-Principals), resource/special education teachers, classroom teachers and educational program assistants.

Administrators are the head of the school and, ultimately, guide what happens in the classrooms through the guidelines, policies and procedures for the school. It is important for these individuals to have an accurate understanding and appreciation for the needs of students, even though their daily contact with students may be limited (e.g., handling behaviour during out of class time) in order to provide support for teachers who are facing challenges in the classroom. Administrators need to be aware of the needs of various students as they plan professional development for school personnel, devise policies for schools such as behaviour codes and plans, and lead staff in providing appropriate service and instruction to students. If the administrator of a school is aware of the important needs of various groups of students the impact of this awareness is more likely to flow down to the staff and the classrooms. If the administrators have an understanding of the needs of a student group, such as students with FAS, the administrator can encourage and support his or her staff, be sensitive to these needs and

provide the time and training necessary to accomplish the goal. However, this impact can also occur in the opposite direction where administrators have an inadequate understanding of the needs of students and therefore they may unintentionally convey inaccurate information or not devote training time on helping their staff develop in certain areas if the area is not considered a need. Prioritizing is important, and there must be an awareness of the areas in order to choose priorities.

Resource/special education teachers offer expertise to the schools and students they serve through their training in working with special populations. These teachers are involved with the students in the school who are experiencing difficulty in a variety of areas and are likely to come into contact with students with FAS as these students usually experience difficulty in academic, social and/or behavioural areas. If individuals in this position in the school are familiar with the needs of students with FAS, they can provide support to the teaching staff by providing information, resources, and strategies that will help these students learn and improve functioning in the school setting. Similar to administrators, if the resource/special education teachers in the schools do not have an adequate understanding of the needs of students with FAS, there is a significant risk that these needs will be overlooked and teachers will not receive support they need while they work with these students each day. When teachers come to the resource teacher with concerns regarding a student with FAS, the resource teacher needs to be able to help the teacher understand the needs of the student and provide strategies to help in the classroom. In essence this can be viewed as the resource/special education teacher functioning as an advocate for students with FAS to both administrators and classroom

teachers. This is a very important role as it helps others understand the needs of students with FAS.

Classroom teachers are the individuals who have the most direct, enduring and frequent contact with students with FAS and are primarily responsible for programming for these students in the classroom. The literature on expectancies in the classroom and the significant impact these expectancies can have on students, as discussed earlier, focuses on the role of classroom teachers. The classroom teacher will form expectations of their students and it is essential that these expectations be based on accurate information regarding the needs and abilities of the students.

The final group considered in this study are educational program assistants (EPA). These individuals may be involved daily with students with FAS and provide assistance with educational tasks and activities. Although the research on teacher expectancies focuses mainly on teachers, it is fair to imply that as the EPAs work one-on-one students they form expectations which translate into behaviours in much the same way as the situation discussed above with classroom teachers. There is a large variability in the training, experience and involvement of EPAs in the programming for students, even more so that the variability that exists among individuals with other roles. This variability may be reflected in the responses of all participants, particularly EPA participants to the questionnaire employed in this study. The behaviour of EPAs has an impact on the student and the help that a child receives. Therefore, although an EPA does not necessarily have full responsibility for the programming for a child, he or she plays a large part in the child's education and their awareness of the needs of a student with FAS is important.

Sample distribution and composition.

This research project was based on a convenient sample (n=121; F=101, M=18, NR=2) of educators across the Halifax Regional School Board (HRSB) with several different schools (n=49; response rate = 47.1%) represented across the region. Participation was completely voluntary. Two participants started but did not complete the questionnaire. Therefore, any data from these participants were eliminated from the sample description and analysis. One of these participants indicated that he/she did not know enough about the topic to continue and the other participant did not provide any reason for discontinuing his/her completion of the questionnaire.

The greatest proportion of the respondents were in the 41-50 age group (52 respondents = 43.7% of respondents who indicated age group). The next largest age group included respondents within the 31 – 40 years of age (33 participants = 27.7% of participants who indicated age group). Twenty-two percent of participants reported their age group to be 51 – 60 (27 participants = 22.7%). Seven respondents (5.8% of respondents who indicated age group) were between the ages of 25 and 30. Two respondents did not indicate their age group.

The participants were grouped into four groups based on their current role in the school (administrator, special education/resource teacher, classroom teacher, EPA). The total number of completed questionnaires does not equal the number of individuals holding positions when the participants are divided into groups by the role they currently occupy. This is due to multiple roles held by five participants. Two participants reported being in the role of both resource teacher and administrator (n=2; 1 female, age range 31-40; 1 male, age range 51-60). Three female participants indicated they currently occupy

both the role of classroom teacher and administrator (n=3; 1 female, age range 25-30; 1 female, age range 31-40; 1 female, age range 51-60). In order to avoid double counting of responses of these individuals the data from their responses were removed from any analysis or report based on the groupings of respondents by roles. This includes comparisons of groups and description of the size of each group. Therefore, for any of the role group analyses indicated above the sample size has been adjusted accordingly (n=116).

Considering the fact that the classroom teacher group is the largest group in the school's professional population, as expected, teachers constituted the majority of respondents (n= 73; 64 females; 8 males; 1 no response). The number of EAPs varies per school, however, there were still fewer EPAs per school as compared with the number of classroom teachers. Seventeen (16 females and 1 male) EAPs participated in this survey. Typically, there are only two to three resource teachers and administrators per school. Thirteen resource/special education teachers (12 females; 0 males; 1 no response) and 13 administrators (5 females and 8 males) participated, respectively. Table 1 summarizes gender and age group data.

Participants reported having experience as educators ranging from less than one year to thirty five years (Mean=17.16). Forty respondents indicated that they had previously worked in another role. Some educators worked in more than one role previously and this is reflected in Table 2 which includes a summary of the other roles filled by participants. All of the administrators had worked in another role at some point in their career (question #43) with all of them having worked as classroom teachers and 3 worked as resource teachers.

Table 1

Gender and age groups of participants

Group	Gender			Age group				
	Male	Female	NR	25-30	31-40	41-50	51-60	NR
All educators (n=121)	18	101	2	7	33	52	27	2
Classroom Teachers (n=73)	8	64	1	5	17	34	16	1
EPAs (n=17)	1	16	-	1	5	10	1	-
Resource Teachers (n=13)	-	12	1	-	5	6	1	1
Administrators (n=13)	8	5	-	-	4	2	7	-
Total (n=116)	17	97	2	6	31	52	25	2

Table 2

Roles previously held by participants and length of time in role

Role previously held	Number of participants	Number of years in role	Range of years in role
Classroom Teacher	22	$M = 11.3$; $Mdn = 12.0$	1 – 25
Educational Program Assistant	1	$M = 7.0$; $Mdn = 7.0$	7
Resource Teacher	16	$M = 6.25$; $Mdn = 3$	1 – 21
Administrator	5	$M = 8.2$; $Mdn = 9$	1 – 18
Totals	44*		

* Four participants had worked in more than one role, therefore, there were 44 previous roles indicated with only 40 participants indicating they had worked in another role previously.

Nine resource teachers reported to have worked as classroom teachers. Eighteen classroom teachers reported to have worked in other roles, namely, as resource teachers (n=12) or administrators (n=5) with 1 who worked as an EPA.

The various levels of professional education of the respondents are shown in Table 3. The level of education ranged from no response (n = 14) to graduate or specialist degrees. Several participants indicated more than one degree. Each level reported is included in the tally below.

Table 3

Levels of professional education reported by participants

Level of Education	Number of participants
Baccalaureate degree	52
Master's degree	47
Specialist degree/certificate (e.g., Special Education)	11
Doctorate (Ph.D.)	-
No response	14
Totals	124*

*If two levels of education were reported both were included in the tally.

The range of grade level work experience for members of the sample is displayed in Table 4. Multiple grade levels were reported by educators.

Table 4

Grade levels worked with by educators (n=121)

Grade	Number of participants
Preschool	1
Primary	54
Grade One	60
Grade Two	53
Grade Three	53
Grade Four	46
Other grades*	41
All grades**	1

* includes grades above Grade 4, but not all grades

** includes all school grades from Primary to Grade 12

The majority of respondents had worked in the HRSB without any recent change of employer (n=115; 95.0%). The remaining participants (n=6; 5.0%) indicated that they had recently changed school divisions. Two participants recently came from Ontario, and one each came from the Northwest Territories, the Annapolis Valley Regional School Board, (another school board in Nova Scotia), and Bahrain, Arabian Gulf. One participant indicated that he had recently changed employers but did not indicate at which school board he previously worked. A small number of participants indicated that they changed employment due to the amalgamation that formed HRSB a few years ago. The

small number of respondents who had recently changed employers indicated that this factor was not relevant to this particular sample.

Survey Instrument

This research project employed a structured questionnaire specifically designed for this project (Appendix A). This ten-page questionnaire contained questions about various aspects of FAS and the learning needs of students with this syndrome. This questionnaire format was designed to provide a framework for eliciting responses (paper-based questionnaire) while allowing participants to provide free responses. The question format varied including true/false statements, yes/no questions, Likert-type scales regarding degree of agreement with a statement, and open-ended questions. These various question formats were employed to offer a reasonably balanced variety of response modalities, and thus maintain respondent interest and some intended overlap. Space at the end of the questionnaire was available for respondents to make comments with respect to the questionnaire, the topic and/or the study itself (question #52).

Questionnaire development.

The questions were formulated using various sources of information. These include consultation with individuals knowledgeable in the area of FAS as to important information for individuals to know, a review of a public awareness survey conducted by Health Canada (2000a), a review of information and resources developed for teachers on FAS (e.g., Manitoba Education and Training, 1996; 2001), a review of other surveys (e.g., Mack, 1995), and other references including articles and books on FAS (e.g.,

Burgess & Streissguth, 1990; Streissguth & Burgess, 1992; Streissguth, 1997). Questions were formed from these sources to cover a range of areas regarding the knowledge of FAS and the understanding of the learning needs of members of this group of children. The areas of interest included knowledge of the effects of alcohol on the fetus and knowledge of general information regarding FAS, awareness and understanding of the learning needs of students with FAS, school issues related to FAS, training and resources available and used by educators, and demographic characteristics of the sample. Each of these areas and its corresponding questions are included below.

The impact of alcohol on the fetus is central to appreciating the causes of FAS or related alcohol effects. For this section (questions #3 to #6) questions were adapted from the Health Canada (2000a) survey using a true and false format. Comparisons between the findings of this study and the Health Canada are included in the results section.

Various questions were included to explore the general knowledge and awareness of FAS among educators. This section consisted of open-ended questions regarding the acronym "FAS" (question #1) and how the respondent conceptualizes FAS (question #2). Also included in this section were questions regarding an estimate of the prevalence of FAS (question #7), common characteristics of students with FAS (question #8), opinion (agree/disagree) statements regarding the impact and nature of FAS on students (question #10 - #14), and an appreciation that FAS can result in other difficulties beyond academic and behavioural problems in the schools (question #19 and #20).

The extent of the understanding of the learning needs of students with FAS are explored both through the general knowledge questions discussed above and through more specific questions. The questions more specifically addressing learning needs of

students with FAS include those related to the respondent's awareness of difficulties experienced in the classroom by students with FAS (question #15 and #16), educational strategies which may be useful (question #18) or have been used by the respondent in the past (question #28 and #29), and the identification of students with FAS (question #21 and #22). In question #17, educators are asked to outline their expectations for students with FAS across three main areas of functioning: academic achievement, behaviour, and social interaction.

Issues that a school as a whole needs to address are also important to consider since various components of the school system, such as the individuals discussed above and procedures/services in place, interact to serve the child. These questions were included to briefly tap into the general opinions of FAS as a school level concern and how the needs of students with FAS were being addressed at the school level. The educators themselves will have their own ideas and strategies for helping students with FAS, but it was also of interest to consider the opinions of educators regarding how much a concern this area is in their school (question # 23), procedures used if a child is suspected to have FAS (question #22), what schools should do in general to help these students and their families (question #30), what was happening at the time to help these students and their families (question #31), and why, perhaps, other things were not happening, from the respondent's perspective (question #32). The responses to these questions may also highlight how much emphasis is put on learning about FAS and specific ways schools could be helping students with this condition.

Training and resources regarding FAS have become more plentiful over the past number of years, however, there is still a need for further training for educators (e.g.,

Health Canada, 2000c). In this section of the questionnaire respondents were asked about any specific training they may have taken with regard to FAS (questions #33 and #34), the sources and type of information they had regarding FAS (questions #35 and #36), and their ideas about what information and format of presentation for such information was most useful (questions #37, #38, and #39). Educators were also asked how prepared they felt they were to educate students with FAS (question #24) and what, if anything, would help them feel more prepared (question #25). This section was included to explore areas that are important to consider when designing resources and training.

Demographic information about the respondents was collected in the last section of the questionnaire. Specifically, this section included questions on whether the respondents had knowingly had experience with a student with FAS (question #26), their professional role (question #40) and the length of time as an educator and in their current role (question #41 and #42), past experience in other positions (questions #43 and #44), the school division in which the respondent was employed (question #45), the grade level of their students (question #47), past experience with other grade levels (question #48), the respondent's level of professional education (question #49), the gender of the respondent (question #50), and the age group in which the respondent belonged (question #51). Educators were also asked if they had recently changed employers with respect to school board or division (question #46). The rationale for requesting this information was to note if a large variability in population and/or professional development opportunities could have impacted the responses to the questionnaire.

Demographic information was collected in order to describe the sample with respect to various factors and characteristics. It is important to be aware of the

characteristics of the sample when viewing the results. If all educators had certain characteristics in common (e.g., all the same age or all the same gender) these characteristics should be noted when discussing findings and making generalizations. With respect to this study specifically, the need for information on the role currently held by each participant was needed in order to compare responses of educators currently in different roles.

Piloting of the questionnaire.

The purpose of this piloting was to ensure readability and clarity of the questions, to determine the average length of time required to complete the questionnaire and to gain insight into the responses that would be gathered. Educators were informally asked if they would complete the survey. The names of the educators were not included in the completed questionnaires and, therefore, personal responses were not identified.

The questionnaire was piloted with seven educators in Winnipeg, Manitoba including two classroom teachers, four resource teachers, and one administrator. The sample was in Winnipeg since the original plan had been to survey educators in Winnipeg. However, after the piloting was completed, the change of research location was necessary due to the relocation of the researcher. The piloting was not repeated since it is reasonable to assume that the educators in Manitoba would have been similar to the educators in Nova Scotia for the purposes of this pilot project.

The results of the piloting indicated that the length of time to complete the questionnaire ranged from 15 minutes to 45 minutes with an average of 30 minutes. Any ambiguous questions were reworded to improve clarity. For example, question #17 was

changed from “At times people form expectations of other individuals around them including students in the classroom” to read “At times people form expectations of other individuals. This includes the expectations that a teacher has for a student in his/her classroom.” Another change was in question #20 with the inclusion of the word difficulties as well as the word disabilities. Question #21 was also changed from “What are the main diagnostic areas considered when identifying children who may be diagnosed with FAS” to “What are the main areas considered when identifying and diagnosing children with FAS (e.g., upon what criteria is a diagnosis based).” Other minor changes were required and implemented including the correction of a question numbering issue, typing errors, and better spacing between questions to allow for the appropriate amount of space for open-ended responses. Two true/false questions were removed to reduce the length of the questionnaire. These questions were not significantly different from the others included in this section and did not yield new information not gained from other questions. The wording of one statement (“A small amount of alcohol consumed during pregnancy would never lead to serious harm to the baby”) was awkwardly worded and may have resulted in misinterpretation and, therefore, this statement was discarded.

With the change from Winnipeg, Manitoba to Halifax Regional Municipality, Nova Scotia, questions specific to Manitoba were removed (e.g., references to Manitoba Education and Training documents, local services, programs, etc.). The removal of the questions mentioned above further reduced the overall time required to fill out the questionnaire by approximately five minutes. There are few programs and services specifically for individuals with FAS in the Halifax Regional Municipality and few

training documents specific to teachers from the provincial department of education. Therefore, there was no requirement to substitute locally-oriented questions.

Procedure

Recruitment of participants.

The participants were recruited from across elementary schools in the Halifax Regional School Board. Upon approval from the HRSB an email was sent out from the school board office introducing the project and indicating the approval of the research. All elementary schools were given equal opportunity to have their staff approached with respect to participation. Each elementary school in the school board (n=104) was contacted by the researcher via telephone to request permission to circulate the questionnaires to staff. This contact resulted in speaking to administrators at the time of the call or leaving a message for the school principal to return the call. If a message was left then a follow-up call was made by the researcher within a week after the first contact, if no response had been forthcoming. If requested by the secretary, the researcher called the administrator back rather than leaving a message. Forty-two principals agreed to the distribution of materials in their schools resulting in a response rate of 47.1% for school inclusion in the sample. Three administrators served more than one school site. Each school site was included separately in the number of schools participating since each is considered a separate school in the HRSB school listing, yielding 49 participating schools. Four schools declined participation and the remaining schools did not respond to messages or follow-up phone calls.

Data collection.

Data was collected between November 2002 and January 2003. The number of potential participants at each school was determined during a conversation with the school administrator. All administrators, classroom teachers, resource teachers, and educational program assistants involved with children from Primary to Grade Four were included in the number of potential participants. Materials were delivered to each school upon approval of the respective administrator. The materials included a participant package for each staff member in the targeted population at that school, a copy of the email indicating approval from the HRSB, instructions on the distribution of packages, an envelope for the collection of consent forms and information on contacting the researcher. Materials were sent to five schools via Canada Post due to the distance of the school from the researcher. If this method of distribution was used then phone calls were made to indicate the materials would be arriving via mail and a phone call was made to confirm receipt of the materials. One school principal picked up the materials at a teacher resource centre in the city when she was in the area. Materials were personally delivered by the researcher to the remaining schools. One administrator requested a brief presentation (5 minutes) be made at a staff meeting regarding the project. This presentation highlighted only information contained in the written materials distributed with the questionnaires. Materials were left with the administrator following the presentation. All other schools did not receive a presentation. It is uncertain as to any differential effect on responding although the overall response rate of the school did not appear to differ from those of the other schools.

Each school administrator was asked to provide a location for educators to return their consent forms and completed questionnaires. The consent forms were to be collected in one envelope and the questionnaires in another in order to ensure the confidentiality of respondents. A date for pickup was indicated at the time the packages were delivered.

A participation package was placed in the mailbox of administrators, classroom teachers, resource teachers and educational program assistants at each school who worked with students from grades Primary to Grade Four. Each package included an introduction letter (Appendix B), two copies of a consent form (Appendix C) (one to be signed and returned and one for the participant to keep for his or her records), a white business sized envelope, a copy of the questionnaire (Appendix A), and a note indicating the date when the materials would be collected. Individuals not interested in participating in this study were instructed, in the introduction letter, to return all materials to the office to avoid the wasting of packages and materials. Participants were asked to complete one of the consent forms, seal it in the white business-sized envelope provided, complete the questionnaire, and seal it in the large envelope in which the materials were distributed. Although it is uncertain where and when the participants completed the questionnaires it was strongly recommended that research participation be done on the educators' own time. This may or may not have been the case and there was no way to ascertain this.

Prior to the collection of all materials from each school by the researcher, the school secretary, or administrator, was contacted by phone to determine if pickup was appropriate at that time. A later date was chosen with the school staff member, if required, due to circumstances at the school (e.g., report cards due, in-services, school

concerts, a flood, etc.) that delayed the completion of the questionnaires by the staff. A total of 731 packages were distributed among the 49 schools. One hundred twenty-three questionnaires were returned, yielding a participant response rate of 16.83%. Two participants did not complete the questionnaire thereby reducing the response rate to 16.55%. This is a low response rate which reduces the representativeness, and limits the generalizability, of the findings of this study. This, together with the use of a convenient sample requires caution in attempting to generalize trends in responses beyond the current sample. However, it is still important to consider the responses of these participants and, while keeping the limitations in mind, it is plausible to consider the likelihood the themes and trends found in this study may reflect those of a broader population.

Each school administrator who allowed distribution of materials in the school was given a copy of Health Canada's document entitled *Best Practices: Fetal Alcohol Syndrome/Fetal Alcohol Effects and the Effects of Other Substance Use During Pregnancy* (Health Canada, 2000b). Each principal was given a thank-you letter for the support of this project [Appendix D]. Individual follow-up letters were distributed to all participants who completed consent forms [Appendix E]. However, there were a number of questionnaires returned with no consent form. Therefore, it was not possible to determine all educators who participated for the purpose of distributing follow-up letters.

Results

The data was analyzed along two major lines as per the purpose of the study: (1) an overall analysis (n=121) and (2) comparisons among role groups (n=116). Results are

reported with respect to the four main research questions asked in this study: (a) what do educators know about FAS? (b) what do educators know and do about the learning needs and challenges facing students with FAS? (c) what training and resources are available and useful for educators in the area of FAS? and (d) are there differences among educator role groups with respect to knowledge of FAS?

Data Analysis

The analysis for this study was principally descriptive as a way of exploring the level of knowledge and understanding of FAS by educators. The responses to each question on the questionnaire were analyzed in one of two ways. Responses to closed-ended and limited choice questions were tabulated and analyzed by looking at the frequencies of responses for each given question. For open-ended and any open-ended components of questions, responses were coded as described below and the frequencies of codes were counted to determine common responses. Specific frequencies for each question are presented in Appendix G for the overall analysis and in Appendix H for the comparisons of role groups.

Coding of responses.

A freeware software package called EZ-TEXT (Carey, Wenzel, Reilly, Sheridan, Steinberg, & Harbison, 1998) was used to code all responses that did not fit into a simple frequency tabulation. This program is distributed online by the Centre for Disease Control & Prevention (<http://www.cdc.gov/hiv/software/ez-text.htm>) in order to provide researchers with a way to create, manage, and analyze semi-structured qualitative

databases. All responses to the semi-structured questions were transcribed into this program and a coding scheme was subsequently developed.

The coding scheme was developed interactively with the data as described by Palmquist (2001). Common ideas and topics that were expected to emerge based on the questions asked and the topic of the various sections of the questionnaire, however codes were created from the data with no preset coding scheme used. Each response was read and appropriate codes were created by the researcher to provide the most information about the data. The exploratory nature of this study also minimizes the impact of one coder since there are no hypotheses being tested and no amount or nature of the knowledge of educators is assumed. Although responses were coded by a single individual, namely, the researcher, and, therefore, the reliability of the data may be questioned, the nature of the study and the interactive formation of the codes strictly from the data help to offset this limitation.

A code was created when there did not already exist a code to describe the response. Small words that were not considered meaningful were not coded (e.g., a, the, I, we, etc.). The coding scheme was based on main subject words or topic (e.g., mother, drink, alcohol, learning problems, attention difficulties, reminders needed, etc.) Appendix F contains the codes and descriptions developed.

Common patterns and/or themes can be observed by counting the frequency of a code. This method, which is similar to looking at word frequency, is a common form of data representation (Krippendorff, 1980; Weber, 1990) used in determining important and popular concepts across respondents. Weber (1990) discusses an approach to analyzing text called "category counts." This is a count of the categories into which words and

responses have been classified. The method used to analyze the current data involves category counts in that a code is considered a category. Rather than counting each word in a response, only those codes that were assigned to each response were counted. Both word frequency and category counts are based on the assumption that the more frequently appearing words, topics or categories reflect the greatest concerns and ideas (Weber, 1990).

The reduction of codes was necessary to identify common concepts and themes frequently mentioned by respondents. A cut-off for inclusion of codes with at least 5 frequencies was selected based on the assumption that if five or more responses included the code it is unlikely that this frequency resulted from two people completing the questionnaire together and/or educators were responding the same way due to similar training or experiences (e.g., professional development; same school). Other cut-off points could have been set; however, in order to balance data reduction with retaining information from the small sample, the set cut-off was selected. At times, responses for a given question may have been considered even if they occurred fewer than 5 times in order describe the set of responses (e.g., there were few responses to a particular question).

The open-ended questions were included in the questionnaire in hopes of eliciting deeper, qualitative responses and spontaneous responses from educators. This goal was not achieved for much of the data. Most of the responses did not include detailed responses and typically consisted of one or two word answers and lists of characteristics that were not significantly different from responses given on limited choice or closed-ended questions. Responses from both open-ended and closed-ended questions have been

collapsed in the reporting of findings by reporting frequencies for various responses without specifying the difference between an open-ended (qualitative) or closed-ended question (quantitative). Direct quotes and comments from participants have been included to illustrate opinions and concerns that stood out from the rest of the data (Appendix I). These responses were included in the coding and subsequent tallies, as appropriate; however, the verbatim has also been included to preserve the authenticity of the responses.

What Do Educators Know About FAS?

Most educators (between 50% to mid 90% depending on the question) demonstrated knowledge of the fundamental information about FAS, including the effect of alcohol on an unborn child and the cognitive and developmental ramifications of prenatal alcohol exposure. The cause of FAS being prenatal alcohol exposure was noted with the recognition that the amount of alcohol, the timing during pregnancy of the exposure and the duration of exposure may potentially play a role in consequences for the child.

One hundred seven (88.4%) of respondents knew that the acronym FAS stands for Fetal Alcohol Syndrome. Six respondents (5%) indicated that FAS stands for Fetal Alcohol Spectrum Disorder. These responses may have been influenced by the instructions at the beginning of the questionnaire indicating that FAS is used as an inclusive term to represent the spectrum of disorders (Fetal Alcohol Spectrum Disorder) associated with prenatal alcohol exposure. Eight respondents (6.6%) incorrectly

responded to this question. Some incorrect responses included “Fetal Alcohol Spectrum” and “Fetal Alcoholic Disorder.”

The first thing that reportedly came to mind when educators thought of FAS (question #2) included facts, concern, personal experience and negative feelings toward the mother. For example, one participant responded with “How can a mother do that to her child!” Responses covered a wide range of topics and thoughts with the most common being the mention of a child (n=42; 34.7% of sample), pregnancy (n=38; 31.4%), drinking/consumption (n=31; 25.6%), learning difficulties (n=29; 24.0%), alcohol (n=26; 21.5%), and mother (n=26; 21.5%). Slightly over ten percent of the sample mentioned alcohol misuse, abuse or the amount of drinking (n=13; 10.7%). Thirteen participants (10.7%) indicated developmental issues/concerns. Several participants provided more than one response.

The present sample of educators appeared to be cautious about the amount of alcohol which is usually considered safe during pregnancy. Question #3 stated “a small amount of alcohol use during pregnancy can usually be considered safe.” The majority of educators (58.7%) indicated that it was false. Over ninety percent (90.9%) of educators indicated they felt it was false to state that a moderate amount of alcohol consumption during pregnancy was usually considered safe. (True = 8.3%; False = 90.9%; Don’t Know = 0.8%).

Educators tended to vary in their responses regarding the prevalence rate of FAS in North America (question #7) although as a group they tended to overestimate (63.6%) the prevalence. Fifty (41.3%) respondents indicated that the estimate would be 1 in 100 births followed by 22.3% (n=27) selecting 1 in 500 births.

Characteristics associated with FAS were selected by the majority of educators with the most common difficulties mentioned corresponding to those characteristics most frequently noted in the clinical and research literature (question #8). These characteristics included learning difficulties (n=117; 96.7%), attention difficulties (n=111; 91.7%), poor cause and effect thinking (n=104; 86.0%), memory difficulties (n=97; 80.2%), and difficulty with social interactions (n=97; 80.2%). Other common characteristics which would likely impact a student at school were selected by approximately two thirds or fewer respondents. These characteristics include language difficulties (n=83; 68.6%), impulsivity (n=78; 64.5%), hyperactivity (n=74; 61.2%), and an over- or under-sensitivity to stimuli (n=63; 52.1%).

Not all the characteristics included in question #8 are considered common in individuals with FAS. There were educators who reported characteristics as being common when in actuality they are not. These characteristics included delusions and/or hallucinations (n=15; 12.4 %), eating problems (n=24; 19.8%), sleep difficulties (n=52; 43.0%), and bizarre thoughts (n=27; 22.3%). These characteristics may be present in some individuals with FAS, however, they are not common.

Participants were asked if students with FAS are at risk for developing other difficulties or disabilities outside of their cognitive and learning problems (question #19). Eighty-three (68.6%) responded "yes" while 14 (11.6%) responded "no." Sixteen (13.2%) respondents indicated they did not know and 8 participants did not respond to the question (6.6%).

Educators reported various difficulties and disabilities experienced by students with FAS outside of the cognitive and learning problems (question #20). All percentages

reported for this question have been adjusted since the question was only posed to participants who had responded “yes” to the previous question (n=83). By far, the most frequent difficulty noted related to social functioning including social interaction difficulties (n=38; 45.8%), poor social skills (n=7; 8.4%) and peer problems (n=5; 6.0%). Other frequently noted difficulties included behavioural difficulties (n=10; 12.0%), self-esteem difficulties (n=7; 8.4%) and involvement in criminal activity (n=7; 8.4%).

The majority of respondents (n=119; 98.3%) recognized the variability that exists among individuals with FAS (question #9). Ninety percent of participants disagreed (“disagreed”= n=76; 62.8% and “strongly disagreed”= n=33; 27.3%) that all children with FAS exhibit the same behavioural characteristics (question #11). Mack’s (1995) survey yielded a smaller proportion in disagreement percentages with a total of 64.7% (“disagreed” = 48.1% and “strongly disagreed” = 16.6%).

Respondents were asked to consider any implications for the variability in characteristics associated with FAS. This question was related to the difficulty in making accurate diagnosis for the child given the wide variability of the characteristics, and the increased likelihood of misdiagnosis. A small number of participants identified the possible difficulty with differential diagnosis (n=12; 9.9%) or misdiagnosis (n=8; 6.6%) as an implication of the wide variability of characteristics of FAS. Other participants responded to the question by indicating the cause for the variability, such as the amount of alcohol consumed (n=12; 9.9%) the time, during pregnancy, of consumption of alcohol (n=5; 4.1%) and individual needs (n=6; 5.0%).

A majority of the present sample disagreed with the statement that FAS is a condition that tends to subside with age (“disagreed” = n=77; 63.6% and “strongly

disagreed" = n=37; 30.6%). The fact that FAS is a lifelong disability was also acknowledged. Ninety-five percent (95.8%) of educators agreed that FAS is a lifelong disability. Thirty-two participants (26.4%) "strongly agreed" that while 84 participants (69.4%) "agreed" with the statement.

When presented with the notion that FAS is a leading cause of mental retardation (question #13) the sample was divided with more respondents in disagreement with this statement. Forty-five percent (n=55; 45.5%) of the current sample indicated that they "disagreed" with the statement while 35.5% (n=43) "agreed" with the statement.

All participants disagreed with the statement that "FAS is limited to certain racial/ethnic groups." Sixty eight participants (56.2%) "disagreed" and 53 (43.8%) participants "strongly disagreed".

There was uncertainty among educators regarding the identification of students who are potentially alcohol-affected and the uncertainty of what is required for a diagnosis of FAS. Almost half of educators indicated that they did not know (n=27; 22.3%) or did not respond to the question (n=24; 19.8%). Educators identified the main diagnostic areas considered with respect to FAS without using the terms found in the literature when discussing diagnosis (growth deficiency/retardation, physical characteristics including facial phenotype, and CNS dysfunction). The most frequent response was the area of social interaction difficulties and social skills (n=19; 15.7%) with non-specific abnormalities/difficulties/challenges closely following with respect to frequency of response (n=18; 14.9%). Fifteen (12.4%) participants indicated that facial characteristics were part of identification. The history of the child (n=11; 9.1%), history of the pregnancy (n=7; 5.8%) were also noted including alcohol consumption during

pregnancy (n=6; 5.0%), references to mother's health (n=5; 4.1%) and mention of prenatal (n=5; 4.1%). Specific difficulties included learning problems (n=14; 11.6%), behavioural difficulties (n=12; 9.9%), cognitive problems (n=12, 9.9%), and attention difficulties (n=9; 7.4%). Growth deficiency, a criterion used in diagnosis, was mentioned by 9 participants (7.4%). Although educators indicated that they needed help in identifying students who were potentially alcohol-affected, they were aware to some extent of the main areas considered in diagnosis.

What Do Educators Know and Do About the Learning Needs and Challenges Facing Students with FAS?

The majority of participants (n=117; 96.7%) indicated that students with FAS experience difficulty in the classroom (question #15). Three participants (2.5%) responded "no" to this question and one participant did not respond (0.8%).

Five main areas were evident with respect to what educators know about the learning needs and challenges facing students with FAS. These areas are: (1) individualized help based on individual needs; (2) the acknowledgment of variability among individuals; (3) the recognition of common difficulties experienced by students with FAS, specifically social difficulties; (4) the ability to identify individuals with FAS; and (5) the expectations held by educators for students with FAS regarding behaviour, academic achievement, and social interactions.

Individualized help was referred to across questions and a variety of areas, including references to the need for individualized programs (IPP/IEP), the need for one on one assistance for the child via teacher assistance, EPA support and/or peer helpers/buddies. Educators indicated that this individualized help would be necessary in

academic areas as well as assistance to learn appropriate behaviours in the classroom and appropriate social skills.

The focus on individual help is related to the emphasis placed on meeting the individual needs of each student since each student is unique whether they have FAS or not. The majority of educators stressed the importance of considering the needs of individuals and tailoring programming, modifications and assistance to meet these needs. In determining individual needs, educators tended to note the importance of a comprehensive assessment (most frequently referred to as a psychological assessment) including cognitive assessment, academic achievement, and social/emotional factors. This focus on assessment also supports the notion that educators have an understanding of the variability among students with FAS.

Various difficulties experienced by students with FAS, in and outside the classroom, were noted by participants (e.g., question #16). Three participants were not asked about these difficulties since their response to question #15 indicated they did not feel students with FAS experience difficulty in the classroom. Some participants responded to this question by referring to question #8 which listed a number of possible difficulties. For these responses, the items checked off in question #8 were recorded as a response to the current question and coded accordingly. The most frequent difficulty noted were areas that are typical difficulty for students with FAS including attention difficulties (n=67; 56.3%), social interaction and social skills deficits (n=52; 43.7% and n=26; 21.8% respectively), learning difficulties without specific areas mentioned (n=48; 40.3%), and memory deficits (n=46; 38.7%). Approximately a fifth of the participants who were asked this question indicated difficulties in the areas of language (n=25,

21.0%) and hyperactivity (n=24, 20.2%). Other areas of difficulty noted included academics (including math and reading), cognitive, motor, and behavioural.

Educators were asked to indicate what expectations they held for students with FAS across three broad areas: academic achievement, behaviour and social interactions (question 17 a to c respectively). The most frequent response was the importance placed on modifications within each area and supporting the student based on his or her individual needs. In general, educators expected students to perform to the best of their ability and that the students could achieve success if modifications were made to adjust instruction and curriculum to their level. The need to assess a child's strengths and weaknesses was evident in the desire expressed by the educators to meet the child at his or her level. More specific responses are presented below.

Overall, educators indicated that students with FAS would experience academic difficulties. This expectation is, for the most part, realistic and the continued focus on individual needs (n=18; 14.9%) was essential in forming appropriate expectations for each student. If all the responses which relate to individual differences are considered together (e.g., individual needs, expect child to perform to the best of his/her ability, degree of FAS, teach to child's level, base programming on assessment results) 38.8% of participants considered these individual needs important. Expectations for academic achievement tended to show that educators recognized the need for modifications (n=21; 17.4%) and support required for the student (n=18; 14.9%). Generally, educators expected the child to succeed by performing to the best of his or her ability (n=14; 11.6%), although lower performance and achievement for these students were expected (n=16; 13.2%). There was recognition of the role played by the degree of FAS

impairment (n=5; 4.1%) and the need to base goals and modifications on an assessment (n=5; 4.1%).

Behavioural expectations were identified by educators with a focus on individual needs (n=17, 14.0%) and dependence upon the degree of FAS (n=7; 5.8%). Behavioural difficulties were expected (n=16; 13.2%) and participants indicated that a form of support (n=9; 7.4%) or behavioural strategies would be required (n=8; 6.6%) as well as the need for close supervision (n=8; 6.6%). Other responses were more specific, expecting difficulties related to hyperactivity (n=5; 4.1%) and impulsivity (n=5; 4.1%). Educators reported that they expected to use behaviour modification strategies (n=8; 6.6%) and techniques (such as rewards and positive reinforcement) in order to help manage the child's behaviour.

Overall, difficulties in the social domain (n=29; 24%) were noted by the majority of educators. More specifically, expectations for social interaction problems (n=18; 14.9%), social skills deficits (n=6; 5.0%) and/or peer problems (n=5, 4.1%) were reported. The importance of basing expectations on individual needs of each student (n=16, 13.2%) and the impact of the degree or severity of FAS (n=6; 5.0%) was evident. It was expected by respondents that support (n=10; 8.3%) would be required with frequent examples given including teaching social skills (n=8, 6.6%) and the need to provide social cues for the student (n=7; 5.8%).

What are educators doing to help these students?

Approximately one third of the respondents (n=43; 35.5%) indicated that they had knowingly taught a child who was alcohol-affected or diagnosed with FAS (question

#26). Seventy-seven participants (63.6%) indicated that they had not knowingly taught a child with FAS. One participant did not respond to the question. Out of the 43 participants with experience with students who are alcohol-affected, or diagnosed with FAS, the majority of educators had only taught 1 (n=23; 53.5%) or 2 such students (n=10; 23.3%). Other participants reported teaching between 3 to 6 students (n=8; 18.6% - frequencies combined). One participant (2.33%) had extensive experience with students with FAS and reported teaching 30 or more students with FAS. This was the same educator mentioned in the sample description who had recently begun working with the school board after working in northern Canada. One participant (2.33%) did not indicate the number of students taught.

Educators with experience working with students with FAS (n=43) commonly reported that it was a challenging experience (n=8; 18.2%). Other frequent responses included the frustration that accompanied the experience for 6 respondents (13.6%). Some educators described the experience as difficult (n=5; 11.4%). A total of 19 (43.2%) participants reported a negative or difficult feeling toward the experience while others viewed the experience in a positive light (total n=7; 16.1%) by indicating that it was a rewarding experience (n=4; 9.1%) and/or one that they enjoyed (n=3; 7.0%). Behavioural and social difficulties were noted by several respondents (n=4; 9.1% and n=6; 13.6%, respectively).

Educators with and without experience, noted various strategies and adaptations for students with FAS mentioned. These tended to group along three main points: (1) the use of individual help, (2) strategies that are helpful, and (3) the involvement of various people in order to provide the support required.

Individual help for students with FAS tended to be the most frequently mentioned idea in terms of what is, or should, be done to help the student. This involved individual/one-on-one attention (n=27; 22.3%), peer helper/buddy (n=19, 15.7%) and individualized programming (n=16; 13.2%).

Other helpful adaptations and strategies mentioned included academic help (n=14; 11.6%) with a reduction in the amount of work (n=6; 5.0%) and breaking the work into smaller chunks (n=11; 9.1%). Some participants indicated the need for support (n=6; 5.0%), support services (e.g., EPAs – n=14, 11.6%; Resource help – n=9, 7.4%) and modifications (modifications required – n=10; 8.3%; modified program – n=5; 4.1%) without giving specific information on what type of modifications. A need for clear explanations of directions and work (n=10; 8.3%) and lots of repetition (n=9; 7.4%) was also expressed. Ten participants (8.3%) noted the importance of basing adaptations on individual needs. Environmental adaptations were reported including a structured environment (n=8; 6.6%) and providing space for students be quiet if overwhelmed by stimulation (n=6; 5.0%).

Educators indicated that they looked to others when they suspected a child may have had FAS and sought to involve those with more experience with the child and with FAS when attempting to plan for the student. The Program Planning Team at the school was the most frequently consulted (n=33; 27.3%) followed by the school psychologist (n=32; 26.4%) and administration (n=27; 22.3%). Educators also indicated interest in seeking assistance from outside agencies and professionals such as medical professionals (n=18; 14.9%), an expert in the field (n=9; 7.4%), and the Developmental Clinic at the IWK Children's Hospital (n=5; 4.1%). Twenty-eight participants (23.1%) indicated that

they would contact the child's family with their concerns. One participant alluded to the difficulty of suspecting a child is alcohol-affected and not being able to bring this up with the family. A classroom teacher, who at times also serves as an administrator, wrote, "Very difficult situation to deal with. I have had this problem. It is addressed in the Resource Programme and Social Skills Programme but FAS has never been brought up with the family although it was known mother drinks, drank in pregnancy and student shows some physical (facial) abnormalities." Other responses involved making modifications, finding information about the child and FAS, and seeking a diagnosis and assessment.

Almost all respondents with experience (n=41; 95.3%) indicated there were adaptations or specific strategies used with the student who was alcohol-affected or diagnosed with FAS (question #28). One respondent (2.3%) indicated that there were not any adaptations or specific strategies and one respondent (2.3%) did not respond. These adaptations represented four areas: (1) teaching style adaptations, (2) classroom adaptations, (3) behavioural management strategies/adaptations, and (4) other adaptations.

The most common teaching adaptation used by respondents was individual help/one-on-one teaching (n=17; 41.5%). The use of peer helpers or buddies was frequently mentioned (n=6; 14.6%) as well as a focus on individual programming (n=5; 12.2%) and individualized needs (n=3; 7.6). Strategies mentioned included the use of visual aids (n=5; 12.2%) and tactile strategies (n=5; 12.2%). Four participants (9.8%) indicated they had lower expectations for the students with FAS. The need for repetition (n=6; 14.6%) was also mentioned.

Classroom adaptations, which include environmental adaptations, were implemented by several educators (question #29b). The most common adaptation involved seating plans, namely, preferential seating for the student with FAS (n=25; 61.0%). Other adaptations included peer helpers and buddy systems (n=8; 19.5%) and a quiet place, or area, for the child if he or she was overwhelmed (n=6; 14.6%). Other environmental adaptations mentioned were reducing distractions in the classroom (n=3; 7.3%), the use of visual aids (n=3; 7.3%) and providing opportunity for movement and personal space for the student (n=3; 7.3%).

Behavioural techniques were reported as frequently used with students with FAS. Behaviour modification techniques and strategies (n=7; 17.1%) were generally mentioned, however, emphasis was put on the importance of rewards (n=16; 39.0%) and positive reinforcement/praise (n=7; 17.1%). Educators noted that it is important to be consistent in dealing with behavioural difficulties (n=6; 14.6%) and that expectations need to be clear (n=5; 12.2%).

In the last part of question #29, participants were asked if there were any other adaptations or strategies used. Some of the adaptations were mentioned included those also noted in the other areas, such as peer helpers/buddies and general behavioural strategies. Most responses were unique, with only one educator bringing up the area or strategy. These responses included the use of calming activities; curriculum modifications to address learning and language difficulties; exercise and allowing free movement; frequent contact with family and home support; the need for improved social skills and the teaching of social skills in order to build friendships; teaching organizational skills; using reminders; implementing breaks into the daily schedule; and

involving a team including specialists, experts, school clinicians and support staff. The frequency of these responses was very low and therefore proportions are not included as they would not add meaningful information.

School factors to consider.

Educators were asked how much of a concern FAS was in their school (question #23) using a closed-ended question with four levels (major, moderate, minor, not a concern). One participant (0.8%) did not respond to the question. Most participants indicated that FAS is a “minor concern” (n=46; 38.0%) or “not a concern” (n=45; 37.2%) in their school. Twenty-four participants (19.8%) indicated that FAS is a “moderate concern” in their school. Five participants (4.1%) indicated that FAS is a “major concern” in their school. Data on school demographics was not collected so it was not possible to examine the correspondence, if any, between the responses for a specific school or groups of schools.

In terms of the level of concern in their school and experience working with students with FAS, educators tended to indicate there was more of a concern when they had experience working with students with FAS. All, but one, of the educators who indicated that FAS was a “major concern” in their school reported having experience working with students with FAS. The educators who indicated that FAS was “not a concern”, or only a “minor concern”, may or may not have had experience with students with FAS.

Educators were asked to identify the most important factors for schools to consider when working with students with FAS and what schools should be doing to help these children and their families (question #30). The most frequent responses were

general in nature, such as support needed (n=25; 20.7%) and training for those working with students with FAS (n=21; 17.4%). The importance of contact with the family was noted by 20 participants (16.5%) and support for the family at home in order to help support the child was also noted (n=16; 13.2%). Educators mentioned the need for effective modifications (n=15; 12.4%) and effective strategies (n=13; 10.7%). These included the need for various resources, staff, training and materials for the staff, students and families. One classroom teacher summed up the desire to help these students by writing that what is needed is to “Demonstrate compassion and a willingness to do anything in your power to assist this child.”

After educators identified important factors for schools to consider they were asked to speculate on what was required to have these things in place (question #31). The most frequent response was the need for more money (n=28; 23.1%) with other general references to the need for more support services (n=14; 11.6%), resources (n=14; 11.6%); EPAs (n=8; 6.6%); and support – non-specific (n=9; 7.4%). A classroom teacher presented this view by writing “We need info! Info to handout to all staff and parents, so that this "well kept secret" is out in the open and considered a serious problem. Then perhaps we will get the support these children need via funding. If there's no info, there's no \$ [money].”

Another group of responses tended to focus on the need for more training for individuals working with the students (n=15; 12.4%), more specifically training for teachers (n=6; 5.0%), increased awareness (n=6; 5.0%), and experts to help educators learn how to help these students (n=5; 4.1%). Several educators recognized the need for a team approach (n=6; 5.0%) to helping students with FAS and their families. This was

evident in the responses indicating the need for good communication between all parties (n=7; 5.8%), support from outside agencies (n=7; 5.8%), having specialists involved (n=7; 5.8%), working with and support parents (n=6; 5.0%), and having support from home (n=6; 5.0%). Educators also noted the need for support of leadership (n=5; 4.1%) and individuals beyond the classroom level, such as the administrators (n=5; 4.1%) and the School Board (n=10; 8.3%). One participant elaborated on the difficulty teachers have in doing what they think is best for the student in the following comment: “No one goes to a restaurant and tells the cook how to cook a meal. You don't fly and tell the pilot how to fly the plane. But teachers are being overridden by parents and a system that doesn't allow teachers to follow through on what they think is best as professionals. If a parent knows their kid and can provide helpful information, we should be open to that. But we may see things the parent doesn't. We should have a say on how to act accordingly. We need the system that surrounds us to back us up. This may include, children's aid, bylaws, MPs ... whatever. The big picture here is it's complicated. There are no easy answers.”

With the number of ideas and speculations as to what would be required to help students with FAS and their families, educators were asked if these things were currently being done (question #32). Forty-one participants (33.9%) reported that the things were not being done. Twenty-one participants (17.4%) reported the things were currently being done and 22 participants (18.2%) indicated that some of the things were being done. Twelve participants (9.9%) did not know if the things mentioned in the previous question were in place and 25 (20.7%) participants did not respond to the question.

Participants were asked why the things mentioned in question #30 were not being done (n=100). Participants who indicated things were being done (n=21) were not asked

that question. The most frequent response was the need for more money (n=15; 15.0%). Fourteen participants (14.0%) indicated things were not being done due to the fact that, to their knowledge, there were few cases of FAS in their schools. Other reasons given included lack of knowledge of FAS (n=8, 8.0%), lack of resources (n=8; 8.0%), low priority in school (n=6; 6.0%), the stigma attached to FAS hampers services (n=4; 4.0%), and the lack of time available to learn about and plan for the student (n=4; 4.0%). Thirty-four percent of participants (n=34) did not respond to the question.

What Training and Resources are Available and Useful for Educators in the Area of FAS?

Thirty-eight percent of participants indicated that they felt “somewhat prepared” (n=46) to educate students with FAS. Thirty-three participants (27.3%) reported that they felt “unprepared” while almost a quarter of the participants indicated that they felt “somewhat unprepared” (n=28; 23.1%). Ten participants (8.3%) indicated that they felt “well prepared” to educate students with FAS while only 4 participants (3.3%) indicated that they felt “very well prepared” (3.3%).

In general, participants reported feeling prepared (very well prepared + well prepared + somewhat prepared = 49.6%) when they had more experience. Likewise, the majority (66.2%) of participants who felt unprepared (“somewhat unprepared” and “unprepared” combined = 50.4%) indicated that they did not have experience with students with FAS. All the participants who indicated they felt “very well prepared” had experience working with students with FAS. Table 5 provides cross tabulation data

Table 5

Comparisons between educators with or without experience with respect to feelings of preparedness and rating of the concern in the school regarding FAS.

Question #26 – Experience with students with FAS	Question #23 – Concern in School	Question #24 – Preparedness					Total
		Very well prepared	Well prepared	Somewhat prepared	Somewhat unprepared	Unprepared	
Yes	Major concern	1	-	3	-	-	4
	Moderate concern	-	3	7	-	-	10
	Minor concern	2	1	11	2	4	20
	Not a concern	1	1	4	1	2	9
	Total	4	5	25	3	6	43
No	Major concern	-	-	-	-	1	1
	Moderate concern	-	1	2	6	4	13
	Minor concern	-	2	10	6	8	26
	Not a concern	-	2	9	11	14	36
	No response	-	-	-	1	-	1
	Total	-	5	21	24	27	77
No Response	Moderate concern	-	-	-	1	-	1
	Total	-	-	-	1	-	1
Totals		4	10	46	27	33	121

with respect to experience, feelings of preparedness, and rating of concern in the school regarding FAS.

When asked what, if anything, would help them be better prepared to teach students who may be diagnosed with FAS (question #25), the most frequent response was the need for current research and information in the area (n=31; 25.5%). One EPA wrote “It's like taking a building and building from the top down. Prepared to teach - yes. Prepared to get compliance from everyone involved to put the effective I.P.P. [Individualized Program Plan] in place - it's hard. We need resources.” Another respondent wrote “I'd like more info! It seems that FAS is a well kept secret. We have tons of info on every other disorder - but next to nothing on FAS.” Some educators indicated the type of information that would be helpful would include what strategies to use (n=24; 19.8%) and modifications that would be appropriate (n=5; 4.1%). Other responses relate to the delivery format of information such as in-services (n=27; 22.3%) and workshops (n=15; 12.4%). Several responses were non-specific in terms of the information or the presentation.

Educators reported receiving very little training specific to FAS, both in amount and scope. The majority of participants (n=109; 90.1%) indicated that they had not taken any specific training with respect to FAS (question #33) while 12 participants (9.9%) indicated that they had some training. It appeared that most training was received through parts of courses or workshops taken outside the school. Of those participants who indicated they had some training, the specifics of the training included: during the training for their current role (n=6; 50.0%); workshops or conferences other than professional development in school (n=6; 50.0%); during professional development

sponsored by the school/board (n=1; 8.3%); part of a course in university (n=1; 8.3%); during other courses, such as behaviour modification courses (n=1; 8.3%); from parents of a student with FAS (n=1; 8.3%); and through experience (n=1; 8.3%).

With respect to sources of information and resources on FAS, educators indicated that printed literature (books, journals, etc.) was most frequently used (n=59; 48.8%) and the most helpful (n=31; 25.6%) as primary sources for information. Other sources of information cited included television (n=13; 10.7%) and the Internet (n=6; 5.0%). Colleagues (n=19; 15.7%) and support staff (n=11; 9.1%) were also noted as commonly consulted sources of information.

The majority of participants (n=103; 85.1%) indicated they would be interested in more information while 14 participants (11.6%) indicated they would not be interested in more information. Four participants (3.3%) did not respond. One participant wrote, "I'd have to be convinced of the need which I am not now."

Educators were interested in a variety of information regarding FAS with the most common area being information on how to identify FAS (n=28; 27.2%) and strategies to use with students with FAS (n=28; 27.2%). Some educators indicated a general interest in any and all information (n=25; 24.3%) while others were interested in current research on FAS (n=23; 22.3%).

Educators who indicated an interest in more information (n=103) were also asked what method of presentation they prefer for getting information (question #39). Four options were provided: (a) workshop, seminars, conferences, (b) printed materials (e.g., books, newsletters), (c) multimedia (e.g., Internet style), and (d) other. The most desired forms of training/resources were in the form of workshops (n=87; 84.5%) and printed

materials (n=57; 55.3%). Multimedia formats were not as popular a method chosen as might be expected in this age of computers and the Internet (n=29; 28.2%). Other formats included videos, case studies, television, modelling, working with specialists and guest speakers.

Are There Differences Among Role Groups?

Participants were divided into four groups based on the role which they held (administrator, special education/resource teacher, classroom teacher, educational program assistant). As indicated earlier, five participants who held multiple roles and their data were removed from any group comparisons to prevent the duplication of data. They were not placed into any group as their primary role was not readily apparent. The purpose of these comparisons was to consider potential differences among the groups in terms of knowledge, understanding and focus on the topic of FAS as well as the learning needs of students with FAS. Training and resources were also considered.

The small sample size and the skewed distribution of participants among role groups limited the feasibility of comparing participants based on role groups using quantitative methods. Chi-square tests were considered; however, the assumptions of this method were not met by the data. The main assumption of chi-square tests is that a two-way contingency table analysis yield a test statistic that is approximately distributed as a chi-square when the sample size is relatively large. Although there is no set rule for what sample size is large enough, the current data set yielded more than 20% of the cells with expected frequencies below 5. Therefore, the current sample size was not sufficient to provide valid statistics from a chi-square statistic. A combination of roles was considered with direct (classroom teachers, EPAs, and resource teachers) versus indirect

(administrators) contact with students as the grouping factor. This combination did not allow for comparisons of responses using quantitative methods, namely chi-square, since the assumptions discussed above were not met even when roles were combined. Since comparisons between individual roles were the main focus of this project, this combination was not pursued.

Comparisons between role groups were made by cross tabulating responses and roles using the Crosstabs function of SPSS. For the closed-ended or limited choice questions, the frequency of each response was cross-tabulated with the role. For the open-ended questions, the most frequent responses, as determined by coding and tallying the frequency of the codes, were compared between role groups. Appendix H contains cross tabulation data for each question. Only those comparisons which revealed noteworthy differences between the groups were reported below. Most of the comparisons were made on the basis of the proportion of members of the role group responding in a given way. If the proportion of the role group was different from the overall proportion when considering the whole sample or when comparing groups, this difference was noted.

The majority of participants (58.7%) indicated that “a small amount of alcohol use during pregnancy is usually considered safe” was “not true” and most other participants indicated it to be “true” (36.4%). This split in opinions held true when looking at roles which the individuals held. Classroom teachers (“not true”: n=42; 57.5%; “true”: n=27; 37.0%), EPAs (“not true”: n=10; 58.8%; “true”: n=6; 35.3%), and administrators (“not true”: n=6; 46.2%; “true”: n=7; 53.8%) were all nearly equally divided on the question. A greater proportion of resource teachers, as a group, tended to view this statement as not true (10 out of 13 resource teachers = 76.9%).

When asked about the prevalence of FAS (question #7), role groups were very similar, with between 60% and 70% of respondents in each group choosing a prevalence of "1 in 100" or "1 in 500". However, as a group, administrators tended to report FAS as more prevalent as compared to the other groups, with 92.4% of administrators indicating prevalence of "less than 1 in 100" to "1 in 500". A large proportion of the other groups indicated prevalence in the same range, however, the percentages of the group were lower with classroom teachers, EPAs, and resource teachers yielding 75.3%, 82.3%, and 69.2% respectively. A greater proportion of resource teachers tended to have the most accurate perception of the prevalence with 30.8% indicating a prevalence rate of 1 in 1000. This prevalence rate is similar to the rate reported by various authors (e.g., Abel & Sokol (1987; 1991); Institute of Medicine (1996); Roberts & Nanson, 2000).

The percentages of participants who selected several of the characteristics were not different when compared to the percentages within each group (attention difficulties, memory problems, learning difficulties, and poor cause and effecting thinking/understanding). There were discrepancies with respect to some characteristics deemed common when role groups were considered.

Sixty-two percent (62.1%) of the sample (n=116) included in this analysis indicated that hyperactivity was a common characteristic. A greater proportion of resource teachers (84.5%) tended to indicate this to be a common feature as compared to the overall group. The other role groups were near the same proportions as the entire sample (classroom teachers = 57.5%; EPAs = 64.7%; administrators = 61.5%).

"Motor delays" were also differently selected by resource teachers (61.5% indicated this was a common characteristic) compared to the overall sample (75.9%) and

the other role groups (classroom teachers = 79.5%; EPAs = 70.6%; administrators = 76.9%).

“Delusions and/or hallucinations” were not frequently selected as a common characteristic of FAS (12.9%). However, the proportion of administrators (23.1%) and EPAs (23.5%) who selected this characteristic was higher than the sample (n=116).

“Difficulties with social interactions” was noted by 80.2% of the sample. Classroom teachers and EPAs were similar in distribution with the proportions of 80.9% and 76.5% respectively. More resource teachers tended to view this as a common difficulty for children with FAS (92.3%) while administrators, compared to the other groups, did not seem to consider this a common difficulty (69.2%).

“Physical abnormalities (e.g., facial characteristics)” were reported as common characteristics by 67.2% of the sample with resource teachers placing more emphasis on this area (92.3% indicated that this was a common characteristic) as compared to the other groups (classroom teachers = 63.0%; EPAs = 64.7%; administrators = 69.2%).

“Eating problems” were selected by about a fifth of the sample (19.8%) with administrators selecting this characteristic most frequently (30.8%). All other role groups were similar to the overall sample (classroom teachers = 17.8%; EPAs = 17.6%; resource teachers = 23.1%).

“Growth retardation” was noted by a greater proportion of resource teachers (76.9%) as compared to the other role groups (classroom teachers = 65.8%; EPAs = 64.7%; administrators = 69.2%) and the overall sample (67.2%).

A higher proportion of resource teachers (92.3%) also noted “language difficulties” as compared to the sample (69.0%), EPAs (64.7%) and administrators

(69.2%). Classroom teachers, as a group, did not indicate this difficulty as much as the others (41.4%).

“Impulsivity” was noted by a greater number of resource teachers (76.9%) as compared to the sample (64.7%), classroom teachers (64.4%) and EPAs (64.7%). Administrators, as a group, did not indicate this to be a common characteristic (53.8%) as frequently.

Fifty-three percent (53.4%) of the sample (n=116) indicated “over or under sensitivity to stimuli” as a common characteristic. The proportion of EPAs (58.8%), resource teachers (61.5%), and administrators (53.8%) were similar to that of the overall sample. Classroom teachers, as a group, did not select this characteristic as often (31.9%).

“Sleep difficulties” were noted by 43.1% of the sample. Classroom teachers were in the lowest proportion with 37.0% indicating this is a common characteristic. The other role groups were split in opinion with approximately half selecting the characteristic and half not selecting it (EPAs = 52.9%; resource teachers = 53.8%; administrators = 53.8%).

The proportion of administrators (46.2%) who selected “bizarre thoughts” as a common characteristic was twice that of the entire sample (22.4%). The proportions of classroom teachers (17.8%), EPAs (29.4%), and resource teachers (15.3%) were not different than the overall sample.

“Social skills deficits” were noted by over three quarters of the sample (78.4%) with all but the administrators falling around the same proportion (classroom teachers = 80.8%; EPAs = 76.5%; resource teachers = 84.6%). The proportion of administrators

who selected this characteristic (61.5%) was lower than the other role groups and the overall sample.

When role groups were compared with respect to the opinion questions #10 through #14, the majority of opinions lined up with the majority of responses reported earlier. Question #13, which read "FAS is a leading cause of mental retardation," was the only response with a noteworthy discrepancy of responses. The majority (n=61; 52.7%) of the sample disagreed ("disagreed": n=53; 45.7% and "strongly disagreed": n=8; 7.0%) while 41.4% (n=48) of the sample agreed ("agreed": n=42; 36.2% and "strongly agreed": n=6; 5.2%). Seven participants (5.8%) did not respond. When comparing role groups, the split was very similar in each group although the resource teachers (61.6%) had a slightly higher proportion in disagreement as compared to the others.

Each role group reported a number of difficulties that children with FAS experience in the classroom (question #16). However, the areas of difficulty that was stressed by the majority of each group varied somewhat. The majority of classroom teachers, EPAs, and resource teachers all stressed attention difficulties in the classroom (61.4%, 52.9%, and 69.2%, respectively). Administrators indicated this was an area of difficulty as well (30.8%) although the majority of administrators stressed learning difficulties (46.2%) and memory deficiencies (38.5%). Classroom teachers (51.4%) and resource teachers (46.2%) noted social interaction difficulties second only to attention problems whereas EPAs more frequently noted memory deficiencies (47.1%) to attention problems. A higher proportion of resource teachers indicated specific academic areas as difficulties (reading = 23.1%; math = 23.1%) as compared to the other role groups.

Expectations for students with FAS (question #17) yielded differences among role groups. The greatest number of responses of classroom teachers indicated the importance of focusing on individual needs for academics (17.8%), behaviour (17.8%), and social interactions (16.4%). EPAs responded generally indicating that support would be required for academics (17.6%) and while expecting the child to achieve success (17.6%) they expected lower achievement (17.6%). With respect to behaviour and social interactions, EPAs indicated that behavioural modification strategies and techniques would be required (17.6%), and social difficulties were expected (17.6%). Resource teachers indicated that modifications were required for academics (53.8%) and that behavioural difficulties were also expected (30.8%). With respect to social interactions, there was a greater variability of expectations among resource teachers with 15.4% indicating that social difficulties were expected, support would be required, there would be a need to teach social skills and a need to provide social cues for the student. The highest proportion of administrators expected that support for academics would be required (30.8%) and expected the child to perform to the best of his/her ability (30.8%). Administrators indicated an expectation for behavioural difficulties (30.8%) with close supervision required (15.4%). In terms of expectations for social interactions, almost a quarter of administrators (23.1%) expected students to learn appropriate social skills.

The strategies and/or adaptations generally considered helpful by educators (question #18) focused on the need for individual attention and help for the student although the proportions of each role group varied somewhat. Classroom teachers (27.4%) and resource teachers (30.8%) indicated the benefit of individual help/one-on-one assistance. EPAs (17.6%) and administrators (23.1%) stressed the need for

individualized programming while administrators also specifically indicated the need for academic help (23.1%). Resource teachers noted the need for resource help (23.1%), use of tactile strategies and materials for learning (30.8%) and the need to break work into smaller chunks (23.1%).

The common responses among groups did not indicate that one role group had any better sense of areas considered when identifying students with FAS. The most frequent response for classroom teachers and resource teachers was physical abnormalities – non specific (15.1% and 23.1% respectfully). Resource teachers also mentioned learning difficulties as an area of consideration (23.1%). EPAs (23.5%) and administrators (15.4%) indicated that social interaction difficulties were a main area. Administrators did not seem to agree on the areas of interest, with responses falling across the board.

Whom the educators consulted if they suspected a child may have FAS varied among the groups. Classroom teachers (27.4%) mainly indicated they would tell the administrator about their concerns. EPAs (35.3%) indicated they would consult with the classroom teacher while the majority of resource teachers (53.8%) indicated they would consult the school psychologist. Administrators (46.2%) indicated they would consult the Program Planning Team/School Team. In most schools this team would include the classroom teacher, the resource teacher, an administrator, and school clinicians such as the school psychologist, speech/language pathologist, etc.

When comparing role groups, approximately the same proportion of each group indicated that FAS was “not a concern” in their school (classroom teachers = 39.7%; EPAs = 41.1%; resource teachers = 30.8%; administrators = 38.5%). Over 40% of

classroom teachers indicated that FAS was a “minor concern” (43.8%). The remaining classroom teachers indicated that FAS was “moderate concern” (13.7%) or a “major concern” (1 classroom teacher = 1.4%). EPAs indicated that FAS was “not a concern” (41.1%) with 11.8% indicating that FAS was a “minor concern” and 29.4% indicating a “moderate concern.” Three EPAs (17.6%) indicated that FAS was a major concern in their school. The majority of resource teachers indicated FAS was a “minor concern” (53.8%) while 15.4% indicated that FAS was a “moderate concern.” Administrators were divided between all four possible levels: “not a concern” (38.5%), a “minor concern” (30.8%), a “moderate concern” (23.1%) and a “major concern” (1 administrator = 7.7%).

Sixty-nine percent of resource teachers (69.2%) indicated that they had knowingly taught a child who was alcohol-affected or diagnosed with FAS (question #26). Within the other three role groups the majority of individuals had not knowingly taught any students who were alcohol-affected or diagnosed with FAS (classroom teachers = 72.6%; EPAs = 64.7%; administrators = 53.8%). This corresponds to the overall majority of participants indicating that they had not knowingly taught any students with FAS (64.7%).

The important factors for schools to consider when working with students with FAS (question #30) were viewed somewhat differently by the role groups. The majority of resource teachers indicated the need for support (30.8%) and the need for effective strategies (30.8%) without providing more specifics. The most frequent response of classroom teachers (19.2%) was the need for training for those working with students with FAS. EPAs (23.5%) indicated the need for contact with the family. Administrators

recognized the importance of knowledge of educators about FAS (23.1%) and the need of understanding and compassion for these children and their families (23.1%).

Over a third of participants in the role groups sample (n=116) indicated that the things mentioned to help students with FAS and their families were not being done (34.4%). Three role groups followed the same pattern as the overall sample with classroom teachers (28.8%), EPAs (47.1%), and administrators (61.5%) indicating things were not being done. The highest proportion of resource teachers indicated that "some" of the things are being done (38.5%).

The source of information found to be the most helpful (question #36) by classroom teachers (24.7%) and resource teachers (38.5%) was literature which included books, journals, etc. EPAs (29.4%) indicated that workshops had been the most helpful. Administrators (30.8%) found colleagues to be the most helpful. Generally, the sources found to be the most helpful matched those sources from which educators had received information, as described, particularly literature (books, journals, etc.). The majority of classroom teachers noted television (52.1%) and literature (50.7%) as sources of information. EPAs (41.2%) and resource teachers (61.5%) also noted literature as sources. The majority of administrators (53.8%) reported colleagues as their source of information.

Most of the individuals who were not interested in more information were the classroom teachers (15.1% not interested). Several of the classroom teachers indicated that they were not interested in knowing more about FAS since there were no students with FAS in their class at the time. All administrators indicated that they were interested

in more information regarding FAS (question #37). All resource teachers, except for one, (92.3%) and the majority of EPAs (88.2%) also indicated an interest in more information.

Discussion

The primary purpose of this project was to explore the extent of awareness and understanding educators had with respect to FAS and the understanding of the learning needs of students with FAS. Educators, as a group, tended to have a broad knowledge of FAS (e.g., “attention difficulties”, “behavioural problems”, “social problems”, “support needed”, “modifications required”, “academic help required”, etc.) which indicated a general understanding without providing an indication of specific needs and specific ways to assist these students.

Quality of Data from Questionnaire Responses

The open-ended questions that were included in the questionnaire in hopes of gaining more insight and qualitative information from educators did not appear to yield responses that were more detailed than those from closed-ended questions. Most common responses were short responses with a focus on general topics (e.g., “attention difficulties”). This lack of elaboration suggests that educators were answering questions in a general way and responding using language commonly used by educators when discussing the needs of special needs populations (e.g., “individualized programming”, “modified program”, “support needed”, etc.). These responses reflect a superficial level of knowledge. The responses provided were “safe” answers in that they are the answers that are socially desirable. For example, the need to focus on the individual needs of each child was frequently mentioned and this is what most would consider best. In a similar

way, the need for more resources and money for support services is a very commonly posed solution to difficulties. These things may be appropriate, but, as written, these responses did not demonstrate a thoughtful consideration of needs or solutions beyond vague far-reaching concepts. Responses have been discussed in conjunction with quantitative information.

What Do Educators Know About FAS?

Educators tended to have a broad sense of FAS and knowledge of the basic information such as cause factors, the fact that prenatal exposure to alcohol impacts the fetus, and detrimental effects persist throughout the life of the individual. Educators recognized the variability that occurs in individuals with FAS and noted several of the common characteristics including social problems, behavioural problems, and learning difficulties. Some educators selected characteristics that were not common. The educators who noted these characteristics likely selected all characteristics listed in the question and, if so, this suggests that they may not have an accurate understanding of the common characteristics associated with FAS. If this is the case, it may be difficult for these educators to identify students who are potentially alcohol-affected and needing further assessment to rule out effects related to prenatal exposure to alcohol.

Questions #3 through #6 were true and false questions derived from a public awareness survey completed by Health Canada (2000a). The present sample of educators appeared to be more cautious about the amount of alcohol which is usually considered safe during pregnancy. Both samples are generally split on this issue of the safety of a small amount of alcohol. Question #3 stated "a small amount of alcohol use during

pregnancy can usually be considered safe.” In the general public survey, majority of respondents (51%) indicated that it was true that “a small amount of alcohol use during pregnancy was usually considered safe.” However, in the present sample of educators, the majority (58.7%) indicated that it was false. The general public survey yielded a greater difference of opinion on the safety of a moderate amount of alcohol consumption during pregnancy (True = 25%; False = 73%; Don’t Know = 2%) as compared to the educators in the current sample (True = 8.3%; False = 90.9%; Don’t Know = 0.8%).

Educators tended to over-estimate the prevalence rate of FAS. The commonly reported prevalence rate for North America is approximately 1 in 1000 births (Abel & Sokol, 1987; 1991; Institute of Medicine, 1996; Roberts & Nanson, 2000). This over-estimation by educators of the prevalence rate is not consistent with reports that there are few children with FAS in the schools included in this sample. This over-estimation may relate to educators’ feeling that a syndrome which is important enough to be researched in the schools, such as this study on FAS, must be relatively prevalent.

The findings of this study tend to agree with findings from other studies which investigated the awareness of FAS among educators. Previous studies (e.g., Mack, 1995; Streissguth & Burgess, 1992) found that there was a level of general concern and knowledge among educators about FAS, but more practical information was needed about instructional and behavioural strategies and as well as information on identifying students who are potentially alcohol-affected.

Streissguth and Burgess (1992) found that educators felt that understanding students who were prenatally exposed to alcohol were important educational issues. Almost half of the present sample felt unprepared to teach students with FAS which

corresponds to the half that felt overwhelmed in Stressiguth and Burgess's (1992) sample. Both samples of educators (Stressiguth & Burgess, 1992 = 94%; current sample = 96.7%) indicated that students with FAS experience difficulty in the classroom in a variety of areas (e.g., behavioural, academic, social).

Mack (1995) surveyed early elementary teachers in northern Michigan and concluded that they possessed a "moderate" level of awareness. The educators in the present study possessed a "moderate" level of awareness of FAS, however the knowledge for identifying students and practical strategies was lacking. Mack found that although teachers answered general information questions correctly there were areas that were not clearly understood such, as half (51.4% "disagreed" or "strongly disagreed") the sample did not think that FAS is typically associated with mental impairment. This compares with the present sample of educators' division in opinion (42.1% agreement; 52.1% disagreement) with respect to whether FAS is a leading cause of mental retardation. These questions are different in that Mack used the question in a correlational fashion (FAS is typically associated with mental impairment) while the questionnaire for this study indicated a causal relationship (FAS is a leading cause of mental retardation). One would expect a higher level of agreement with the correlational statement since the causal statement is very definitive; however the proportions were very similar.

Mack (1995) found that 37.4% "strongly agreed" and 45.5% "agreed" that FAS is a lifelong disability. Ninety-five percent (95.8%) of educators agreed that FAS is a lifelong disability. In the current sample, thirty-two participants (26.4%) "strongly agreed" that while 84 participants (69.4%) "agreed" with the statement, thus yielding a

higher level of agreement in the present sample as compared to the sample used by Mack (1995).

Mack (1995) also found that approximately half the sample was “somewhat unprepared” or “not prepared” to teach students with FAS. A similar proportion felt the same way in the present sample. A majority of educators in both samples indicated they needed more information with respect to identifying students who potentially have FAS.

The public awareness survey conducted by Health Canada (2000a) employed a representative sample of the public across Canada. Compared to the present findings, educators are more conservative in the amount of alcohol they considered safe during pregnancy. This was the case for both a small amount and a moderate amount of alcohol. Educators tended to indicate that even low levels of alcohol during pregnancy can have adverse effects on the baby. This difference may be due to more caution, more awareness now as compared to three years ago (e.g., Health Canada’s focus on this issue), or social desirability in that educators wanted to give answers that were ‘responsible’. Educators also have more direct contact with children who may be alcohol affected. This increased contact may be related to a greater understanding of issues impacting children.

What Do Educators Know and Do About the Learning Needs and Challenges Facing Students with FAS?

Taken as a whole, educators have some understanding of the learning needs and challenges experienced by students with FAS although the data suggest that this is at a basic and general level (e.g., “support is needed” and “modifications are required”). These are “safe” answers since any special needs population will require these services.

That is not to say that students with FAS need a whole new set of strategies and assistance compared to other special needs students. It is important that the difficulties typically associated with FAS be recognized in order to determine what types of strategies maybe helpful to that student and educator. Educators tended to recognize the importance of individualized adaptations for student success although the nature of these adaptations was not always discussed.

The main areas of difficulty and need were noted, including social interaction difficulties, behavioural difficulties, attention difficulties, learning problems, cognitive difficulties and developmental concerns (e.g., growth retardation/deficiency; motor development, etc.). Social interaction difficulties were touched on throughout the data set and across several questions by most educators. The pervasiveness of this area of difficulty suggests that this is one of the most common and problematic areas noted by educators. It is reasonable to expect social difficulties to impact a student with FAS across many other areas of functioning, particularly in a school setting, since so much of life in school involves interacting with other people whether they are peers, teachers, etc.

Educators tended to report that they knew something about FAS, but they needed more help in being able to identify students who possibly had FAS (what to look for and be aware of) and help to know how to provide support to these students in terms of academic planning; individual attention and support; and providing resources (e.g., EPA support). They generally indicated this help needed to come from additional resources (human and financial), training, and information on FAS.

Overall, only a third of the educators had experience with students with FAS, or students who were alcohol-affected, (n=43) and those with experience were likely to have

only taught a small number of students with FAS. It is unknown how many educators have actually worked with students with FAS, or who were alcohol-affected, without knowing it.

Binns (2001) reported that educators with more experience were more knowledgeable and more confident in working with students with FAS. Overall, educators in the present sample who had experience with students with FAS, particularly resource teachers, generally felt prepared to teach students with FAS and generally provided specific strategies for working with these students. This would be expected since working with students would provide the opportunity to try different strategies and adaptations to see what would be beneficial.

In terms of the strategies and adaptations that educators are employing to help these students, various options were suggested with a main focus on individualized help. This help was mentioned in terms of more EPA support, individual attention from the teacher and more resource help. Peer support/tutoring or a “buddy system” was frequently mentioned as a way to provide support to the student with FAS. This strategy suggests that educators are thinking of how to help these students with the current resources they have rather than just saying there is need for more support/money. Having peer support for the student will not only help with academics, but it can also be effective in behaviour modelling and practice for social interaction – both of which are areas of difficulty for students with FAS as noted by educators.

School factors.

The “low level” of concern in their school regarding FAS, as reported by educators, tended to reflect a lack of focus or priority placed on FAS and the students

who are affected by prenatal exposure to alcohol. This low level of concern, or lack thereof, is not necessarily wrong in practice since there does not appear to be a high incidence of children with FAS being taught in the participating schools (few educators have had experience with these children). If there is a low need, or no perceived need, the schools are apt to place more emphasis on the areas that are directly impacting their school population. This practice is one that is likely found throughout school systems around the country.

Due to the difficulty with identification and misdiagnosis of children with FAS, it is reasonable to suppose that there are more alcohol-affected children in the schools than educators realize and, if so, efforts should be made to identify the needs of these children in order to better serve them. This may then guide training plans since there would be an accurate perception of need. The limited number of cases of FAS in the schools may be accurate, however improving identification and diagnostic areas would be beneficial to confirm this. A diagnosis can help explain the pattern of difficulties a child is experiencing. This does not mean labelling children for the sake of labelling them. Nor should the diagnosis be used to justify a predetermined treatment plan without considering and accommodating the myriad of individual differences among children with FAS.

What Training and Resources are Available and Useful for Educators in the Area of FAS?

There tended to be a lack of training taken in the area of FAS and a limited set of sources from which they got information about FAS. Educators, as a group, were divided

on how prepared they felt to work with students with FAS (unprepared = 50.4% vs. prepared = 49.6%). There were few educators who felt well-prepared and this likely is related to the emphasis put on FAS at the school level, training opportunities and confidence in one's ability to work with special needs populations. This preparedness tended to be related to experience with students with those who had more experience generally felt more prepared.

Most educators indicated that they were interested in more information and training on FAS. These educators were most interested in information that helps identify students with FAS and effective strategies for working with these students. Other educators indicated that any information would be helpful. A few educators commented that completing the questionnaire made them realize how much they do not know about FAS and they would like to know more. This desire for more information translates into the need for accessible resources and training opportunities.

The type of information that appears to be the most helpful to educators is practical help in identifying students with FAS and helping them succeed in school. This help should include feasible strategies that can be implemented at various developmental/grade levels, and that aim at helping the individual student, the classroom, and school. Higher level awareness and attention should also be promoted within the school boards, provincial departments of education and nationally. There are things being done across the country and the sharing of information and experiences would be beneficial to educators. There is a need for some general information to be provided to some educators; however, this study, as well as the studies by Streissguth and Burgess (1992) and Mack (1995), found that educators had knowledge of the general information

on FAS, but lacked more practical applications based on the understanding the needs to these students.

The present sample of educators indicated that workshops and printed materials were the most widely used and helpful sources of information and training. By combining these formats into a training workshop that is supplemented with a comprehensive printed manual, text or guide the needs of most educators will likely be met. If desired, this literature could be converted to a multimedia format such as a web page and another form of presentation is achieved. The method of presentation for information and the format of training should suit the needs of various educator groups.

Resource teachers tended to have a good understanding of the needs of students with FAS. Other educators, particularly administrators, indicated that they referred to colleagues and support staff for information. It may be advisable to aim at least a component of training toward resource teachers and support staff who, in turn, can share the information with other educators. This would minimize the substantial investment of training all educators and allow for training to be more focused, and likely, more in-depth. This type of training would likely be at the school board or provincial level.

There is limited training budget and resources available to educators. Therefore, knowing what is desired and beneficial to educators can help them determine what areas to pursue. Although not all schools will view FAS as an area to which to devote professional development, it is important for educators to have access to resources and information should it be needed. This may include resources in the library, a staff member who has taken some training in the area, or a resource list that can guide self-directed learning.

With respect to training for school staff at the school level, a training session/workshop presented by someone knowledgeable about FAS would serve to raise awareness of FAS and the needs of students with FAS. This presentation could be incorporated into professional development, in-services, and the like. This training should provide a brief overview of general information followed by practical strategies for helping students with FAS. Training could also incorporate information on teacher expectancies and the impact these can have on students. A summary report on the findings of this research project will be given to educators in order to inform them of the types of areas to focus on in training with respect to FAS.

Are There Differences Among Role Groups?

There appeared to be few key differences among the role groups of educators - classroom teachers, EPAs, resource teachers, administrators - in their responses to the questionnaire. Responses by role group tended to generally reflect the roles in which the participants work. That is to say that the focus of each role could be explained by considering the function and scope of the given role.

Classroom teachers tended to focus on support within the classroom and teaching style adaptations, with the most common being the need for individualized programming and individual assistance. They were concerned with behavioural management techniques and were interested in information on how to help the students achieve success. Classroom teachers spend much more time directly working with the students. Therefore, their responses regarding the need for more specific strategies and information on identification fit with their involvement with the student. Classroom teachers are the ones

who would be planning for students and notice differences in a child which would relate to identify special needs children. EPAs' contact with the student is typically on an individual or small group level. Their general responses and a focus on classroom/academic difficulties (e.g., "memory", "attention problems") fit with their experience with these children.

EPAs tended to be broad in their responses (e.g., "behavioural difficulties" rather than specific areas, need support, use behaviour strategies, etc.) and concerned with in-classroom situations (e.g., "be consistent"; "child has trouble paying attention"; "memory problems"). On the whole, they did not differ from the other groups in regards to the responses given on the questionnaire.

Resource teachers, as a group, yielded the most interesting differences from the other role groups across several questions. The majority of resource teachers (69.2%) had experience working with students with FAS as compared to the other groups where the majority did not have similar experience (classroom teachers = 27.4%; EPAs = 29.4%; administrators = 46.1%). Therefore, the differences noted may be partly a result of the role, training and/or of the experience of these individuals. The experience many resource teachers have had with students with FAS is not surprising since the resource teacher would work a student with FAS in some way whereas not all the EPAs or classroom teachers would work with the student.

As a group, resource teachers tended to have a more realistic estimate of the prevalence of FAS in North America, they were more specific in terms of difficulties noted (e.g., named specific academic areas of math and reading rather than just listing "academic difficulties"), they tended to be more specific when asked for strategies as

compared to the other role groups (e.g., “use tactile strategies”, “visual aids”, “rewards”, “social stories”, etc.), and provided more information in response to other questions (e.g., higher proportion of resource teachers noted behavioural difficulties along with other difficulties in question #20 as compared to the other groups). The majority of resource teachers also indicated that “some” of the things that should be done to help students are being done. This may be due to the fact that a resource teacher is likely aware of what is happening at both the administration and classroom level whereas the respondents in the other role groups are more apt to see mainly one of these levels of intervention. By the nature of their job and training, resource teachers work with more special needs students than educators in the other role groups. EPAs also typically work with special needs populations, however, not to the extent resource teachers do with respect to programming and planning. Since resource teachers work with a wide variety of special needs populations, developing individualized plans and programming, they may be more apt to think of difficulties and interventions in concrete, specific ways.

Administrators provided more general responses as well (e.g., “support”, “academic help”, “behavioural difficulties”, etc.). This non-specificity may be seen as related to administrators’ less direct and less frequent contact with students with FAS, which occurs predominantly outside the classroom, as compared to classroom teachers, EPAs or resource teachers. Administrators did not seem to emphasize social difficulties as much as other groups which is somewhat surprising since several of the behavioural issues they deal with would likely be related to social problems.

The limited differences among the groups indicates that educators on the whole all need to increase their level of understanding and awareness of FAS and the needs of

these students. Resource teachers tended to be the most knowledgeable and, in their role as a specialist with special needs students, this difference was to be expected. As discussed earlier, specific training (beyond general information) could be directed to this group of educators in attempt to build on the knowledge they have and encourage them to share this knowledge with others.

Educators tended to be interested in involving others in the process of identifying and programming for students with FAS. In general, by looking at the responses of each role group it can be suggested that each group would consult someone who was potentially more experienced with the situation and was higher than themselves or more specialized with respect to handling special needs. It is important that those who have expertise in the area of special needs population have a sound knowledge of the needs of FAS students. This would include school clinicians, resource teachers, and guidance counsellors. It may be beneficial, and more economical, to target training to support staff (e.g., school clinicians, specialists, etc.) and resource staff who in turn could provide information to other educators.

Implications of findings

The findings of this study indicate that although there is a general knowledge of FAS there is a need for more information and awareness by educators with respect to practical strategies, how to identify students, as well as a need for research that is designed to provide insight into effective ways of supporting these children and their families.

Attitudes that can hamper the provision of help and services for students with FAS can be very prominent due to the stigma attached to FAS. Educators commented on the stigma attached and the impact this has on service provision. Educators referred to the struggle to address the issue of FAS when parents, communities, and even educators themselves do not want to discuss the issue openly. A denial of FAS existing in a community or school also reduces the likelihood of having resources and training devoted to this area which in turn reduces the understanding of individuals to the true needs to these students and the best ways to help the students succeed.

Implications regarding teacher expectancies.

In this project, the researcher did not investigate the potential impact on students with FAS of their teachers' expectations for them. However, two main findings that flow from the research on teacher expectations may have relevance to the present study: (1) Teacher expectations are based on a variety of factors, including the teacher's perception and of the nature of the ability, difficulties and needs of the student (e.g., Good & Brophy, 1995; Van Matre, Valentine, & Cooper, 2000); (2) Teacher expectations may unwittingly be translated into differential behaviours toward students (e.g., Brophy & Good, 1974; Brown, 1976; Good & Brophy, 1994) which may, in turn, influence the achievement and behaviour of the student. The present study addresses the first part of the chain discussed earlier with awareness and understanding of the abilities and needs of students with FAS leading to a willingness to act in accordance with this understanding and then acting accordingly.

Educators had expectations for students with FAS with respect to academic achievement, behaviour, and social interactions. Typically these expectations related to anticipated difficulties in these areas. There were difficulties acknowledged so it is unlikely, based on the responses, if educators were aware a student had FAS the expectations would be too high for the student.

If educators are basing their expectations on their current level of knowledge, much of the expectations are dependent upon a diagnosis already being made. The responses given by educators suggest that once the needs of the child are known (e.g., through assessment) appropriate actions would be taken. The educators in this sample continually stressed the need to focus on individual needs and assessment to determine strengths and weaknesses. The key is being able to identify students who are potentially alcohol-affected in order to request assistance and assessment to determine their profile. The inability to identify students for further exploration may be one situation where expectations may be inappropriate since there is not enough understood about the student.

The notion that expectations may be translated into differential behaviours was not specifically considered in this study. However, one could speculate that the behaviours exhibited by these educators would be appropriate with respect to providing individualized help to these students, addressing attention difficulties and being aware of potential social difficulties. The expectations noted (e.g., learning difficulties, memory deficits, behavioural problems, social skills deficits, etc.) were quite general in nature and would likely need to be more specific to translate into specific behaviours.

In order for educators to be better able to minimize the effects of possible negative expectations and optimize appropriate positive ones, they need to be helped in

developing realistic expectations, based on the understanding of the capabilities and needs of the individual student, and that are tempered by a fair and informed understanding of situations. Certain expectations need to be carefully monitored by educators as to not negatively influence the student's learning, achievement and/or behaviour. For example, the expectation of lower achievement may result in educators not challenging the students enough and, therefore, not eliciting as much progress or success from the student. Another caution relates to educators' expectation of social interaction difficulties and/or behaviour problems. Educators must maintain a realistic and balanced approach to viewing the social and behavioural difficulties.

Overall, the findings of this study concur with those of surveys of educators over the past decade (e.g., Mack 1995; Streissguth & Burgess, 1992; Binns, 2001) suggesting little change in the quality of awareness of educators with respect to FAS. There may be an increase in knowledge of basic information, but a level of understanding beyond that has still not been attained by many educators. In the present sample, this may be explained by the low priority placed on FAS and the perceived low prevalence, regardless of any actual prevalence. Educators from areas of the country where educators have more experience with students with FAS may possess more knowledge and understanding.

Limitations of the Present Study

This study is limited by the various factors which limit the generalization of its findings and conclusions beyond the boundaries of the present sample. These factors

relate to sample factors, response rate, the nature and timing of the data collection, and the coding of data.

The sample was a convenient sample from one school board in Nova Scotia. This sample was not randomly selected and, therefore, it cannot be assumed that this is a representative sample of educators. There were also educators in various role which were not included in this study and therefore the results should not be generalized to include these educators (e.g., specialized teachers such as music, gym, French, etc.). The educators were also limited by grade level with only Primary to Grade 4 represented. Educators who teach different grade levels may have different ideas and opinions regarding FAS. This is also important if considering teacher expectancy effects since the effects appear to differ with different grade levels (e.g., Kuklinski & Weinstein, 2001). For example, the emphasis on which characteristics are common among individuals with FAS may be different when one surveys high school teachers or adult educators. There may be characteristics that may be more evident at different grades and in different settings (e.g., academic classroom, skills class, vocational training setting).

The sample size was somewhat low ($n=121$) especially with some educators not responding to questions on occasion. A larger sample would provide more validity to the findings. When comparing role groups, the number of EPAs, resource teachers, and administrators was lower than desired. However, the number of participants in each role group compared to the makeup of an average school is reasonable. On average, a school had approximately 10 classroom teachers (Primary to Grade 4), 3 EPAs, 1 resource teacher, and 1 administrator. Therefore, the potential participants in 49 schools would be 490 classroom teachers (66.7% of potential participant group), 147 EPAs (20.0%), 49

resource teachers (6.7%) and 49 administrators (6.7%). The total potential participants would be 735. The present study yielded 731 potential participants. The proportion of classroom teachers (n=73 out of 116; 62.9%) were similar to the suggested sample makeup above. The proportion of EPAs (n=17 out of 116; 14.7%) was slightly less than would be expected. The proportion of resource teachers (n=13 out of 116; 11.2%) and administrators (n=13 out of 116; 11.2%) were greater in the current sample as compared to the estimated population. Therefore, the resource teachers and administrators may have been over represented in this sample and their responses may slightly skew the results. Having said that, the results were presented by comparing the proportion of each role group with the others and discussed in terms of the current sample. The results did not seem to be affected greatly with most responses not differing greatly from the overall sample to the role groups. Therefore, although the present sample may not be totally representative of educators on the whole, the results are worthwhile with respect to the local sample and in cautious speculation with respect to other educators.

The response rate for respondents of 16.55% is relatively low. A higher response rate would provide more weight to the responses and the information collected. The school response rate of 47.12% is acceptable; however a response rate of 70% or more would be preferred in order to confidently say that the opinions and patterns of responses are representative of the population both at the individual and school level. Realistically, response rates are typically lower in survey research, like the present study, than desired for a number of possible reasons. People may be resistant to giving away information with little or no personally return or gain. This reflects a feeling in our society that our time and opinions are valuable and if people are not compensated for their time and effort

they are not as interested in being involved. There has also been an increase in the past number of years in how much people are asked for their opinion on various topics from political views to household product surveys to surveys such as the one undertaken by this project. People may be uninterested and unwilling to answer any more questions regardless of the reasons behind the questions. This unwillingness may also relate to an overall fatigue level that exists for many people which can also influence participation. There are many demands and tasks in the lives of individuals (e.g., family, work, social, etc.) that can result in increased fatigue. There are too many things for most to do and therefore, some things need to be taken off the list of things to do. Something like the research participation and answering a questionnaire, such as the one used in this project would not likely be near the top of the list for many people and therefore is not given priority among all the other demands. This is especially true in the lives of educators and demands placed on them at school. There are a number of responsibilities they need to meet and completing a questionnaire which shows up in their mailbox may end up at the bottom of the pile – if added to the pile at all.

The nature of the data collection is also worth considering in conjunction with the low response rate and small sample size. Two factors to consider with respect to data collection are the use of written questionnaire and the time of the school year. The written questionnaire was relatively long and required an investment of time and effort on the part of the participants. The length and time commitment likely impacted the composition of the sample in terms of a volunteer bias. Those individuals who chose to participate are likely different from those who did not participate. For example, many of the educators indicated that they had a Master's or specialist degree (n=58) and may be

more sympathetic toward the researcher and be generally more interested in research. These differences may include differences in the interest in the topic, the amount of information the educators felt he or she had to contribute, whether the educator had time to complete the questionnaire, and/or the opinion of the educators with respect to participation in research. The written questionnaire also may have resulted in various interpretations of the questions without any clarification available. In comparison, if interviews were used the participants would have been able to ask for clarification of the questions. The main example of this is question #9 which asks for implications of the variability of characteristics as discussed earlier. If educators had begun answering with respect to causes of variability as opposed to implications, an interviewer, for example, could have asked the question again to emphasize the implications or repercussions of variability and steered the participant away from naming causes. With respect to clarification, the written questionnaire also has the inherent difficulty for the researcher with the written responses being potentially unclear or incomplete. Other methods of data collection, such as interviews, telephone surveys or focus groups, may alleviate this problem by allowing the researcher to seek clarification regarding responses.

The time of the school year likely had an impact on the response rate both with respect to schools and individual educators. There is not a perfect time to conduct research in a school with respect to the availability and willingness of educators to participate. The school year is very busy and the time of educators is in high demand. The timing of data collection for this project was intended for earlier in the year, however, the approval process from the school board and approval of methodological changes by the university ethics committee took longer than anticipated. One educator

indicated on the questionnaire that there was not enough time to devote to the questionnaire. The end of November was the time for progress reports to be completed which took a lot of time particularly on the part of classroom teachers. December was also very busy in the schools with end of term events, Christmas vacation coming up, etc. Only a few schools completed questionnaires in January. Most of these schools had been given materials prior to Christmas break with the intention of collection prior to break. For various reasons this pick up prior to Christmas did not happen. It is difficult to tell for certain if this had an impact on the response rate or responses although the response rates within each school did not appear to vary with respect to the time of pick up.

The coding of the open-ended responses was done by a single coder. Ideally, coding should have been completed by two or three independent raters, yielding an inter-rater reliability to safeguard impartiality. The fact that the coding scheme and codes were developed directly from the data offsets to some extent the threat of bias as discussed earlier.

Areas for Future Research

There are several ways that this research could be continued and further investigations made into the area of the awareness of FAS among educators. These areas include sample considerations; location of educators; consideration of the awareness by a community as a whole of the needs of FAS; and the impact that parents, families and organizations have on helping to inform educators about FAS.

Expanding the sample to include other grade levels and individuals who occupy other roles in the school not currently considered (e.g., gym teachers, music teachers,

French teachers, etc.) would be beneficial. Other individuals in education, such as support staff and school clinicians (e.g., School Psychologists, Speech/Language Pathologists, Audiologist, etc.) should also be considered, particularly, as these are individuals whom educators indicated they would consult for assistance with students with FAS.

Considering the awareness and knowledge that these other individuals have with respect to FAS would provide a more complete picture of the support, understanding and services that students with FAS receive.

The Halifax region in Nova Scotia, not to mention most of the Maritime provinces, was not noted as being active in the area of FAS services and support according to Health Canada (2000c). The present study was limited to this geographical area which likely is reflected in the limited training opportunities and awareness of FAS among the educators in this area. Other parts of the country (e.g., Manitoba and British Columbia) have more services in terms of diagnostics, support, training, etc. An area for future consideration is to explore the awareness and understanding of educators across the country. It would be expected that in regions where FAS was more prevalent and/or more emphasis was placed on services and research with respect to FAS, the awareness and understanding among educators would be different than that of educators in other regions.

For a broader look at the awareness of FAS, surveying organizations and support services outside the school system may be appropriate to add to the understanding of the degree to which communities are aware of FAS. This may include service groups, learning centres, special organizations that support special needs students, interest groups, hospitals/developmental clinics, etc. This may also include political arenas by

considering the awareness among politicians who have an influence on spending and services for children and families such as those affected by FAS.

With respect to teacher expectations and the effects of these expectations, further research should move from the first basic level of awareness and understanding of FAS to a higher level in the hierarchy involving the impact of knowledge on teacher expectations and how these expectations impact the students. The potential chain presented earlier that would link knowledge of FAS (Figure 1) to student outcomes via appropriate expectations and a willingness to act according to these expectations needs further consideration. The current project is a first step of this process and future studies should consider how this knowledge impacts teachers' expectations including modifying and mediating factors such as those explored by Kuklinski and Weinstein (2001). From there, research should consider if or how training, and therefore an assumed increase in awareness, could adjust teacher expectations for students and subsequent achievement of the students. Other factors should be taken into account in this work such as experience with students with FAS, expectations for other students (e.g., does the educator have high expectations for all students?), and other educator variables (e.g., length of time teaching, opinions of special needs programming, etc.).

Summary and Recommendations

There is a need for more training for educators, specifically in the areas of identification, strategies/adaptations, and practical suggestions for helping students with FAS succeed. Educators may know about practical applications of awareness; however they did not indicate such and desire more information in this area. Educators in this

sample demonstrated a reasonable understanding of general information however there was a lack of specific information provided on strategies and adaptations that are effective with students with FAS. As Ann Streissguth indicated in her book, it is this practical knowledge, beyond basic information, that will help teachers and schools program for students with FAS successfully (Streissguth, 1997). Training and information on strategies should not be presented as being limited to students diagnosed with FAS. These children have a variety of difficulties and showing educators that strategies used to meet the needs of other children with specific needs (e.g., attention difficulties) can work with students with FAS as well may be a way of presenting information and suggestions since many of the difficulties can be part of FAS.

The training of support staff, including school clinicians and resource teachers, should be considered as an opportunity to direct training to specific groups and then have these people be “trainers” by passing on the information to other educators. The support staff should also model strategies and techniques that may be helpful to educators. By modelling and encouraging educators to try strategies, the chances of educators implementing these strategies on their own will likely increase. Having experienced ways of helping will likely help educators feel more prepared and confident in ways of helping the students. This will serve to maximize training budgets and efforts and still serve to inform educators in each school about the needs of students with FAS. The trainer can then act as the resource person for that school in the area in which they have taken training. This training plan is not limited to training regarding FAS. It could be used to gain training with respect to other areas important for educators to be aware of such as pervasive developmental disorders, attention disorders, learning disabilities, etc.

Resources and training opportunities should incorporate various formats in attempt to meet the needs of the majority of educators. Printed literature still holds a high position as desired resources along with workshops and seminars. By integrating these into training programs and resources, information can be presented in ways that suit the needs of educators. Multimedia formats are desired by some educators and can be utilized; however the findings of the present study indicate that printed literature and workshops are more desirable.

In conclusion, this study has served to explore awareness of FAS among educators as a step toward how educators understand the needs of students with FAS and how this understanding may impact the students' success by suggesting a possible link through teacher expectancies. This project has also attempted to inform future training and resources with respect to what information is still lacking. This project has met these purposes and, despite limitations, has revealed areas that are understood by educators and areas that may require more training. Overall this project has likely increased the awareness of FAS among educators across the HRSB by bringing to mind the needs of the special population of students who have been impacted by prenatal exposure to alcohol. Research needs to move toward the effect that the level of understanding has on the expectations that educators' hold for students, how educators act accordingly to these expectations, and how these expectations may impact the students. Further work needs to be done in the area of FAS awareness and supporting educators who work with students with FAS, but by working together educators, parents, agencies, governments and others can move toward better services and support to these children and their families.

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Appendix A

PLEASE NOTE THAT THE LAYOUT OF THIS QUESTIONNAIRE CHANGED DUE TO THE FORMATTING AND MARGINS REQUIRED FOR THE THESIS.

Questionnaire

Awareness of FAS Among Educators

Principal Researcher: Kim D. O'Connor

The following questionnaire is looking at the awareness of educators regarding effects of alcohol on children. The term FAS is used throughout this questionnaire, however for this project it is used as an inclusive term to represent the spectrum of disorders (Fetal Alcohol Spectrum Disorder) associated with prenatal alcohol exposure including FAE, Partial FAS, ARND (Alcohol-Related Neurodevelopmental Disorder), ARBD (Alcohol-Related Birth Defect). This term (FAS) is used since it is a commonly used term when discussing disorders associated with prenatal exposure to alcohol; however it is important to recognize that there are differences in the diagnosis and characteristics among these disorders. The phrase alcohol-affected is a general term that is used without indicating a specific diagnosis and may be used in this questionnaire to discuss non-specific diagnosis, and the general effects of prenatal alcohol exposure.

Your participation in this research project is completely voluntary and you may withdraw at any time. Please do not include your name on this questionnaire. The responses you provide will be analyzed in a group so you will not be personally identified; hence, your responses are kept confidential. Please read and complete the questions carefully. There is a section at the end of this questionnaire for your comments. When you have completed the survey please place it in the envelope provided, seal the envelope and place it in the designated location in your school. Thank you for your participation.

-
1. What does FAS stand for?

 2. What is the first thing that comes to mind when you think of FAS?

Please indicate if you think each of the following statements about alcohol during pregnancy and its effect on an unborn baby is true or not true.

3. A small amount of alcohol use during pregnancy can usually be considered safe.
 True
 Not True
 Don't know

4. The more alcohol a pregnant woman drinks, the more likely the baby will be harmed.
 True
 Not True
 Don't know

5. A moderate amount of alcohol consumption during pregnancy can usually be considered safe.
 True
 Not True
 Don't know

6. The more alcohol a pregnant woman drinks, the more harm that may be done to the baby.
 True
 Not True
 Don't know

7. A conservative estimate of the prevalence of FAS in North America (across racial/ethnic groups) is approximately:
 less than one in 100 births
 one in 100 births
 one in 500 births
 one in 800 births
 one in 1000 births

8. Which of the following features are considered common characteristics of FAS?

- Hyperactivity
- Motor delays
- Attention difficulties
- Delusions and/or hallucinations
- Memory problems
- Difficulty with social interactions
- Physical abnormalities (e.g., facial characteristics)
- Learning difficulties
- Eating problems
- Growth retardation
- Language difficulties
- Poor cause and effect thinking/understanding
- Impulsivity
- Over or under sensitivity to stimuli
- Sleep difficulties
- Bizarre thoughts (e.g., paranoid thinking; conspiracy thinking)
- Social skills deficits

9. Can a child who is alcohol-affected exhibit some of the characteristics you indicated in the previous question without exhibiting others?

- Yes
- No

If yes, are there any implications for this variability of characteristics?

Select the response that best describes your opinion:

10. FAS is a condition that tends to subside with age.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

11. All children with FAS exhibit the same behavioural characteristics.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

12. FAS is a lifelong disability.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

13. FAS is a leading cause of mental retardation.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

14. FAS is limited to certain racial/ethnic groups.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

15. Do students with FAS experience difficulty in the classroom?

- Yes; *proceed to question #16*
- No; *proceed to question #17*

16. What types of difficulties do they experience? Please list as many as you can think of at this time.

17. At times people form expectations of other individuals. This includes the expectations that a teacher has for the students in his/her classroom. Indicate what, if any, expectations you have for students with FAS with regard to the following areas:

Academic Achievement –

Behaviour –

Social Interaction –

18. What strategies or adaptations are generally helpful to students with FAS?

19. Are children with FAS at risk of developing other difficulties or disabilities outside of their cognitive and learning difficulties?

Yes; *proceed to question #20*

No; *proceed to question #21*

20. What types of difficulties or disabilities can occur?

21. What are the main areas considered when identifying and diagnosing children who have FAS? (e.g., upon what criteria is a diagnosis based)

22. What would you do if you suspect a child in your classroom is potentially a student with FAS?

23. How much of a concern is FAS in your school?

- Major concern
- Moderate concern
- Minor concern
- Not a concern

24. How well prepared do you feel you are to educate students who may be diagnosed with FAS?

- Very well prepared
- Well prepared
- Somewhat prepared
- Somewhat unprepared
- Unprepared

25. Please indicate what, if anything, would help you be better prepared to teach students who may be diagnosed with FAS.

26. Have you ever knowingly taught a child who was alcohol-affected or diagnosed with FAS?

- Yes How many? _____ *proceed to question #27*
- No *proceed to question #30*

27. If you have had experience working with a student or students with FAS, what was it like for you?

28. Were any adaptations or specific strategies used with the child or these children?

- Yes *proceed to question #29*
- No *proceed to question #30*

29. What types of adaptations/strategies were used? Please elaborate as required.

Teaching style adaptations

Classroom adaptations (e.g., physical changes to the classroom)

Behavioural management strategies adaptations

Other

30. In your opinion, what are the most important factors for schools to consider when working with students with FAS? What should schools be doing to help these children and their families?

31. What is required to have things you indicated in the previous question put in place?
What needs to be done?

32. Are the things you mentioned in question #30 being done now? If not, in your opinion, why not?

33. Have you taken any specific training with regards to FAS?

- Yes; *proceed to question #34*
- No; *proceed to question #35*

34. Please indicate what type of training you have taken:

- During training for your current role (e.g., B. Ed.; etc.)
- Professional Development sponsored by your school/division
- Workshops, seminars, etc. other than professional development at your school
- Other; please specify: _____

35. From what sources have you received information regarding FAS? Check all that apply.

- Workshops, seminars, conferences
 - In-School Professional Development
 - Department of Education publications
 - Books, journals, etc.
 - Association/Organization newsletters
 - Internet
 - Television
 - Colleagues
 - Support Staff
 - Other; please indicate what sources:
-

36. What source(s) of information have been the most helpful to you (e.g., sources in question #35)?

37. Would you be interested in more information regarding FAS?

- Yes; *proceed to question #38*
- No; *proceed to question #40*

38. What information would be helpful?

39. What method of presentation do you prefer for getting information?

- Workshop, seminars, conferences
 - Printed materials (e.g., books, newsletters)
 - Multimedia (e.g., Internet style forms)
 - Other:
-

The information in this section is gathered for the purposes of determining the characteristics of the respondents. You will not be personally identified.

40. What is your role at this time?

- Classroom Teacher
- Educational Program Assistant/Support Worker
- Resource/Special Education Teacher
- Administrator (Principal/Vice-Principal)

41. How long have you been an educator? _____

42. How long have you been in your current role (in years)? _____

43. Have you ever worked in another one of the roles mentioned in question #40?

- Yes; *proceed to question #44*
- No; *proceed to question #45*

44. Which position(s) and for how long?

Position: _____ How long? _____

Position: _____ How long? _____

Position: _____ How long? _____

45. In which district of the Halifax Regional School Board do you currently work?

46. Have you recently changed school boards with respect to employment?

- Yes
- No

If yes, which school board were you working with prior to the Halifax Regional School Board?

47. At which grade level(s) are the students you work with?

48. Have you ever been an educator with students at other grade levels?

Yes Which grade(s)? _____

No

49. What is your highest level of professional education? Please indicate area of study for degrees held

Baccalaureate degree (e.g., B. Ed. – early yrs): _____

Master's degree; Area of study: _____

Specialist degree/certificate (e.g., Special Education): _____

Doctorate (Ph.D.): Area of study: _____

50. What is your gender group?

Female

Male

51. In which age group do you belong?

18 – 24

25 – 30

31 – 40

41 – 50

51 – 60

over 60

52. If you have any comments you would like to include about this topic, this survey or research project please use the space below or add an additional page if required. Thank you for your participation.

Appendix B

PLEASE NOTE THAT THE LAYOUT OF THIS LETTER CHANGED DUE TO THE FORMATTING AND MARGINS REQUIRED FOR THE THESIS.

Introduction letter included in packages given to each potential participant

My name is Kim O'Connor and I am a graduate student at the University of Manitoba completing my Master's of Education in School Psychology. I am conducting my thesis research on the awareness of Fetal Alcohol Syndrome in the schools by surveying educators (administrators, classroom teachers, resource teachers and educational program assistants) across the region. I am looking for volunteers for this project and I have been given permission by the Halifax Regional School Board and the administration of the school to ask for your participation.

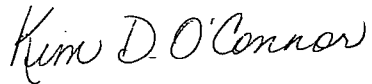
Over the past three decades FAS, and other associated disorders collectively termed Fetal Alcohol Spectrum Disorders (FASD), have received increasing attention across the country in several fields including education. By looking at what educators know about FAS and about the learning needs of students with FAS I hope to discover ways to help educators develop appropriate strategies and expectations for these students. By forming appropriate expectations educators help the students achieve the best possible outcomes in academics and later adjustment and functioning. It is also important to me to find out more about helping educators learn about FAS including what type of training may be helpful and methods of information delivery that are appropriate and desired.

I appreciate that you have a very busy schedule, but I hope that you will consider participating in this research. Your participation is completely voluntary. With your help, and other educators across the region, we can explore the needs of educators with respect to working with students who are alcohol-affected. The findings of this project will hopefully serve to inform professional development, training and resources for educators. This project is a survey-based project that requires participants to complete a paper-based questionnaire which will take approximately 25-35 minutes to complete. The questions are formatted in a variety of styles including multiple choice, yes/no, and open ended questions. Your responses will be confidential and will not personally identify you.

If you are interested in participating in this research please complete one of the consent forms included, seal it in the white envelope and place it in the labelled envelope in the office. The other consent form is for your records. Please complete the questionnaire and seal it in the large envelope provided. If you are not interested in participating please return the package to the office. Please take note of the small sheet of paper included in this package which indicates the date the questionnaires will be picked up.

If you would like more information about this project or your participation please contact me by phone at (902) 435-7306 or via email at kdoconnor@ns.sympatico.ca. Thank you for your time.

Sincerely,

A handwritten signature in cursive script that reads "Kim D. O'Connor".

Kim D. O'Connor
Graduate Student, M.Ed. Program (School Psychology)
University of Manitoba

Appendix C

PLEASE NOTE THAT THE LAYOUT OF THIS FORM CHANGED DUE TO THE FORMATTING AND MARGINS REQUIRED FOR THE THESIS.

Research Project Information and Consent Form
Research Project: Fetal Alcohol Syndrome Awareness Among Educators

Thank you for considering participation in this research project. This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

This research project looks at the awareness of Fetal Alcohol Syndrome (FAS), and the understanding of the challenges for students with FAS, among educators by surveying administrators, classroom teachers, resource teachers, and educational program assistants across the Halifax Regional School Board. Over the past three decades FAS has received a large amount of attention in several fields including education. For a child with FAS, the understanding and accurate perception of their difficulties by schools (e.g., administrators and teaching staff) is essential in helping them succeed not only academically, but also later in life. Research has shown that the way in which people perceive someone impacts how they interact with the individual, the expectations placed on the individual and the opportunities provided to the individual. This holds true for educators and their students with appropriate expectations yielding student achievement in the general population and in special needs populations. This survey aims to uncover the level of knowledge that educators have regarding FAS in attempt to identify areas of understanding and potential areas of professional development as educators work with students with FAS and their families. By doing so we can discover ways to help educators in their roles develop appropriate strategies and expectations of these students in order to help the students achieve the best possible outcomes in academics and later adjustment and functioning.

Participation in this research project is completely voluntary and you may withdraw at any time. The project will require you to complete a paper-based questionnaire. This questionnaire is 10 pages long and includes a variety of question formats including true/false questions, multiple choice questions, and open ended questions. This will take approximately 25-35 minutes to complete. The questionnaire will be brought to your school and will be picked up after completion.

This research is being conducted as a thesis project as part of the Master's of Education program at the University of Manitoba. The information collected using the questionnaire will be used to determine the level of awareness and knowledge of FAS and the awareness of the educational challenges faced by students with FAS. All

individual responses will be kept in strict confidence to protect the anonymity of all participants with data only available to myself and my advisor (Dr. Riva Bartell). All analyses will be conducted on a group basis and individual data will not be used to analyze specific responses or individuals. The questionnaire asks for general information about each participant although this information will not identify you personally. This information is gathered for the purposes of determining the characteristics of the respondents and to determine subgroups of this sample in order to make potential comparisons between groups (e.g., job position). Consent forms, names and contact information of the participants will be kept separate from the questionnaires and only used to verify consent and to forward a copy of the findings to interested individuals.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

If you have any questions please contact me at (902) 435-7306 or via email at kdoconnor@ns.sympatico.ca or my supervisor, Dr. Riva Bartell at (204) 474-9038. If you would like to receive a report of the findings of this research please complete the section below. This research has been approved by the Education and Nursing Research Ethics Board of the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at (204) 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Thank you again for your consideration of participating in this research project.

Sincerely,

Kim D. O'Connor
 Graduate Student, M.Ed. Program (School Psychology)
 University of Manitoba

I, _____, have read the above information and consent to participation in this research project undertaken by Kim D. O'Connor at the University of Manitoba. I understand that my participation is voluntary and I may withdraw at any time. A copy of this consent form has been given to me for my records.

Participant's Signature

Date

Please complete the following if you are interested in receiving a report on the findings of this research. The report can be mailed or emailed to you. Please print clearly. Thank you.

Name:

Phone: _____

Please mail me a copy of the report to the following mailing address (including postal code):

I would prefer to have the report emailed to me at _____

Appendix D

PLEASE NOTE THAT THE LAYOUT OF THIS LETTER CHANGED DUE TO THE
FORMATTING AND MARGINS REQUIRED FOR THE THESIS.

Letter to principals to thank them for including their school in the sample

FROM THE DESK OF
KIM D. O'CONNOR

Thank you for the opportunity to include your staff in my research project on Fetal Alcohol Syndrome (FAS). I will be giving thank you letters to each staff member who participated in this research project. I will drop these off or mail them to the school. The importance of understanding the needs of all students at the school level is essential for their success both academically and later in life and it is particularly important for students with special needs.

Attached is a copy of a document from Health Canada entitled Best Practices: Fetal Alcohol Syndrome/Fetal Alcohol Effects and the Effects of Other Substance Use During Pregnancy. Additional copies are available from Health Canada at no cost if individuals at the school are interested in the document. The document is also available online at <http://www.hc-sc.gc.ca/hecs-sesc/cds/pdf/BestpracticesEnglishclosed.pdf>. Other resources that are useful for educators can be found on the web including Teaching Students with Fetal Alcohol Syndrome: A Resource Guide for Teachers (<http://www.come-over.to/SpecialEdFAS/contents.htm>) and Tapping Hidden Strengths: Planning for students who are Alcohol-Affected (<http://www.edu.gov.mb.ca/ks4/specedu/fas/index.html>). I will be compiling a more extensive list of resources and references for educators regarding FAS. I will forward a copy of this list to you when it is completed.

In order to help people learn more about FAS, I am interested in making presentations to educators and others who interested in the topic. This presentation could be at a staff meeting, professional development in-service or other venues that you see fit. The presentation can encompass a variety of aspects of FAS including general information, current research, classroom implications and strategies. Please contact me if this idea interests you and we can discuss the presentation options further.

Thank you again for including your school in this project. If you have any questions or comments please feel free to contact me at 435-7306 or via email at kdoconnor@ns.sympatico.ca.

Sincerely,

Kim D. O'Connor
Graduate Student, M.Ed. Program (School Psychology)

Appendix E

PLEASE NOTE THAT THE LAYOUT OF THIS LETTER CHANGED DUE TO THE FORMATTING AND MARGINS REQUIRED FOR THE THESIS.

Follow-up and debriefing letter

Thank you again for your participation in this research project. I appreciate you taking the time to be involved in this research that will serve to describe the awareness of educators regarding the needs of students with FAS. The importance of understanding the needs of all students at the school level is essential for their success both academically and later in life and it is particularly important for students with special needs.

All individuals, including educators form expectations about other people based on their understanding and perception of the abilities and needs of that person. These expectations are translated into behavioural differences in the person holding the expectations and can impact the other person's performance, achievement and self concept. With respect to educators, research has shown that the expectations held by teachers regarding their students can have both positive and negative effects on the students. The educator's beliefs about the ability of a student can result in differences in teacher behaviour even without the teacher realizing it is happening. For example, research has found that, in general, teachers tend to provide higher achieving students with more opportunities to get an answer, provide more clues, ask these students more questions which will help them learn and praise them more often for correct responses. On the other hand, teachers tend to call less on students they view as lower achieving students, expect less work from these students, and wait less time for these students to answer a question before moving on. These behaviours convey to the student that he or she is not capable and a self-fulfilling prophecy may result where the student takes on the expectation of the teacher as their own self expectation. These are just examples of some teacher behaviour and it does not mean that all educators respond this way. However, it is generally accepted in the research literature that teacher behaviour will be altered based on expectations of their students. These differences can be problematic when the educator's expectations of a student are inappropriate and inaccurate such as too low or too high. For example, if an educator has low expectations of a student the student may sense this expectation and begin to have similar personal expectations. This can lead to poor performance from the student subsequently reinforcing the lower expectations held by the educator. In order to avoid these problems, educators need to form appropriate and beneficial expectations of the students in their schools and classrooms. One of the most effective ways to do this is to ensure that educators have an accurate understanding of the needs of various students including students with FAS. This research project is looking at the understanding of these needs among educators keeping in mind that a lack of knowledge or only a little knowledge may not be sufficient to help educators form suitable expectations of students with FAS. By considering the level of awareness among educators and what information/training is still needed, the results of this project can serve as a way of informing the design of future training and resources in this area and

aid in the collaboration between educators and other individuals in the field to determine the best ways of helping all students.

A summary of the findings of this research will be available to all interested participants. If you did not indicate that you are interested in this summary, but have now decided that you would like a copy please contact me with your mailing address or email address. If you have any questions please contact me at (902) 435-7306 or via email at kdoconnor@ns.sympatico.ca. You may also contact my supervisor if necessary, Dr. Riva Bartell at (204) 474-9038. Thank you again for participating in this research project.

Sincerely,
Kim D. O'Connor
Graduate Student, M.Ed. Program (School Psychology)
University of Manitoba

Appendix F

Codes developed and used to code data

Below are the codes that were developed from the data. All codes created are included below in alphabetical order regardless of frequency of assignment.

Code	Description
ABILLOW	Low ability
ACADDIF	Academic problems and difficulties
ACADHLP	Teach, reinforce, remediate academic difficulties
ACADSKL	Poor academic/curriculum skills
ACCEPT	Acceptance
ACHESUC	Achieve success
ACHIAVE	Average achievement
ACHILOW	Lower achievement
ACTIVCT	Activity centres
ACTIVTY	Difficulty with lots of activity
ADHDADD	ADHD or ADD
ADMINST	Administrators
ADMINTL	Tell administration of concerns
AFFECTD	Affected
AFTBIRT	After Birth
AGGRESA	Aggressive toward adults
AGGRESPE	Aggressive toward peers
AGGRESS	Aggressive and Aggression
ALCDEPI	Alcohol Dependent in person with FAS
ALCDEPM	Alcohol dependency in mother
ALCOABU	Alcohol Abuse/Misuse
ALCOHIC	Alcoholic
ALCOHOL	Alcohol

ALCOUSE	Alcohol use in individuals with FAS
ALLLIFE	All aspects of life affected
ALLSOUR	All sources have been useful
ALREADY	Already providing the support system needed
AMOUNT	Amount of alcohol consumed
ANGER	Anger problems
ANGRCON	Learn to control his/her anger
ANXIETY	Anxiety

ANYALL	Any information on FAS
APGAR	APGAR score
ARBDEF	Birth defects caused by alcohol – alcohol related birth defects
ARGUE	Argumentative
ASKHLPN	Ask for help if needed
ASSESSP	Psychological Assessment
ATLEVEL	Adapted to the student's level
ATTEDIF	Attention difficulties
ATTENIO	Assure attention – teaching strategy
AUDITOR	Auditory
AUTHORI	Difficulty with authority
AWARE	Awareness
BABY	Baby
BACKGRN	Background and history of individual
BASASSM	Based on assessment
BEHADIF	Behavioural difficulties
BEHAMOD	Behaviour modification
BEHCHKL	Behaviour checklist
BEHCODE	Behaviour code
BEHLEAR	Learn appropriate behaviour
BEHPLAN	Need to have a behaviour plan

BEHSTRA	Behavioural Strategies
BELONG	Sense of belonging
BELOWGR	Below grade and/or age appropriate level
BESTABI	Perform at the best of the child's ability
BIGPICT	Difficulty seeing the big picture
BIRTHWE	Birth weight
BIZTHTS	Bizarre thoughts
BLAME	Blame
<hr/>	
BLOODTE	Blood test
BOARD	School Board
BONDLKF	Lack of close bonds with family
BONDLKO	Lack of close bonds with others
BRAIN	Brain
BREAKS	Scheduled breaks
BUDDY	"Buddy" system
BULLY	Being a bully
CALMING	Required calming down
CANLEAR	The student can learn
CASESTU	Case Studies
CATSCAN	CAT Scan
CAUSEFF	Cause and Effect Thinking/Understanding
CAUSES	Causes of FAS
CD	Conduct Disorder
CHALLNG	Challenging experience
CHANGE	Difficulty dealing with change
CHILD	Child or children
CNSDAM	Damage to the CNS
COGNTIV	Cognitive problems
COLLEAG	Colleagues

COMMUN	Communication difficulties
COMMUNI	Communication
COMPAS	Compassion
COMPDIF	Comprehension/Understanding difficulties
COMPULS	Compulsive
COMPWRK	Difficulty in completing work or tasks
CONCDIF	Concentration difficulties
CONCOTH	Lack of concern for others or their feelings
CONCPDF	Difficulty with conceptual understanding
CONFERE	Conferences on FAS
CONFINE	Confinement of women
CONFLRE	Conflict Resolution activities and learning
CONFUS	Confusion experienced by a student with FAS
CONNEKN	Connections to prior knowledge
CONSCIE	Lack of Conscience
CONSEQ	Need Consequences
CONSEQD	Difficulty understanding consequences
CONSIST	Consistency
CONSUM	Consumption
COUNSEL	Counselling
COUNSRS	Counsellors needed
COURPT	Part in a course
COURSE	Course on FAS
CRANKY	Cranky infant
CRIMINA	Criminal Activity
CRISINT	Crisis Intervention
CUMRECD	Cumulative records
CURRDIF	Difficulty with regular curriculum
CURRMOD	Curriculum modifications

DAMAGE	Damage/defects
DANGER	Danger
DECIDIF	Difficulty making decisions
DEGFAS	Degree or Severity of FAS
DELUSIO	Delusions and/or hallucinations
DEMANDG	Demanding experience
DEPNDSU	Dependent on supports
DEPRESS	Depression
DEPTED	Department of Education
DETSUPP	Difficult to determine supports
DEVCLIN	Developmental clinic
DEVELOP	Developmental issues/concerns
DIAGDIF	Diagnosis difficulties
DIAGMIS	Misdiagnosis
DIAGNOS	Seek identification and diagnosis of FAS
DIAGNOT	Not diagnosed/overlooked
DIFDIAG	Differential
DIFFICT	Diagnosis
DIFPLAN	Difficult
DIRECTI	Difficult to plan/program
DIRELEA	Difficulty following directions
DISABIL	Follow directions or learn how
DISCPLN	Disabilities
DISHNST	Discipline necessary
DISRUPT	Dishonesty
DISTRAC	Disruption in classroom
DISTRED	Distractibility
DISTUR	Distractions minimized/reduced
DOCUMNT	Disturbed

DONTKNO	Document characteristics, events, etc.
DRINK	Don't Know
DRUGS	Drinking
DRUGTST	Drugs
DSM	Drug testing
EARL	Diagnostic and Statistical Manual
YIN	Early intervention
EATPROB	Eating problems
EDUCSET	Educational setting
EFFECTS	Effects/Impact
EMOSUPP	Emotional support
EMOTDIF	Emotional Difficulties
EMOTIMM	Emotional immaturity
ENCOUR	Encourage child
ENERGET	Energetic
ENERLOW	Low energy
ENEROUT	Outlet for energy
ENJOY	Enjoyable experience
ENVIRON	Environmental factors impact FAS
EPA	Educational Program Assistants
EPASUPP	EPA Support
EXCESSV	Excessive -pattern of drinking
EXERCEQ	Exercise equipment
EXPDEVL	Exposure to developmental stages
EXPECLR	Need clear concise expectations
EXPERIE	Learning from experience
EXPERT	Expert in the field
EXPHIGH	High expectations
EXPLANG	Explanation of language

EXPLCLR	Clear explanations of directions and work
EXPLOWR	Lower expectations
EXPMOD	Moderate expectations
EXPNONE	No expectations
EXPOSUR	Exposure to alcohol
EXPPOOR	Expect very poor or limited performance
EXPREAL	Realistic expectations
EXPRENO	Non-expressive

EXPSAME	Same expectations for other students
EXTRACT	Extracurricular activities
EXTWORK	Extra work to have a child with FAS FVA~
FACIAL	Facial characteristics
FAE	Fetal Alcohol Effects
FAMICON	Family contact
FAMILY	Family life and family background
FATIGUE	Fatigue
FEEDBCK	Provide consent and quick feedback
FERFAIL	Fear failure
FETUS	Fetus/unborn child
FEWCASE	Few cases or students with FAS in their school
FIDGTTY	Fidget toys
FINDINF	Find info on FAS
FLEXIBL	Flexibility is needed
FOCUDIF	Focusing difficulty
FOLLWR	Follower
FOSTER	Foster care
FRENEED	Needs friends and positive social relationships
FREQACT	Frequent change of activities
FREQCON	Frequent consumption

FREQMTS	Frequently meet with student
FRUSEDU	Educator's frustration
FRUSSTU	Frustration of student
GENLZDF	Difficulties with generalization
GETALNG	Expect student to get along with others
GOALSET	Set goals
GOVT	Government
GRAPHOR	Graphic organizers
<hr/>	
GROUPW	Group work to help learn to interact
GROWDEF	Growth deficiency
HANDEYE	Poor hand eye coordination
HARD\$	Difficult to get money
HARD4TE	Hard for teacher to provide necessary assistance
HARM	Harm
HEADLG	Larger head size
HEADSM	Small head size
HEALTCR	Health Care
HEALTH	Health of Mother during pregnancy
HEALTHP	Health problems or complications
HEARDIF	Hearing difficulties
HEARTPR	Heart problems
HEREDI	Heredity
HITS	Physical fighting or behaviour toward others
HOMELIF	Home life
HOMESUP	Home support needed
HOMWRKN	Homework notebook
HOPELES	Hopeless situation of mother
HOWHELP	How to help child with FAS
HYPER	Hyperactivity

IDENINF	Identification information
IDONTCA	I don't care attitude
IMMATUR	Immature
IMMESUP	Immediate supervisor
IMMUSYS	Immune system deficiencies or weaknesses
IMPULS	Impulsivity
INAPCOM	Makes inappropriate comments
INCLUSI	Inclusion
INCONSI	Inconsistency
INDVHLP	Individual help needed
INDVNED	Individual needs
INDVPRG	Individualized programming
INNOCEN	Innocent
INSECUR	Insecurity
INSERVI	In-service
INSTINC	Trust instincts
INTENSE	Intense experience
INTERNT	Internet
INTERST	Interest in the topic
INTERUP	Interrupting behaviour
IPP/IEP	Individualized Program Plan/Individualized Educational Plan
IQDIMIN	Diminished or lower IQ
IRRITAB	Irritability
ISOLAT	Isolation with respect to peers
JOBNO	Difficulty holding a job
JOYFUL	Joyful experience
JUDGPOR	Poor judgement skills
KNOWLDG	Knowledge
LACKAWA	Lack awareness

LACKEPA	Lack of EPA support
LACKNOW	Lack knowledge necessary to teach/plan
LACKRES	Lack resources
LANGDIF	Language difficulties
LANGMOD	Language modifications
LEADERS	Educational Leadership needed
LEARDIF	Learning Problems/Difficulties
LEARNCT	Learning Centre
LEARNEX	Learning experience
LEGALPR	Legal problems
LETEACH	Let educators teach and program
LGAMNT	Large amount of alcohol
LIFESKI	Teach life skills
LISTEN	Expect to listen or learn to listen
LISTNSK	Poor listening skills
LITERAT	Literature, articles on FAS
LONER	Characterized as a loner
LOUD	Loud/noisy
LOWPRIO	FAS is a low priority
LYING	Lying
MALNOCH	Malnourished child
MANY	Many problems, troubles, difficulties
MATH	Be able to do math
MATHDIF	Math difficulties
MEDICAL	Medical issues/problems/challenges
MEDPROF	Medical professionals
MEMDIF	Memory difficulties
MEMSTRA	Memory Strategies
MENTAL	Mental challenges and/or difficulties

MENTRET	Mental Retardation
MISCLAS	Missing or missed class time
MISUNDR	Misunderstanding of child's difficulties
MODALIT	Modality
MODEL	Model
MODIFIC	Modifications and adaptations needed
MODPROG	Modified program
MONEYNE	Money needed

MORDONE	More needs to be done
MORETIM	More time required for learning
MOTFNDE	Fine motor skill deficits
MOTGRDE	Gross Motor skill deficits
MOTHER	Mother
MOTRDIF	Poor/difficulty with motor skills
MOVALLW	Allow extra movement/activity
MUSIC	Use music
NATIVE	Native person or group
NEUREFF	Neurological effects
NEWSLTR	Newsletters
NO	No
NO1SOLU	Not one solution for all
NOASSUM	Cannot make assumptions
NOEXPER	No experience
NOFRIEND	No friends
NONCOMP	Non-compliant
NONE	None
NONJUDG	Non-judgemental
NONSTRC	Difficulties coping in non-structured activities
NORESP	No Response

NOSE	Nose abnormalities/features
NOSPECS	No specific memories or students
NOTAPPL	Not Applicable
NOTOPT	Not an option
NUTRIT	Nutrition
OBSERV	Observations
OCCUPTH	Occupational Therapist
ODD	Oppositional Defiant Disorder
ONE2ONE	One to One Attention/Teaching
ONLYSOM	Only so much schools can do
OPEN	Be open to suggestions
ORGADIF	Organization difficulties
ORGATEA	Teach organizational skills
ORGNWK	Organ weakness
OUTSUPP	Support of outside agencies
OVRWHEL	Overwhelming experience
PARENT	Parent
PARNTUC	Parent uncooperative
PARTICI	Participate in class
PASSIVE	Passive
PATIEN	Patience
PDEV	Professional Development
PEERHLP	Peer help or assistance
PEERPRO	Peer Problems
PERCDIF	Perceptual difficulties
PERFEC	Perfectionism
PERSEXP	Personal experience with FAS
PERSIST	Persistence
PERSNAF	Person affected by prenatal alcohol exposure

PERSNAL	Personality problems
PERSTRY	Personal story of someone re FAS
PHYSICA	Physical abnormalities, difficulties or challenges
PHYSTRT	Physical traits
PIROMAN	Pyromaniac
PLAN	Outline a plan to address needs
POOR	Poor
POVERTY	Poverty

PRACTIC	Practice
PRAISE	Praise effort and accomplishments
PREG	Pregnancy/Pregnant
PREMATR	Premature history
PRENAT	Prenatal
PRETEAC	Pre-Teaching
PREVTBL	Preventable
PROBLAB	Problems with labels
PROBLEM	Problems/Difficulties
PROBSOL	Poor problem solving skills/ability
PROCESS	Processing difficulties
PROFESR	Professor
PROGNOS	Prognosis
PROGPLT	Program Planning Team
PROLONG	Prolonged = pattern of exposure
PUBLIC	Educate the public on the issues with FAS
QUESNOT	Question Not Asked
QUIETPL	Quiet Place/Time
RACIAL	Racial inferences or comments on race/culture
READ	Be able to read
READDIF	Reading difficulties

REASPOR	Poor reasoning skills
REDIRECT	Redirect attention, behaviour, etc.
REDUWRK	Reduced amount of work
REFER	Refer or referrals
REINFO+	Positive attention/reinforcement
RELATIO	Difficulties experienced in relationships
REMIND	Reminders needed
REMOVE	Remove child from a situation
REPEATC	Ask child to repeat and rephrase
REPEATT	Teacher repeat and rephrase
REPETIT	Need lots of repetition
REPQUES	Repeated the question/answer without answering it
RESEARC	Recent research and information on FAS
RESOUHP	Resource help
RESOURS	Resources
RESOURT	Resource Teacher
RESPECT	Expect to respect others
RESPLRN	Learn to take responsibility
RESPONO	No responsibility for result of actions
RESTLES	Restless behaviour
RESTRAI	Restraint required
REVISPL	Revise plan as required
REWARDS	Rewards given
REWARNG	Rewarding experience
RIGHWRG	Right and wrong
RISKTAK	Risk Taking Behaviours
RITALIN	Ritalin
ROLEPLY	Role Playing
ROTELRN	Rote Learning

ROUTDIF	Difficulty learning and following routines
ROUTINE	Need to establish routine
RULEDIF	Difficulty following the rules
RULES	Follow classroom rules
SAFETY	Safety is a concern
SCHAGED	School Aged
SCHEDUL	Clear schedule for the day
SCHOHIS	School History
<hr/>	
SCHOOL	School
SCHPSYC	School Psychologist
SCHTEAM	School Support Team
SEATPLN	Seating Plan Factors
SELFCEM	Self-centred
SELFCON	Difficulties with self control
SELFEST	Self Esteem
SELMOT	Self motivated to learn about FAS
SENSIT	Sensitivity to stimuli
SENSPLY	Sensory play and experience
SENSTVY	Sensitivity
SEQUDIF	Sequencing difficulties
SERIOUS	Serious
SHARID	Share ideas with other educators
SITSTIL	Sitting Still
SLEEPDF	Sleep difficulties
SLEPINF	Poor sleeping habits as infant
SLOWER	Slower rate of learning
SLOWREP	Slow to respond
SMALGRP	Small group help
SMALRCL	Smaller class size

SMOKING	Smoking
SOCCUES	Social cues and conventions
SOCLDIF	Social interaction difficulties
SOCLEAR	Learn appropriate social skills
SOCSERV	Social Services involved
SOCSKIL	Poor Social Skills
SOCSTOR	Social
SOCTEAC	Stories

SOCWRKR	Teach social skills
SOME	Social worker
SOMECH	Some things are being done
SOOTPLY	Displays only some characteristics
SPACE	Opportunity for soothing play
SPATIAL	Provide student with lots of space
SPEAKER	Spatial difficulties
SPECEDC	Speaker on FAS
SPECFAS	Special Education Class
SPECLST	Specific things re FAS vs. special needs child
SPECNDC	Specialists
SPECNED	Special Needs Child or Children
SPECSTU	Special needs for a child
SPELANP	Specific or particular student
SPELCHK	Speech Language Pathologist
SPELDIF	Spell checkers
STAYTSK	Spelling difficulties
STEAL	Staying on task
STIGMA	Stealing Stigma
STIGMRV	Remove the stigma
STIMRED	Reduce stimuli

STRATEG	Strategies
STRESSF	Stressful experience
STRUCTD	Structured environment
STUDENT	Student
SUBSABU	Substance Abuse
SUFFER	Suffer
SUPERVI	Need close supervision
SUPPGRP	Support Group
SUPPORT	Support needed
SUPPSER	Support services involved and needed
SUPPSTF	Support Staff
SURNOTM	Not enough time to put all attention to survey
SURVEY+	Positive comments on survey
SURVEY-	Survey was long, difficult, etc
SURVQUE	Question regarding use of information collected
SUSPENS	Suspension
SYMPTOM	Symptoms of FAS
TACSTRA	Tactile strategies/materials
TALKATV	Talkative
TEACHER	Teacher
TEAM	Work together as a team
TEAMTG	Team meeting
TELEVIS	Television
THGSAVO	Things to avoid
THNKDIF	Thinking difficulties
THROOUT	Throughout pregnancy
TIME	Time required to plan, learn, etc.
TIMECON	Time during pregnancy = factor
TIMEOUT	Time Out

TIRING	Tiring experience
TLC	Tender Loving Care needed
TOABILI	Expectation to perform to the student's ability
TRAGEDY	Tragedy
TRAINING	Training
TRANSCH	Transitioning out or into present school
TRANSIT	Transitions are difficult for the student
TROUBLD	Troubled
<hr/>	
UNDERST	Understanding
UNDETEC	Undetected difficulties
UNFAIR	Unfair
UNFITMO	Unfit Mothers
UNIQUE	Each child is unique
UNPREDI	Unpredictable behaviour and actions
UPBRING	Upbringing
USESTRE	Use strengths
VARIABI	Variability
VIDEO	Videos on FAS
VIOLENT	Violent behaviour
VIOLESS	Become less violent
VISNDIF	Vision difficulties
VISSTRA	Visual strategies for teaching
VISUAL	Visual Learning or Learning style
VISUALS	Visual Aids
VOICLRN	Learn to use words and voice appropriately
WEAKNES	Weakness
WHENEED	Information desired when needed
WITHDRA	Withdrawn
WOMAN	Woman or Women

WORKCHU	Break work into smaller/shorter chunks
WORKIND	Difficulty working independently
WORKSHO	Workshop
WOW	Wow
WRITDIF	Difficulty with writing
WRITE	Be able to write
WTHDSYM	Withdrawal symptoms
YES	Yes
YOUNGM	Young mother

Appendix G

Frequency of responses to each question when analyzed for the entire sample (n=121)

Table G1

Frequent responses regarding what first comes to mind when participants think of FAS –

Question #2

Question #2 - What is the first thing that comes to mind when you think of FAS?		
	n	%
Child	42	34.7
Pregnancy	38	31.4
Drinking/consumption	31	25.6
Learning difficulties	29	24.0
Alcohol	26	21.5
Mother	26	21.5
Alcohol Misuse/Abuse/Alcoholic	13	10.7
Developmental issues/concerns	13	10.7
Affected, effects, impact	11	9.1
Baby/infant	10	8.3
Behavioural difficulties	10	8.3
Facial characteristics	8	6.6
Fetus	8	6.6
Physical challenges or disabilities	7	5.8
Exposure	6	5.0
Prenatal	6	5.0
Woman	5	5.0
Problems	5	4.1
Specific student the educator has had experience with that had FAS or was suspected.	5	4.1
No response	1	0.8

Table G2

True/False questions compared to Health Canada (2000a)

#	Question	True			Not True			Don't Know		
		Current survey		Health Canada	Current survey		Health Canada	Current survey		Health Canada
		n	%	%	n	%	%	n	%	%
3	A small amount of alcohol use during pregnancy can usually be considered safe.	44	36.4	51	71	58.7	46	6	5.0	2
4	The more alcohol a pregnant woman drinks, the more likely the baby will be harmed.	118	97.5	98	3	2.5	1	0	0.0	**
5	A moderate amount of alcohol consumption during pregnancy can usually be considered safe.	10	8.3	25	110	90.9	73	1	0.8	2
6	The more alcohol a pregnant woman drinks, the more harm that may be done to the baby.	113	93.4	98	6	5.0	2	2	1.7	**

* Health Canada (2000a)

** Indicates no responses in that category. Health Canada (2000a) rounded percentages to the nearest whole number. Therefore, the percentages do not all add up to 100%.

Table G3

Responses with respect to the prevalence of FAS – Question #7.

Question #7 – A conservative estimate of the prevalence of FAS in North America (across racial/ethnic groups) is approximately:

	n	%
Less than one in 100	16	13.2
One in 100 births	50	41.3
One in 500 births	27	22.3
One in 800 births	5	4.1
One in 1000 births	14	11.6
Don't Know	3	2.5
No Response	6	5.0

Table G4

Common characteristics of FAS selected by respondents – Question #8.

Question #8 - Which of the following features are considered common characteristics of FAS?						
Characteristics	Yes		No		No response	
	n	%	n	%	n	%
Learning difficulties	117	96.7	3	2.5	1	.8
Attention difficulties	111	91.7	9	7.4	1	.8
Poor cause and effect thinking/understanding	104	86.0	16	13.2	1	.8
Memory problems	97	80.2	23	19.0	1	.8
Difficulty with social interactions	97	80.2	23	19.0	1	.8
Social skills deficits	96	79.3	24	19.8	1	.8
Motor delays	90	74.4	30	24.8	1	.8
Physical abnormalities (e.g., facial characteristics)	83	68.6	37	30.6	1	.8
Language difficulties	83	68.6	37	30.6	1	.8
Growth retardation	81	66.9	39	32.2	1	.8
Impulsivity	78	64.5	42	34.7	1	.8
Hyperactivity	74	61.2	46	38.0	1	.8
Over or under sensitivity to stimuli	63	52.1	57	47.1	1	.8
Sleep difficulties	52	43.0	68	56.2	1	.8
Bizarre thoughts (e.g., paranoid thinking; conspiracy thinking)	27	22.3	93	76.9	1	.8
Eating Problems	24	19.8	96	79.3	1	.8
Delusions and/or hallucinations	15	12.4	105	86.8	1	.8

Table G5

Implications for the variability of characteristics among individuals with FAS (n=121) –

Question #9b.

Question #9b – Are there any implications for this variability of characteristics?		
	n	%
Amount of alcohol consumed	12	9.9
Differential diagnosis implications	12	9.9
Misdiagnosis	8	6.6
Displays only some characteristics	7	5.8
No one solution for all individuals	6	5.0
Individual needs	6	5.0
Degree or severity of FAS	5	4.1
Time during pregnancy of consumption	5	4.1
Every child is unique	5	4.1
No response	30	24.8
Don't know	26	21.5

Table G6

Opinions of educators in response to statements on FAS – Questions #10 - #14.

#	Question	Strongly agree		Agree		Disagree		Strongly disagree		Don't Know		No response	
		n	%	n	%	n	%	n	%	n	%	n	%
10	FAS is a condition that tends to subside with age.	-	-	5	4.1	77	63.6	37	30.6	1	.8	1	.8
11	All children with FAS exhibit the same behavioural characteristics.	2	1.7	7	5.8	76	62.8	33	27.3	1	.8	2	1.7
12	FAS is a lifelong disability.	32	26.4	84	69.4	3	2.5	1	.8	-	-	1	.8
13	FAS is a leading cause of mental retardation.	8	6.6	43	35.5	55	45.5	8	6.6	-	-	7	5.8
14	FAS is limited to certain racial/ethnic groups.	-	-	-	-	68	56.2	53	43.8	-	-	-	-

Table G7

Difficulties experienced in the classroom by students with FAS (n=119) – Question #16.

Question #16 – What types of difficulties do students with FAS experience? (n=119)*		
	n	%*
Attention difficulties	67	56.3
Social interaction difficulties	52	43.7
Learning difficulties	48	40.3
Memory deficits	46	38.7
Social skills deficits	26	21.8
Language difficulties	25	21.0
Hyperactivity	24	20.2
Impulsivity	20	16.8
Motor difficulties (not specific)	17	14.3
Difficulty focusing on work	16	13.4
Difficulty with cause and effect thinking	16	13.4
Behavioural difficulties	15	12.6
Peer problems	15	12.6
Physical challenges or disabilities	12	10.1
Reading difficulties	11	9.3
Math difficulties	10	8.4
Difficulty following directions	10	8.4
Comprehension and understanding difficulties	10	8.4
Fine motor problems	8	6.7
Processing problems	8	6.7
Growth deficiency	8	6.7
Sensitivity to stimuli	8	6.7
Difficulty with concentration	7	5.9
Sleep difficulties	7	5.9
Cognitive problems (non-specific)	6	5.0
Bizarre thoughts	6	5.0
Difficulty sitting still	6	5.0
Gross motor problems	5	4.2
Distractibility problems	5	4.2
Academic difficulties (not specific)	5	4.2
No response	6	5.0

*Percentages are based on number of respondents who responded “yes” question #15.

Table G8

Expectations for academic achievement for students with FAS (n=121) – Question #17a.

Question #17a – Expectations for academic achievement		
	n	%
Modifications required	21	17.4
Support required	18	14.9
Based on individual needs of the student	18	14.9
Expect lower achievement	16	13.2
Expect child to perform to best of his/her ability	14	11.6
Academic difficulties	10	8.3
Expect student to achieve success	9	7.4
Set goals to achieve	5	4.1
Depends on the degree of FAS	5	4.1
Teach/adapt to the child's level	5	4.1
Base expectations on assessment of the student	5	4.1
No response	14	11.6

Table G9

Expectations for behaviour of students with FAS (n=121) – Question #17b.

Question #17b – Expectations for behaviour of students with FAS		
	n	%
Based on individual needs of the student	17	14.0
Behavioural difficulties expected	16	13.2
Support required	9	7.4
Behaviour modification strategies and techniques would be required	8	6.6
Close supervision required	8	6.6
Depends on the degree of FAS	7	5.8
Need for clear expectations	6	5.0
Hyperactivity	5	4.1
Impulsive behaviour	5	4.1
No response	21	17.4

Table G10

Expectations for social interactions of students with FAS (n=121) – Question #17c.

Question #17c – Expectations for the area of social interactions		
	n	%
Social difficulties expected	18	14.9
Based on individual needs of the student	16	13.2
Support required	10	8.3
Need to teach social skills	8	6.6
Need to provide social cues for the student	7	5.8
Poor social skills	6	5.0
Depends on the degree of FAS	6	5.0
Expect the student to learn appropriate social skills	6	5.0
Expect the student to get along with others	5	4.1
Include student in social situations	5	4.1
Peer problems	5	4.1
No response	22	18.2

Table G11

Strategies or adaptations generally helpful to students with FAS (n=121).

Question #18 – Strategies or adaptations generally helpful to students with FAS		
	n	%
Individual help/one on one	27	22.3
Peer helper/buddy	19	15.7
Individualized programming – includes Individualized Program Plan (IPP) and Individualized Educational Plan (IEP)	16	13.2
Academic help	14	11.6
EPA support for the student	14	11.6
Break work into small chunks	11	9.1
Clear explanations of directions and work	10	8.3
Based on individual needs	10	8.3
Modifications required	10	8.3
Needs lots of repetition	9	7.4
Need to be consistent	9	7.4
Resource help required	9	7.4
Structured environment	8	6.6
Tactile strategies and materials for learning	8	6.6
Seating plan considerations – preferential seating	7	5.8
Reduce the amount of work required	6	5.0
Need to establish routines	6	5.0
Having a quiet place for student to use if required	6	5.0
Have a behaviour plan in place	6	5.0
Teach social skills	6	5.0
Support required – no other specifics given	6	5.0
Behaviour modification/strategies	5	4.1

Table continued on next page...

Curriculum modifications	5	4.1
Rewards given where appropriate	5	4.1
Visual aids	5	4.1
Need to have consequences for behaviour	5	4.1
Modified program	5	4.1
Social stories	5	4.1
No experience with students with FAS	5	4.1
No response	8	6.6
Don't know	9	7.4

Table G12

Types of difficulties that can occur outside the classroom with students with FAS (n=83)

*** – Question #20*

Question #20 – Types of difficulties that can occur outside the classroom with students with FAS

	n	%*
Social interaction difficulties	38	45.8
Behavioural difficulties	10	12.0
Poor social skills	7	8.4
Criminal activities/involvement	7	8.4
Self-esteem difficulties	7	8.4
Isolation	6	7.2
Learning difficulties	5	6.0
Physical difficulties and challenges	5	6.0
Peer problems	5	6.0
No response	25	30.1
Don't know	12	14.5

*Percentages are based on number of respondents who responded “yes” question #19.

** This question was only asked to participants who responded “yes” to question #19.

Table G13

Main areas considered during identification and diagnosis of children with FAS as reported by respondents (n=121) – Question #21

Question #21 – Main areas considered when identifying and diagnosing children who have FAS		
	n	%
Social interaction difficulties and poor social skills	19	15.7
Physical abnormalities, difficulties, challenges – non-specific, not facial	18	14.9
Facial characteristics	15	12.4
Learning difficulties	14	11.6
Behavioural difficulties	12	9.9
Cognitive problems	12	9.9
Background and history of child	11	9.1
Family/home life and background	11	9.1
Growth deficiency	9	7.4
Attention difficulties	9	7.4
Involvement of medical professional – diagnosis done by medical professional	7	5.8
Reference to pregnancy	7	5.8
Alcohol consumed	6	5.0
Reference to mother – not classified when mention health of mother	6	5.0
Birth weight	6	5.0
Developmental issues/concerns	6	5.0
Health of mother during pregnancy	5	4.1
Language difficulties	5	4.1
Prenatal	5	4.1
No response	24	19.8
Don't know	27	22.3

Table G14

Responses regarding what respondents would do if they suspected a child in their classroom is potentially a student with FAS (n=121) – Question #22

Question #22 – What respondents indicated they would do if they suspected a child in their classroom is potentially a student with FAS		
	n	%
Consult with the Program Planning Team/School Team	33	27.3
Consult School Psychologist	32	26.4
Contact the family with concerns	28	23.1
Tell administrator	27	22.3
Request a psychological assessment of student	27	22.3
Consult medical professional	18	14.9
Find information on FAS	15	12.4
Consult Resource teacher	12	9.9
Implement modifications where required	11	9.1
Consult an expert	9	7.4
Consult with classroom teacher	9	7.4
Consider background and history of child	8	6.6
Review cumulative school record of the child	6	5.0
Observe the child carefully	6	5.0
Seek a diagnosis	5	4.1
Involve Developmental Clinic at the IWK Hospital	5	4.1
Document concerns, reasons, observations, etc.	5	4.1
Consult with the Learning Centre	5	4.1
No response	3	2.5
Don't know	1	0.8

Table G15

Things that educators indicated would make them better prepared to teach students who may be diagnosed with FAS (n=121) – Question #25

Question #25 – Please indicate what, if anything, would help you be better prepared to teach students who may be diagnosed with FAS.

	n	%
Current research in the area	31	25.5
In-services	27	22.3
Strategies to use	24	19.8
Literature (books, journals, etc.)	18	14.9
Workshops	15	12.4
Professional Development	9	7.4
Training	9	7.4
How to help student	7	5.8
Support – not specific	6	5.0
Personal experience with a student with FAS	6	5.0
Increased awareness	5	4.1
Modifications that would appropriate	5	4.1
No response	6	5.0
Don't know	-	-

Table G16

Responses to what it was like for educators to work with a student with FAS (n=43) –

Question #27

Question #27 – Response to what it was like to work with a student with FAS		
	n	%*
Challenging experience	8	18.2
Noted problems with social interactions	6	13.6
Frustrating for the educator	6	13.6
Difficult	5	11.4
Rewarding	4	9.1
Noted behavioural difficulties	4	9.1
Learning experience	3	7.0
Enjoyed the experience	3	7.0
No response	4	9.1
Don't know	1	2.3
Question not asked	78	-

*Percentages are based on number of respondents who responded “yes” question #26 indicating that they had experience with students with FAS.

Table G17

*Teaching style adaptations used by educators when working with students with FAS**(n=41) – Question #29a*

Question #29a – Teaching style adaptations used by educators when working with students with FAS

	n	%*
Individual help/one on one	17	41.5
Peer helpers/buddy system	6	14.6
Visual aids	5	12.2
Individualized programming - includes Individualized Program Plan (IPP) and Individualized Educational Plan (IEP)	5	12.2
Tactile strategies and materials for learning	5	12.2
Very clear explanations of directions and work	4	9.8
Lower expectations for achievement	4	9.8
Be sure to have the child's attention before giving instruction	4	9.8
Modifications made – none specific	4	9.8
Based on individual needs	3	7.3
Break work into smaller, manageable chunks	3	7.3
EPA support in classroom for child	3	7.3
Have child repeat back what was said to them (e.g., instructions)	3	7.3
Use frequent repetitions for directions, instructions and teaching concepts	3	7.3
Close supervision	3	7.3
Have clear expectations for work	3	7.3
No response	6	14.6
Don't know	-	-
Question not asked	78	-

*Percentages are based on number of respondents who responded "yes" question #28 indicating that they had experience with students with FAS.

Table G18

Classroom adaptations used by educators when working with students with FAS (n=41) –

Question #29b

Question #29b – Classroom adaptations used by educators when working with students with FAS

	n	%*
Seating plan considerations – preferential seating	25	61.0
Peer helpers/buddy system	8	19.5
Having a quiet place for student to use if required	6	14.6
Visual aids	3	7.3
EPA Support	3	7.3
Providing lots of space for student	3	7.3
Reduce distractions	3	7.3
No response	8	19.5
Don't know	-	-
Question not asked	78	-

*Percentages are based on number of respondents who responded “yes” question #28 indicating that they had experience with students with FAS.

Table G19

Behavioural management strategies used by educators when working with students with

FAS (n=41) – Question #29c

Question #29c – Behavioural management strategies used by educators when working with students with FAS

	n	%*
Rewards	16	39.0
Behavioural modification techniques and strategies – specifics not mentioned	7	17.1
Positive reinforcement and praise	7	17.1
Important to be consistent	6	14.6
Need clear expectations	5	12.2
Peer helpers/buddy system	3	7.3
Frequent contact with the family	3	7.3
Behavioural checklists	3	7.3
Having child repeat and rephrase instructions and expectations	3	7.3
Role play activities	3	7.3
Encourage good self-esteem	3	7.3
Close supervision	3	7.3
Time outs used	3	7.3
No response	8	19.5
Don't know	-	-
Question not asked	78	-

*Percentages are based on number of respondents who responded “yes” question #28 indicating that they had experience with students with FAS.

Table G20

Important factors, identified by educators, for schools to consider when working with students with FAS and their families (n=121) – Question #30

Question #30 – In your opinion, what are the most important factors for schools to consider when working with students with FAS? What should schools be doing to help these children and their families?

	n	%
Support needed – non specific	25	20.7
Training for those working with students with FAS	21	17.4
Contact with family	20	16.5
Support for the family at home in order to help them support their child	16	13.2
Modifications that will be effective	15	12.4
Effective strategies	13	10.7
EPA support available	13	10.7
Work as a team	11	9.1
Need resources	11	9.1
Support and training for teachers	11	9.1
Understanding and compassion	10	8.3
Knowledge of educators about FAS	10	8.3
Focus on individual needs	10	8.3
Seek a diagnosis	9	7.4
Need to be aware of FAS and associated features	9	7.4
Teach social skills	9	7.4
Utilize outside agencies for support	8	6.6
Work with and support parents	7	5.8
Academic help required	7	5.8
Have sufficient resource help in the schools	7	5.8
Be informed that a child has FAS	6	5.0
Have access to current research	6	5.0
Support groups available	5	4.1
Input and information from medical professionals	5	4.1

Table continued on next page...

Counselling available for student and/or family as required	5	4.1
Work with the child at their level/to the best of their ability	4	3.3
No response	11	9.1
Don't know	2	1.7

Table G21

Ideas about what is required for important factors to be considered and things put in place to help students and their families (n=121) – Question #31

Question #31 – What is required to have the things indicated in the previous question put in place? What needs to be done?		
	n	%
Need more money	28	23.1
Training for those working with students with FAS	15	12.4
In-services on topic	15	12.4
Support services	14	11.6
Resources – non specific	14	11.6
School Board support for programs and services	10	8.3
Have access to current research	10	8.3
Support – non specific	9	7.4
EPA support for students	8	6.6
Good communication between all parties involved	7	5.8
Support from outside agencies	7	5.8
Specialists in the area to support educators and families	7	5.8
Support and training for teachers	6	5.0
Work with and support parents	6	5.0
Support for home	6	5.0
Work as a team	6	5.0
Increased awareness regarding FAS	6	5.0
Focus on individual needs	5	4.1
Administrators need to support efforts (e.g., training, money, time, etc)	5	4.1
Experts involved to help educators learn and develop plans to help the students	5	4.1
Contact with the family	5	4.1
Leadership to take on the issue to help the students	5	4.1
No response	19	15.7
Don't know	2	1.7

Table G22

Reasons given by educators for why things are not being done (n=100) – Question #32b

Question #32b – Why are things not being done?		
	n	%*
Need more money	15	15.0
Few cases of FAS in the school	14	14.0
Lack of knowledge of FAS	8	8.0
Lack resources	8	8.0
Low priority in the school	6	6.0
Stigma attached to FAS	4	4.0
Lack of time available to learn about and plan for student	4	4.0
Don't know	1	1.0
No response	34	34.0
Question not asked	21	-

*Percentages were adjusted since participants who responded “yes” to the first part of question #32 were not asked the second half of the question.

Table G23

Sources from which educators receive information about FAS (n=121) – Question #35

Question #35 - From what sources have you received information about FAS? Check all that apply.

	n	%
Books, journals, etc.	59	48.8
Television	53	43.8
Colleagues	45	37.2
Support Staff	29	24.0
Internet	27	22.3
Workshops, seminars, conferences	20	16.5
Association/Organization newsletters	12	9.9
Department of Education publications	9	7.4
In-School Professional Development	7	5.8
Other: - Part of a course, professor, contact with parents and family, personal experience, teacher, school psychologist, medical professional, video	22	18.2

Table G24

Most helpful sources of information as reported by educators (n=121) – Question #36

Question #36 – What source(s) of information have been most helpful to you?		
	n	%
Literature (books, journals, etc.)	31	25.6
Colleagues	19	15.7
Television	13	10.7
Support Staff	11	9.1
Workshop	10	8.3
Internet	6	5.0
Part of a course	5	4.1
Personal experience	4	3.3
Conference	3	2.5
Newsletter	3	2.5
Parent	2	1.7
School Psychologist	2	1.7
In-service	1	.8
Video	1	.8
Don't know	3	2.5
No response	36	29.8

Table G25

Educators response to what information would be helpful regarding FAS (n=103) –

Question #38

Question #38– What information would be helpful to you?		
	n	%*
Information on how to identify FAS	28	27.2
Strategies to use with students with FAS	28	27.2
Any and all information – no specifics given	25	24.3
Current research on FAS	23	22.3
Literature on FAS	9	8.7
How to help students with FAS	8	7.8
Modifications for students with FAS	7	6.8
Workshops on FAS	7	6.8
Professional Development	5	4.9
Information on diagnosis	4	3.9
Behaviour modification techniques	4	3.9
No response	15	14.6
Question not asked	18	-

*Percentages are based on number of participants who indicated they would be interested in more information on FAS (question #37).

Table G26

Preference for the method of presentation of information reported by educators (n=103)

– Question #39

Question #39– What method of presentation do you prefer for getting information?		
	n	%
Workshops, seminars, conferences	87	84.5
Printed materials (e.g., books, newsletters)	57	55.3
Multimedia (e.g., Internet style forms)	29	28.2
Other:		
- Videos, sharing ideas with colleagues, case studies, personal experiences, information from experts, modeling, one on one with professional/specialist, speakers, television	13	12.6

Appendix H

Frequency tables for each question regarding role comparisons (n=116)

Table H1

Responses to Question #1

Question #1 – What does FAS stand for?

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Fetal Alcohol Syndrome	67	91.8	13	76.5	12	92.3	11	84.6	103	88.8
Fetal Alcohol Spectrum Disorder	2	2.7	3	4.1	-	-	1	7.7	6	5.2
Incorrect	4	5.5	1	5.9	1	7.7	1	7.7	7	6.0

* Proportion of role group

Table H2

Responses to Question #2 by role

Question #2 - What is the first thing that comes to minds when you think of FAS? (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Child	25	34.2	6	35.3	4	30.8	6	46.2	41	35.3
Pregnancy	23	31.5	5	29.4	2	15.4	5	38.5	35	30.2
Drinking/ consumption	20	27.4	4	23.5	2	15.4	3	23.1	29	25.0
Learning difficulties	16	21.9	4	23.5	4	30.8	3	23.1	27	23.3
Alcohol	12	16.4	7	41.2	2	15.4	2	15.4	24	20.7
Mother	17	23.3	4	23.5	3	23.1	2	15.4	26	22.4
Alcohol Misuse/Abuse/ Alcoholic	7	9.6	1	5.9	2	15.4	3	23.1	13	11.2
Developmental issues/concerns	8	11.0	2	11.8	1	7.7	1	7.7	12	10.3
Affected, effects, impact	6	8.2	1	5.9	1	7.7	2	15.4	9	7.8
Baby/infant	8	11.0	-	-	-	-	1	7.7	9	7.8
Behavioural difficulties	6	8.2	1	5.9	1	7.7	1	7.7	9	7.8
Facial characteristics	4	5.5	1	5.9	2	15.4	-	-	7	6.0
Fetus	3	4.1	3	17.6	-	-	1	7.7	7	6.0
Physical challenges or disabilities	4	5.5	-	-	3	23.1	-	-	7	6.0

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Exposure	2	2.7	3	17.6	-	-	1	7.7	6	5.2
Prenatal	2	2.7	2	11.8	1	7.7	-	-	5	4.3
Woman	3	4.1	-	-	1	7.7	1	7.7	5	4.3
Problems	4	5.5	-	-	-	-	-	-	4	3.4
Specific student the educator has had experience with that had FAS or was suspected.	4	5.5	-	-	1	7.7	-	-	5	4.3

* Proportion of role group

Table H3

Responses to Question #3 by role

Question #3 – True/Not True: A small amount of alcohol use during pregnancy can usually be considered safe. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
True	27	37.0	6	35.3	3	23.1	7	53.8	43	37.1
Not True	42	57.5	10	58.8	10	76.9	6	46.2	68	58.6
Don't Know	4	5.5	1	5.9	-	-	-	-	5	5.2

* Proportion of role group

Table H4

Responses to Question #4 by role

Question #4 – True/Not True: The more alcohol a pregnant woman drinks, the more likely the baby will be harmed. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
True	72	98.6	17	100.0	13	100.0	12	92.3	114	98.3
Not True	1	1.4	-	-	-	-	1	7.7	2	1.7
Don't Know	-	-	-	-	-	-	-	-	-	-

* Proportion of role group

Table H5

Responses to Question #5 by role

Question #5 – A moderate amount of alcohol consumption during pregnancy can usually be considered safe. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
True	5	6.8	2	11.8	1	7.7	2	15.4	10	8.6
Not True	67	91.8	15	88.2	12	92.3	11	84.6	105	90.5
Don't Know	1	1.4	-	-	-	-	-	-	1	.9

* Proportion of role group

Table H6

Responses to Question #6 by role

Question #6 – The more alcohol a pregnant woman drinks, the more harm that may be done to the baby. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
True	69	94.5	16	94.1	13	100.0	11	84.6	109	94.0
Not True	3	4.1	1	5.9	-	-	2	15.4	6	5.2
Don't Know	1	1.4	-	-	-	-	-	-	1	.9

* Proportion of role group

Table H7

Responses to Question #7 by role

Question #7 – A conservative estimate of the prevalence of FAS in North America (across racial/ethnic groups) is approximately: (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Less than one in 100 births	9	12.3	3	17.6	-	-	4	30.8	16	13.8
1 in 100	32	43.8	8	47.1	2	15.4	5	38.5	47	40.5
1 in 500	14	19.2	3	17.6	7	53.8	3	23.1	27	23.3
1 in 800	3	4.1	-	-	-	-	1	7.7	4	3.4
1 in 1000	8	11.0	1	5.9	4	30.8	-	-	13	11.2
Don't Know	3	4.1	-	-	-	-	-	-	3	2.6
No Response	4	5.5	2	11.8	-	-	-	-	6	5.2

* Proportion of role group

Table H8

Responses to Question #8 by role

Question #8 – Which of the following are considered common characteristics of FAS?(n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Hyperactivity										
Yes	42	57.5	11	64.7	11	84.6	8	61.5	72	62.1
No	31	42.5	5	29.4	2	15.4	5	38.5	43	37.1
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Motor delays										
Yes	58	79.5	12	70.6	8	61.5	10	76.9	88	75.9
No	15	20.5	4	23.5	5	38.5	3	23.1	27	23.3
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Attention difficulties										
Yes	68	93.2	15	88.2	13	100.0	11	84.6	107	92.2
No	5	6.8	1	5.9	-	-	2	15.4	8	6.9
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Delusions and/or hallucinations										
Yes	7	9.6	4	23.5	1	7.7	3	23.1	15	12.9
No	66	90.4	12	70.6	12	92.3	10	76.9	100	86.2
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Memory problems										
Yes	60	82.2	12	70.6	10	76.9	11	84.6	93	80.2
No	13	17.8	4	23.5	3	23.1	2	15.4	22	19.0
No Response	-	-	1	5.9	-	-	-	-	1	0.9

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Difficulty with social interactions										
Yes	59	80.8	13	76.5	12	92.3	9	69.2	93	80.2
No	14	19.2	3	17.6	1	7.7	4	30.8	22	19.0
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Physical abnormalities (e.g., facial characteristics)										
Yes	46	63.0	11	64.7	12	92.3	9	69.2	78	67.2
No	27	37.0	5	29.4	1	7.7	4	30.8	37	32.0
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Learning difficulties										
Yes	71	97.3	16	94.1	13	100.0	12	92.3	112	96.6
No	2	2.7	-	-	-	-	1	7.7	3	2.6
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Eating Problems										
Yes	13	17.8	3	17.6	3	23.1	4	30.8	23	19.8
No	60	82.2	13	76.5	10	76.9	9	69.2	92	79.3
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Growth retardation										
Yes	48	65.8	11	64.7	10	76.9	9	69.2	78	67.2
No	25	34.2	5	29.4	3	23.1	4	30.8	37	32.0
No Response	-	-	1	5.9	-	-	-	-	1	0.9
Language difficulties										
Yes	48	65.8	11	64.7	12	92.3	9	69.2	80	69.0
No	25	34.2	5	29.4	1	7.7	4	30.8	35	30.2
No Response	-	-	1	5.9	-	-	-	-	1	0.9

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Poor cause and effect thinking/understanding

Yes	62	84.9	15	88.2	10	76.9	12	92.3	99	85.3
No	11	15.1	1	5.9	3	23.1	1	7.7	16	13.8
No Response	-	-	1	5.9	-	-	-	-	1	0.9

Impulsivity

Yes	47	64.4	11	64.7	10	76.9	7	53.8	75	64.7
No	26	35.7	5	29.4	3	23.1	6	46.2	40	34.5
No Response	-	-	1	5.9	-	-	-	-	1	0.9

Over or under sensitivity to stimuli

Yes	37	50.7	10	58.8	8	61.5	7	53.8	62	53.4
No	36	49.3	6	35.3	5	38.5	6	46.2	53	45.7
No Response	-	-	1	5.9	-	-	-	-	1	0.9

Sleep difficulties

Yes	27	37.0	9	52.9	7	53.8	7	53.8	50	43.1
No	46	63.0	7	41.2	6	46.2	6	46.2	65	56.0
No Response	-	-	1	5.9	-	-	-	-	1	0.9

Bizarre thoughts (e.g., paranoid thinking; conspiracy thinking)

Yes	13	17.8	5	29.4	2	15.4	6	46.2	26	22.4
No	60	82.2	11	64.7	11	84.6	7	53.8	89	76.7
No Response	-	-	1	5.9	-	-	-	-	1	0.9

Social skills deficits

Yes	59	80.8	13	76.5	11	15.4	8	61.5	91	78.4
No	14	19.2	3	17.6	2	84.6	5	38.5	24	20.7
No Response	-	-	1	5.9	-	-	-	-	1	0.9

* Proportion of role group

Table H9

Responses to Question #9a by role

Question #9 – Can a child who is alcohol-affected exhibit some of the characteristics you indicated in the previous question without exhibiting others? (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Yes	72	98.6	16	94.1	13	100.0	13	100.0	114	98.3
No	-	-	-	-	-	-	-	-	-	-
Don't Know	1	1.4	-	-	-	-	-	-	1	0.9
No response	-	-	1	5.9	-	-	-	-	1	0.9

* Proportion of role group

Table H10

Responses to Question #9b by role

Question #9b – If yes, are there any implications for this variability? (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Amount of alcohol consumed	5	6.8	4	23.5	1	7.7	1	7.7	11	9.5
Differential diagnosis implications	8	11.0	-	-	3	17.6	1	7.7	12	10.3
Misdiagnosis	3	4.1	2	11.8	2	15.4	-	-	7	6.0
Displays only some characteristics	5	6.8	2	11.8	-	-	-	-	7	6.0
No one solution for all individuals	2	2.7	-	-	2	15.4	1	7.7	5	4.3
Individual needs	3	4.1	1	5.9	-	-	1	7.7	5	4.3
Degree or severity of FAS	4	5.5	-	-	1	7.7	-	-	5	4.3
Time during pregnancy of consumption	1	1.4	3	17.6	-	-	-	-	4	3.4
Every child is unique	4	5.5	-	-	-	-	1	7.7	5	4.3
No response	22	30.1	4	23.5	1	7.7	3	23.1	30	25.9
Don't know	15	20.5	4	23.5	2	15.4	4	30.8	25	21.6
Question not asked	1	1.4	1	5.9	-	-	-	-	2	1.7

* Proportion of role group

Table H11

Responses to Question #10 by role

	Question #10 – Agree/Disagree: FAS is a condition that tends to subside with age (n=116)								Total	
	Role									
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Strongly Agree	-	-	-	-	-	-	-	-	-	-
Agree	1	1.4	3	17.6	-	-	1	7.7	5	4.3
Disagree	48	65.8	9	52.9	8	61.5	9	69.2	74	63.8
Strongly Disagree	23	31.5	4	23.5	5	38.5	3	23.1	35	30.2
Don't Know	1	1.4	-	-	-	-	-	-	1	0.9
No Response	-	-	1	5.9	-	-	-	-	1	0.9

* Proportion of role group

Table H12

Responses to Question #11 by role

Question #11 – Agree/Disagree: All children with FAS exhibit the same behavioural characteristics. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Strongly Agree	-	-	1	5.9	1	7.7	-	-	2	1.7
Agree	3	4.1	4	23.5	-	-	-	-	7	6.0
Disagree	47	64.4	10	58.8	7	53.8	10	76.9	74	63.8
Strongly Disagree	20	27.4	2	11.8	5	38.5	3	23.1	30	25.9
Don't Know	1	1.4	-	-	-	-	-	-	1	0.9
No Response	2	2.7	-	-	-	-	-	-	2	1.7

* Proportion of role group

Table H13

Responses to Question #12 by role

Question #12 – Agree/Disagree: FAS is a lifelong disability. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Strongly Agree	18	24.7	5	29.4	3	23.1	2	15.4	28	24.1
Agree	53	72.6	10	58.8	9	69.2	11	84.6	83	71.6
Disagree	2	2.7	1	5.9	-	-	-	-	3	2.6
Strongly Disagree	-	-	-	-	1	7.7	-	-	1	0.9
No Response	-	-	1	5.9	-	-	-	-	1	0.9

* Proportion of role group

Table H14

Responses to Question #13 by role

Question #13 – Agree/Disagree: FAS is a leading cause of mental retardation. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Strongly Agree	4	5.5	1	5.9	1	7.7	-	-	6	5.2
Agree	26	35.6	7	41.2	3	23.1	6	46.2	42	36.2
Disagree	35	47.9	8	47.1	6	46.2	4	30.8	53	45.7
Strongly Disagree	4	5.5	-	-	2	15.4	2	15.4	8	7.0
No Response	4	5.5	1	5.9	1	7.7	1	7.7	7	6.0

* Proportion of role group

Table H15

Responses to Question #14 by role

Question #14 – Agree/Disagree: FAS is limited to certain racial/ethnic groups. (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Strongly Agree	-	-	-	-	-	-	-	-	-	-
Agree	-	-	-	-	-	-	-	-	-	-
Disagree	40	54.8	12	70.6	5	38.5	7	53.8	64	55.2
Strongly Disagree	33	45.2	5	29.4	8	61.5	6	46.2	52	44.8
No Response	-	-	-	-	-	-	-	-	-	-

* Proportion of role group

Table H16

Responses to Question #15 by role

	Question #15 – Do students with FAS experience difficulty in the classroom? (n=116)								Total	
	Role									
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Yes	70	95.9	17	100.0	13	100.0	12	92.3	112	96.6
No	3	4.1	-	-	-	-	-	-	3	2.6
No response	-	-	-	-	-	-	1	7.7	1	0.9

* Proportion of role group

Table H17

Responses to Question #16 by role

Questions #16 – What types of difficulties do they experience? (n=113)**

	Role								Total	
	Classroom Teacher (n=70)**		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Attention difficulties	43	61.4	9	52.9	9	69.2	4	30.8	65	57.5
Social interaction difficulties	36	51.4	3	17.6	6	46.2	4	30.8	49	43.4
Learning difficulties	28	40.0	7	41.2	4	30.8	6	46.2	45	39.8
Memory deficiencies	28	40.0	8	47.1	4	30.8	5	38.5	45	39.8
Social Skills deficits	15	21.4	5	29.4	4	30.8	1	7.7	25	22.1
Language difficulties	18	25.7	1	5.9	4	30.8	1	7.7	24	21.2
Hyperactivity	15	21.4	4	23.5	3	23.1	1	7.7	23	20.4
Impulsivity	12	17.1	4	23.5	-	-	3	23.1	19	16.8
Motor difficulties (not specific)	13	18.6	2	11.8	1	7.7	1	7.7	17	15.0
Difficulty focusing on work	12	17.1	-	-	1	7.7	3	23.1	16	14.2

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Difficulty with cause and effect thinking and understanding	13	18.6	1	5.9	2	15.4	-	-	16	14.2
Peer problems	11	15.7	3	17.6	1	7.7	-	-	15	13.3
Behavioural difficulties	6	8.6	3	17.6	3	23.1	1	7.7	13	11.5
Physical challenges or disabilities	10	14.3	1	5.9	1	7.7	-	-	12	10.6
Reading difficulties	5	7.1	2	11.8	3	23.1	1	7.7	11	9.7
Math difficulties	5	7.1	1	5.9	3	23.1	1	7.7	10	8.8
Difficulty following directions	7	10.0	1	5.9	1	7.7	1	7.7	10	8.8
Comprehension and understanding difficulties	5	7.1	3	17.6	2	15.4	-	-	10	8.8
Fine motor problems	4	5.7	2	11.8	-	-	2	15.4	8	7.1
Processing problems	5	7.1	2	11.8	-	-	1	7.7	8	7.1
Growth deficiency	7	10.0	-	-	1	7.7	-	-	8	7.1
Sensitivity to stimuli	7	10.0	1	5.9	-	-	-	-	8	7.1
Sleep difficulties	6	8.6	1	5.9	-	-	-	-	7	6.2
Difficulty with concentration	4	5.7	1	5.9	-	-	1	7.7	6	5.3

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Bizarre thoughts	4	5.7	1	5.9	1	7.7	-	-	6	5.3
Difficulty sitting still	2	2.9	2	11.8	1	7.7	1	7.7	6	5.3
Gross motor problems	2	2.9	1	5.9	-	-	2	15.4	5	4.4
Distractibility problems	5	7.1	-	-	-	-	-	-	5	4.4
Academic difficulties (not specific academic areas were mentioned)	3	4.3	-	-	1	7.7	1	7.7	5	4.4
Cognitive problems (non-specific)	-	-	2	11.8	2	15.4	-	-	4	3.5
No response	3	4.3	-	-	1	7.7	2	15.4	6	5.3
Question not asked	3**	-	-	-	-	-	-	-	3	2.7

* Proportion of role group

** Classroom Teachers – three indicated that “no” to question #15 so therefore this question was not asked. Therefore, n (classroom teachers) = 70 for this question.

Table H18

Responses to Question #17a by role

Question #17a – What expectations do you have for students with FAS with regard to academic achievement? (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Modifications required	12	16.4	-	-	7	53.8	1	7.7	20	17.2
Based on individual needs of the student	13	17.8	-	-	2	15.4	2	15.4	17	14.7
Support required	7	9.6	3	17.6	2	15.4	4	30.8	16	13.8
Expect child to perform to best of his/her ability	7	9.6	1	5.9	4	30.8	4	30.8	16	13.8
Expect lower achievement	9	12.3	3	17.6	1	7.7	2	15.4	15	12.9
Academic difficulties	7	9.6	1	5.9	1	7.7	1	7.7	10	8.6
Expect student to achieve success	3	4.1	3	17.6	1	7.7	1	7.7	8	11.0
Set goals to achieve	3	4.1	2	11.8	-	-	-	-	5	4.3
Depends on the degree of FAS	2	2.7	1	5.9	2	15.4	-	-	5	4.3

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Teach/adapt to child's level	4	5.5	-	-	1	7.7	-	-	5	4.3
Base expectations on assessment of the student	3	4.1	1	5.9	1	7.7	-	-	5	4.3
No response	11	15.1	2	11.8	-	-	1	7.7	14	12.1

* Proportion of role group

Table H19

Responses to Question #17b by role

Question #17b – What expectations do you have for students with FAS with regard to behaviour? (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Based on individual needs of the student	13	17.8	-	-	1	7.7	2	15.4	18	15.5
Behavioural difficulties expected	9	12.3	2	11.8	4	30.8	1	7.7	16	13.8
Support required	3	4.1	1	5.9	1	7.7	3	23.1	8	11.0
Close supervision required	5	6.8	1	5.9	2	15.4	-	-	8	11.0

Table continued on next page...

Behaviour modification strategies and techniques would be required	3	4.1	3	17.6	1	7.7	-	-	7	6.0
Depends on the degree of FAS	4	5.5	2	11.8	1	7.7	-	-	7	6.0
Need for clear expectations	5	6.8	-	-	-	-	-	-	5	4.3
Hyperactivity	3	4.1	1	5.9	1	7.7	-	-	5	4.3
Impulsive behaviour	4	5.5	-	-	1	7.7	-	-	5	4.3
No response	14	19.2	3	17.6	1	7.7	3	23.1	21	18.1

* Proportion of role group

Only common responses were considered therefore some numbers do not add up such as the number of responses with the number of administrators.

Table H20

Responses to Question #17c by role

Question #17c – What expectations do you have for students with FAS with regard to behaviour? (n=116)

	Role								Total	
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Social difficulties expected	10	13.7	3	17.6	2	15.4	1	7.7	16	13.8
Based on individual needs of the student	12	16.4	-	-	1	7.7	2	15.4	15	12.9
Support required	4	5.5	1	5.9	2	15.4	2	15.4	9	7.8
Need to teach social skills	4	5.5	1	5.9	2	15.4	-	-	7	6.0
Need to provide social cues for the student	3	4.1	1	5.9	2	15.4	-	-	6	5.2
Depends on the degree of FAS	4	5.5	1	5.9	1	7.7	-	-	6	5.2
Expect the student to learn appropriate social skills	3	5.5	-	-	-	-	3	23.1	6	5.2
Poor social skills	4	4.1	-	-	1	7.7	-	-	5	4.3
Expect the student to get along with others	4	5.5	1	5.9	-	-	-	-	5	4.3

Table continued on next page...

Include student in social situations	3	4.1	1	5.9	-	-	1	7.7	5	4.3
Peer problems	4	5.5	-	-	-	-	1	7.7	5	4.3
No response	16	21.9	3	17.6	1	7.7	2	15.4	22	19.0

* Proportion of role group

Table H21

Responses to Question #18 by role

	Question #18 – What strategies or adaptations are generally helpful to students with FAS? (n=116)								Total	
	Role									
	Classroom Teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Individual help/one on one	20	27.4	1	5.9	4	30.8	2	15.4	27	23.3
Peer helper/buddy	11	15.1	2	11.8	2	15.4	2	15.4	17	14.7
Individualized programming - includes Individualized Program Plan (IPP) and Individualized Educational Plan (IEP)	7	9.6	3	17.6	2	15.4	3	23.1	15	12.9
Academic help	6	8.2	2	11.8	2	15.4	3	23.1	13	11.2
EPA support for the student	9	12.3	3	17.6	1	7.7	1	7.7	14	12.1
Break work into small chunks	6	8.2	1	5.9	3	23.1	1	7.7	11	9.5
Clear explanations of directions and work	8	11.0	-	-	1	7.7	1	7.7	10	8.6
Based on individual needs	8	11.0	-	-	-	-	1	7.7	9	7.8

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Modifications required	8	11.0	-	-	2	15.4	-	-	10	8.6
Needs lots of repetition	4	5.5	2	11.8	2	15.4	-	-	8	6.9
Need to be consistent	4	5.5	2	11.8	1	7.7	2	15.4	9	7.8
Resource help required	3	4.1	2	11.8	3	23.1	1	7.7	9	7.8
Structured environment	4	5.5	1	5.9	2	15.4	1	7.7	8	6.9
Tactile strategies and materials for learning	2	2.7	1	5.9	4	30.8	1	7.7	8	6.9
Seating plan considerations – preferential seating	5	6.8	1	5.9	1	7.7	-	-	7	6.0
Reduce the amount of work required	5	6.8	-	-	1	7.7	-	-	6	5.2
Need to establish routines	6	8.2	-	-	-	-	-	-	6	5.2
Having a quiet place for student to use if required	3	4.1	1	5.9	1	7.7	1	7.7	6	5.2
Have a behaviour plan in place	1	1.4	-	-	3	23.1	1	7.7	5	4.3
Teach social skills	3	4.1	1	5.9	-	-	1	7.7	5	4.3
Support required – no other specifics given	3	4.1	-	-	1	7.7	1	7.7	5	4.3

Table continued on next page...

Behaviour modification or strategies	1	1.4	2	11.8	1	7.7	1	7.7	5	4.3
Curriculum modifications	2	2.7	-	-	1	7.7	2	15.4	5	4.3
Rewards given where appropriate	3	4.1	-	-	1	7.7	1	7.7	5	4.3
Visual aids	1	1.4	2	11.8	2	15.4	-	-	5	4.3
Need to have consequences for behaviour	2	2.7	2	11.8	-	-	1	7.7	5	4.3
Modified program	2	2.7	3	17.6	-	-	-	-	5	4.3
Social stories	-	-	1	5.9	2	15.4	1	7.7	4	3.4
No experience with students with FAS	5	6.8	-	-	-	-	-	-	5	4.3
No response	6	8.2	1	5.9	-	-	1	7.7	8	6.9
Don't know	5	6.8	2	11.8	1	7.7	1	7.7	9	7.8

* Proportion of role group

Table H22

Responses to Question #19 by role

Question #19 – Are children with FAS at risk for developing other difficulties and disabilities outside of their cognitive and learning difficulties? (n=116)										
	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Yes	43	58.9	13	76.5	12	92.3	10	76.9	78	67.2
No	10	13.7	3	17.6	-	-	1	7.7	14	12.1
Don't Know	13	17.8	-	-	1	7.7	2	15.4	16	13.8
No response	7	9.6	1	5.9	-	-	-	-	8	6.9

* Proportion of role group

Table H23

Responses to Question #20 by role

Question #20 – What other types of difficulties can occur? (n=78)**

	Role								Total	
	Classroom Teachers (n=43)		EPA (n=13)		Resource Teacher (n=12)		Administrator (n=10)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Social interaction difficulties	21	48.8	5	38.5	6	50.0	4	40.0	36	46.2
Behavioural difficulties	1	2.3	2	15.4	4	33.3	2	20.0	9	11.5
Poor social skills	3	7.0	3	23.1	-	-	-	-	6	7.7
Criminal activities/involve ment	3	7.0	2	15.4	1	8.3	-	-	6	7.7
Self-esteem difficulties	5	11.6	-	-	1	8.3	1	10.0	7	9.0
Isolation	4	9.3	1	7.7	1	8.3	-	-	6	7.7
Learning difficulties	3	7.0	1	7.7	1	8.3	-	-	5	6.4
Physical difficulties and challenges	3	7.0	1	7.7	1	8.3	-	-	5	6.4
Peer problems	3	7.0	2	15.4	-	-	-	-	5	6.4
No response	23	53.5	4	30.8	2	16.7	5	50.0	34	43.6

* Based on the proportion of role group that answered “yes” to question #19 (n=78).

** Number of participants in role groups you answered “yes” to question #19 (n=78)

Table H24

Responses to Question #21 by role

	Question #21 – What are the main areas considered when identifying and diagnosing children who have FAS? (n=116)								Total	
	Role									
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Social interaction difficulties and poor social skills	10	13.7	4	23.5	2	15.4	2	15.4	18	15.5
Physical abnormalities, difficulties, challenges – non-specific, not facial	11	15.1	2	11.8	3	23.1	-	-	16	13.8
Facial characteristics	10	13.7	1	5.9	1	15.4	1	7.7	13	11.2
Learning difficulties	9	12.3	1	17.6	3	23.1	1	7.7	14	12.1
Behavioural difficulties	6	8.2	3	5.9	1	7.7	2	15.4	12	10.3
Cognitive problems	7	9.6	1	5.9	1	7.7	2	15.4	11	9.5
Background and history of child	7	9.6	1	5.9	2	15.4	1	7.7	11	9.5

Table continued on next page...

Family/home life and background	6	8.2	1	5.9	1	7.7	-	-	8	6.9
Growth deficiency	6	8.2	1	5.9	1	7.7	-	-	8	6.9
Attention difficulties	6	8.2	1	5.9	2	15.4	-	-	9	7.8
Involvement of medical professional – diagnosis done by medical professional	6	8.2	-	-	1	7.7	-	-	7	6.0
Reference to pregnancy	6	8.2	-	-	1	7.7	-	-	7	6.0
Alcohol consumed	5	6.8	1	5.9	-	-	-	-	6	5.2
Reference to mother – not classified when mention health of mother	6	8.2	-	-	-	-	-	-	6	5.2
Birth weight	4	5.5	1	5.9	1	7.7	-	-	6	5.2
Developmental issues/concerns	3	4.1	1	5.9	1	7.7	-	-	5	4.3
Health of mother during pregnancy	3	4.1	-	-	1	7.7	1	7.7	5	4.3

Table continued on next page...

Language difficulties	4	5.5	-	-	-	-	-	-	4	3.4
Prenatal	3	4.1	2	11.8	-	-	-	-	5	4.3
No response	18	24.7	2	11.8	1	7.7	5	38.5	24	20.7
Don't know	14	19.2	5	29.4	3	23.1	3	23.1	25	21.6

* Proportion of role group

Table H25

Responses to Question #22 by role

Question #22 – What would you do if you suspect a child in your classroom is potentially a student with FAS? (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Consult with the Program Planning Team/School Team	19	26.0	2	11.8	4	30.8	6	46.2	31	26.7
Consult School Psychologist	18	24.7	4	23.5	7	53.8	2	15.4	31	26.7
Contact the family with concerns	16	21.9	1	5.9	4	30.8	4	30.8	25	21.6
Tell administrator	20	27.4	5	29.4	2	15.4	-	-	27	23.3
Request a psychological assessment of student	14	19.2	3	17.6	3	23.1	5	38.5	25	21.6
Consult medical professional	11	15.1	1	5.9	3	23.1	1	7.7	16	13.8
Find information on FAS	8	11.0	1	5.9	2	15.4	2	15.4	13	11.2
Consult Resource teacher	9	12.3	2	11.8	1	7.7	-	-	12	10.3

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Implement modifications where required	7	9.6	2	11.8	-	-	1	7.7	10	8.6
Consult an expert	4	5.5	2	11.8	1	7.7	2	15.4	9	7.8
Consult with classroom teacher	2	2.7	6	35.3	-	-	1	7.7	9	7.8
Consider background and history of child	4	5.5	1	5.9	2	15.4	1	7.7	8	6.9
Review cumulative school record of the child	2	2.7	-	-	2	15.4	1	7.7	5	4.3
Observe the child carefully	5	6.8	1	5.9	-	-	-	-	6	5.2
Seek a diagnosis	2	2.7	1	5.9	-	-	2	15.4	5	4.3
Involve Developmental Clinic at the IWK Hospital	-	-	1	5.9	3	23.1	-	-	4	3.4
Document concerns, reasons, observations, etc.	3	4.1	1	5.9	-	-	-	-	4	3.4
Consult with the Learning Centre	4	5.5	1	5.9	-	-	-	-	5	4.3

* Proportion of role group

Table H26

Responses to Question #23 by role

Question #23 – How much of a concern is FAS in your school? (n=116)										
Level of Concern	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Major	1	1.4	3	17.8	-	-	1	7.7	4	3.4
Moderate	10	13.7	5	29.4	2	15.4	4	30.8	21	18.1
Minor	32	43.8	2	11.8	7	53.8	3	23.1	44	37.9
Not a concern	29	39.7	7	41.1	4	30.8	5	38.5	45	38.8
No response	1	1.4	-	-	-	-	-	-	1	0.9

* Proportion of role group

Table H27

Responses to Question #24 by role

Question #24 – How well prepared do you feel you are to educate students who may be diagnosed with FAS? (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Very well prepared	1	1.4	1	5.9	2	15.4	-	-	4	3.4
Well prepared	6	8.2	1	5.9	1	7.7	2	15.4	10	86.2
Somewhat prepared	25	34.2	6	35.3	7	53.8	6	46.2	44	37.9
Somewhat unprepared	18	24.7	6	35.3	-	-	2	15.4	26	22.4
Unprepared	23	31.5	3	17.6	3	23.8	3	23.1	32	27.6

* Proportion of role group

Table H28

Responses to Question #25 by role

Question #25 – Please indicate what, if anything, would help you be better prepared to teach students who may be diagnosed with FAS. (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Current research in the area	18	24.7	4	5.5	6	46.2	2	15.4	30	25.9
In-services	21	28.8	3	4.1	2	15.4	1	7.7	27	23.3
Strategies to use	13	17.8	3	4.1	4	30.8	3	23.1	23	19.8
Literature (books, journals, etc.)	12	16.4	3	4.1	1	7.7	2	15.4	18	15.5
Workshops	9	12.3	3	4.1	-	-	3	23.1	15	12.9
Professional Development	7	9.6	2	11.8	-	-	-	-	9	7.7
Training	5	6.8	-	-	-	-	3	23.1	8	6.9
How to help student	3	4.1	1	5.9	1	7.7	1	7.7	6	5.2
Support – not specific	3	4.1	1	5.9	1	7.7	-	-	5	4.3
Personal experience with a student with FAS	2	2.7	2	11.8	-	-	2	15.4	6	5.2
Increased awareness	4	5.5	-	-	-	-	1	7.7	5	4.3
Modifications that would be appropriate	1	1.4	1	5.9	2	15.4	1	7.7	5	4.3
No response	5	6.8	-	-	-	-	-	-	5	4.3

* Proportion of role group

Table H29

Responses to Question #26 by role

Question #26 – Have you ever knowingly taught a child who was alcohol-affected? (n=116)										
	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Yes	20	27.4	5	29.4	9	69.2	6	46.1	40	34.5
No	53	72.6	11	64.7	4	30.8	7	53.8	75	64.7
No response	-	-	1		-	-	-	-	1	0.9

* Proportion of role group

Table H30

Responses to Question #27 by role

Question #27 – If you had experience working with a student with FAS, what was it like for you? (n=40)**

	Role								Total	
	Classroom Teachers (n=20)		EPA (n=5)		Resource Teacher (n=9)		Administrator (n=6)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Challenging experience	4	20.0	1	20.0	2	22.2	-	-	7	17.5
Noted problems with social interactions	4	20.0	-	-	2	22.2	-	-	6	15.0
Frustrating for the educator	4	20.0	1	20.0	-	-	1	16.7	6	15.0
Difficult	5	25.0	-	-	-	-	-	-	5	12.5
Rewarding	-	-	2	40.0	1	11.1	-	-	3	7.5
Noted behavioural difficulties	3	15.0	-	-	-	-	1	16.7	4	10.0
Learning experience	1	5.0	-	-	1	11.1	-	-	2	5.0
Enjoyed the experience	2	10.0	-	-	1	11.1	-	-	3	7.5
No response	-	-	1	20.0	1	11.1	2	33.3	4	10.0
Don't know	-	-	1	20.0	-	-	-	-	1	2.5
Question not asked	53		12		4		7		76	

* Proportion of role group

** Percentages are based on number of respondents who responded "yes" question #26 indicating that they had experience with students with FAS.

Table H31

Responses to Question #29a by role

Question #29a – Teaching style adaptations used by educators when working with students with FAS (n=38)**

	Role								Total	
	Classroom Teachers (n=17)		EPA (n=5)		Resource Teacher (n=9)		Administrator (n=7)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Individual help/one on one	10	27.0	2	40.0	2	22.2	2	28.6	16	42.1
Peer helpers/buddy system	3	17.6	-	-	-	-	2	28.6	5	13.2
Visual aids	1	5.9	-	-	4	44.4	-	-	5	13.2
Individualized programming - includes Individualized Program Plan (IPP) and Individualized Educational Plan (IEP)	2	11.8	1	20.0	-	-	2	28.6	5	13.2
Tactile strategies and materials for learning	2	11.8	-	-	3	33.3	-	-	5	13.2
Very clear explanations of directions and work	3	17.6	-	-	1	11.1	-	-	4	10.5
Lower expectations for achievement	3	17.6	1	20.0	-	-	-	-	4	10.5

Table continued on next page...

Be sure to have the child's attention before giving instruction	3	17.6	-	-	-	-	1	14.3	4	10.5
Modifications made – none specific	2	11.8	1	20.0	1	11.1	-	-	4	10.5
Based on individual needs	-	-	-	-	1	11.1	-	-	1	2.6
Break work into smaller, manageable chunks	1	5.9	-	-	1	11.1	1	14.3	3	7.9
EPA support in classroom for child	2	11.8	1	20.0	-	-	-	-	3	7.9
Have child repeat back what was said to them (e.g., instructions)	2	11.8	-	-	1	11.1	-	-	3	7.9
Use frequent repetitions for directions, instructions and teaching concepts	1	5.9	-	-	2	22.2	-	-	3	7.9
Close supervision	1	5.9	1	20.0	-	-	1	14.3	3	7.9
Have clear expectations for work	1	5.9	-	-	2	22.2	-	-	3	7.9
No response	2	11.8	1	20.0	2	22.2	1	14.3	6	15.8
Question not asked	56		12		4		6		78	

* Proportion of role group

** Percentages are based on number of respondents who responded "yes" question #28 indicating that adaptations were used with the child or children with FAS.

Table H32

Responses to Question #29b by role

Question #29b – Classroom adaptations used by educators when working with students with FAS (n=38)**

	Role								Total	
	Classroom Teachers (n=17)		EPA (n=5)		Resource Teacher (n=9)		Administrator (n=7)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Seating plan considerations – preferential seating	11	64.7	3	60.0	7	77.8	3	42.9	24	63.2
Peer helpers/buddy system	3	17.6	1	20.0	2	22.2	1	14.3	7	18.4
Having a quiet place for student to use if required	2	11.8	3	60.0	-	-	1	14.3	6	15.8
Visual aids	2	11.8	-	-	-	-	-	-	2	5.3
EPA Support	1	5.9	1	20.0	1	11.1	-	-	3	7.9
Providing lots of space for student	1	5.9	1	20.0	-	-	1	14.3	3	7.9
Reduce distractions	1	5.9	1	20.0	1	11.1	-	-	3	7.9
No response	4	23.5	1	20.0	2	22.2	1	14.3	8	21.1
Question not asked	56		12		4		6		78	

* Proportion of role group

** Percentages are based on number of respondents who responded “yes” question #28 indicating that adaptations were used with the child or children with FAS.

Table H33

Responses to Question #29c by role

Question #29c – Behavioural management strategies used by educators when working with students with FAS (n=38)**

	Role								Total	
	Classroom Teachers (n=17)		EPA (n=5)		Resource Teacher (n=9)		Administrator (n=7)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Rewards	10	58.8	1	20.0	3	33.3	-	-	14	36.8
Behavioural modification techniques and strategies – specifics not mentioned	1	5.9	-	-	2	22.2	2	28.6	5	13.2
Positive reinforcement and praise	3	17.6	-	-	1	11.1	2	28.6	6	15.8
Important to be consistent	1	5.9	3	60.0	1	11.1	1	14.3	6	15.8
Need clear expectations	1	5.9	1	20.0	2	22.2	1	14.3	5	13.2
Peer helpers/buddy system	1	5.9	-	-	-	-	1	14.3	2	5.3
Frequent contact with the family	3	17.6	-	-	-	-	-	-	3	7.9
Behavioural checklists	1	5.9	-	-	1	11.1	1	14.3	3	7.9

Table continued on next page...

Having child repeat and rephrase instructions and expectations	1	5.9	-	-	2	22.2	-	-	3	7.9
Role play activities	-	-	1	20.0	-	-	1	14.3	2	5.3
Encourage good self-esteem	2	11.8	-	-	-	-	1	14.3	3	7.9
Close supervision	-	-	1	20.0	-	-	2	28.6	3	7.9
Time outs used	2	11.8	-	-	-	-	1	14.3	3	7.9
No response	5	29.4	1	20.0	2	22.2	-	-	8	21.2
Question not asked	56		12		4		6		78	

* Proportion of role group

** Percentages are based on number of respondents who responded "yes" question #28 indicating that adaptations were used with the child or children with FAS.

Table H34

Responses to Question #30 by role

Question #30 - Important factors, identified by educators, for schools to consider when working with students with FAS and their families. (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Support needed – non specific	13	17.8	3	17.6	4	30.8	2	15.4	22	19.0
Training for those working with students with FAS	14	19.2	3	17.6	2	15.4	2	15.4	21	18.1
Contact with family	10	13.7	4	23.5	3	23.1	2	15.4	19	16.4
Support for the family at home in order to help them support their child	10	13.7	3	17.6	1	7.7	2	15.4	16	13.8
Modifications that will be effective	10	13.7	-	-	3	23.1	2	15.4	15	12.9
Effective strategies	6	8.2	-	-	4	30.8	2	15.4	12	10.3
EPA support available	8	11.0	3	17.6	-	-	2	15.4	13	11.2
Work as a team	6	8.2	2	11.8	1	7.7	2	15.4	11	9.5
Need resources	9	12.3	1	5.9	-	-	1	7.7	11	9.5

Table continued on next page...

Support and training for teachers	6	8.2	1	5.9	2	15.4	2	15.4	11	9.5
Understanding and compassion	4	5.5	1	5.9	1	7.7	3	23.1	9	7.8
Knowledge of educators about FAS	4	5.5	-	-	2	15.4	3	23.1	9	7.8
Focus on individual needs	8	11.0	-	-	-	-	2	15.4	10	8.6
Seek a diagnosis	5	6.8	1	5.9	1	7.7	2	15.4	9	7.8
Need to be aware of FAS and associated features	4	5.5	1	5.9	1	7.7	3	23.1	9	7.8
Teach social skills	5	6.8	3	17.6	-	-	-	-	8	6.9
Utilize outside agencies for support	7	9.6	-	-	-	-	-	-	7	6.0
Work with and support parents	4	5.5	1	5.9	2	15.4	-	-	7	6.0
Academic help required	2	2.7	2	11.8	1	7.7	2	15.4	7	6.0
Have sufficient resource help in the schools	5	6.8	2	11.8	-	-	-	-	7	6.0
Be informed that a child has FAS	4	5.5	1	5.9	1	7.7	-	-	6	5.2
Have access to current research	4	5.5	-	-	1	7.7	1	7.7	6	5.2
Support groups available	3	4.1	-	-	-	-	1	7.7	4	3.4

Table continued on next page...

Input and information from medical professionals	3	4.1	-	-	1	7.7	1	7.7	5	4.3
Counselling available for student and/or family as required	3	4.1	-	-	1	7.7	-	-	4	3.4
Work with the child at their level/to the best of their ability	3	4.1	1	5.9	-	-	-	-	4	3.4
No response	8	11.0	2	11.8	1	7.7	-	-	11	9.5

* Proportion of role group

Table H35

Responses to Question #31 by role

Question #31 - What is required to have the things indicated in the previous question put in place? What needs to be done? (n=116)

	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Need more money	20	27.4	3	17.6	1	7.7	3	23.1	27	37.0
Training for those working with students with FAS	8	11.0	2	11.8	2	15.4	1	7.7	13	11.2
In-services on topic	9	12.3	2	11.8	1	7.7	3	23.1	15	12.9
Support services	8	11.0	3	17.6	1	7.7	2	15.4	14	12.1
Resources – non specific	9	12.3	1	5.9	1	7.7	2	15.4	13	11.2
School Board support for programs and services	9	12.3	-	-	1	7.7	-	-	10	8.6
Have access to current research	6	8.2	2	11.8	1	7.7	1	7.7	10	8.6
Support – non specific	3	4.1	1	5.9	2	15.4	1	7.7	7	6.0

Table continued on next page...

EPA support for students	5	6.8	3	17.6	-	-	-	-	8	6.9
Good communication between all parties involved	4	5.5	2	11.8	1	7.7	-	-	7	6.0
Support from outside agencies	5	6.8	1	5.9	1	7.7	-	-	7	6.0
Specialists in the area to support educators and families	7	9.6	-	-	-	-	-	-	7	6.0
Support and training for teachers	2	2.7	2	11.8	1	7.7	1	7.7	6	5.2
Work with and support parents	4	5.5	2	11.8	-	-	-	-	6	5.2
Support for home	4	5.5	2	11.8	-	-	-	-	6	5.2
Work as a team	3	4.1	1	5.9	-	-	1	7.7	5	4.3
Increased awareness regarding FAS	3	4.1	2	11.8	-	-	-	-	5	4.3

Table continued on next page...

Focus on individual need	2	2.7	1	5.9	-	-	1	7.7	4	3.4
Administrators need to support efforts (e.g., training, money, time, etc)	5	6.8	-	-	-	-	-	-	5	4.3
Experts involved to help educators learn and develop plans to help the students	4	5.5	-	-	-	-	1	7.7	5	4.3
Contact with the family	4	5.5	1	5.9	-	-	-	-	5	4.3
Leadership to take on the issue to help the students	4	5.5	-	-	-	-	1	7.7	5	4.3
No response	10	13.7	2	11.8	5	38.5	2	15.4	19	16.8
Don't know	1	1.4	1	5.9	-	-	-	-	2	1.7

* Proportion of role group

Table H36

Responses to Question #32a by role

Question #32a – Are the things you mentioned in question #30 being done now? (n=116)										
	Role								Total	
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Yes	12	16.4	3	17.6	1	7.7	3	23.1	19	16.4
No	21	28.8	8	47.1	3	23.1	8	61.5	40	34.4
Some	14	19.2	1	5.9	5	38.5	-	-	20	17.2
Don't know	8	11.0	3	17.6	-	-	1	7.7	12	10.3
No response	18	24.7	2	11.8	4	30.8	1	7.7	25	21.6

* Proportion of role group

Table H37

Responses to Question #32b by role

	Question #32b – Why are things not being done? (n=97)								Total	
	Role									
	Classroom Teachers (n=61)		EPA (n=14)		Resource Teacher (n=12)		Administrator (n=10)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Need more money	9	14.8	2	14.3	2	16.7	2	20.0	15	15.5
Few cases of FAS in the school	10	16.4	1	7.1	-	-	2	20.0	13	13.4
Lack of knowledge of FAS	5	8.2	2	14.3	1	8.3	-	-	8	8.2
Lack resources	5	8.2	1	7.1	-	-	1	10.0	7	7.2
Low priority in the school	5	8.2	-	-	1	8.3	-	-	6	6.2
Stigma attached to FAS	3	4.9	1	7.1	-	-	-	-	4	4.1
Lack of time available to learn about and plan for student	3	4.9	-	-	-	-	1	10.0	4	4.1
Don't know	-	-	1	7.1	-	-	-	-	1	1.0
Question not asked	12		3		1		3		19	

* Proportion of role group

**Percentages were adjusted since participants who responded “yes” to the first part of question #32 were not asked the second half of the question.

Table H38

Responses to Question #34 by role

	Question #34 – Type of training taken by educators with regard to FAS (n=9)**								Total	
	Role									
	Classroom Teachers (n=6)		EPA (n=2)		Resource Teacher (n=1)		Administrator (n=0)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
During training for current role	4	66.7	-	-	1	100	-	-	5	55.6
Professional Development sponsored by your school or division	-	-	1	50.0	-	-	-	-	1	11.1
Workshops, seminars, etc. other than professional development at school	3	50.0	1	50.0	1	100	-	-	5	55.6
Other training	1	16.7	2	100	-	-	-	-	3	33.3

* Proportion of role group

**Percentages were adjusted since only the participants who responded “yes” to question #33 were not asked this question.

Table H39

Responses to Question #35 by role

	Question #35 – From what sources have you received information regarding FAS? (n=116)								Total	
	Role									
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Books, journals, etc.	37	50.7	7	41.2	8	61.5	5	38.5	57	49.1
Television	38	52.1	5	29.4	3	23.1	5	38.5	51	44.0
Colleagues	30	41.2	2	11.8	5	38.5	7	53.8	44	37.9
Support Staff	18	24.7	5	29.4	3	23.1	2	15.4	28	24.1
Internet	12	16.4	5	29.4	3	23.1	4	30.8	24	20.7
Workshops, seminars, conferences	9	12.3	5	29.4	4	30.8	1	7.7	19	16.4
Association/ Organization newsletters	7	9.6	1	5.9	-	-	1	7.7	9	7.8
Department of Education publications	7	9.6	1	5.9	-	-	-	-	8	6.9

Table continued on next page...

In-School Professional Development	2	2.7	2	11.8	-	-	3	23.1	7	6.0
Other: - Part of a course, professor, contact with parents and family, personal experience, teacher, school psychologist, medical professional, video	11	15.1	4	23.5	4	30.8	1	7.7	20	17.2

* Proportion of role group

**Percentages were adjusted since participants who responded "yes" to the first part of question #32 were not asked the second half of the question.

Table H40

Responses to Question #36 by role

	Question #36 – What source(s) of information have been the most helpful? (n=116)								Total	
	Role									
	Classroom Teachers (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Literature (books, journals, etc.)	18	24.7	4	23.5	5	38.5	1	7.7	28	24.1
Colleagues	12	16.4	1	5.9	2	15.4	4	30.8	19	16.4
Television	7	9.6	1	5.9	1	7.7	2	15.4	11	9.5
Support Staff	7	9.6	2	11.8	1	7.7	1	7.7	11	9.5
Workshop	5	6.8	5	29.4	-	-	-	-	10	8.6
Internet	2	2.7	2	11.8	-	-	-	-	4	3.4
Part of a course	2	2.7	1	5.9	2	15.4	-	-	5	4.3
Personal experience	3	4.1	1	5.9	-	-	-	-	4	3.4
Conference	3	4.1	-	-	-	-	-	-	3	2.6
Newsletter	-	-	1	5.9	-	-	1	7.7	2	1.7
Parent	-	-	-	-	-	-	1	7.7	1	0.9
School Psychologist	-	-	-	-	2	15.4	-	-	2	1.7
In-service	-	-	1	5.9	-	-	-	-	1	0.9
Video†	-	-	-	-	-	-	-	-	-	-
Don't know	2	2.7	-	-	-	-	1	7.7	3	2.6
No response	20	27.4	6	35.3	4	30.8	6	46.2	36	31.0

* Proportion of role group

† This was indicated as a helpful source in the overall sample, however when limited sample to those participants occupying single roles this response was not found.

Table H41

Responses to Question #37 by role

Question #37 – Would you be interested in more information regarding FAS? (n=116)										
	Role								Total	
	Classroom teacher (n=73)		EPA (n=17)		Resource Teacher (n=13)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Yes	58	79.5	15	88.2	12	92.3	13	100	98	84.5
No	11	15.1	2	11.8	1	7.7	-	-	14	12.1
No response	4	5.5	-	-	-	-	-	-	4	3.4

* Proportion of role group

Table H42

Responses to Question #38 by role

	Question #38 – What information would be helpful? (n=98)**									
	Role								Total	
	Classroom Teachers (n=58)		EPA (n=15)		Resource Teacher (n=12)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*	n	%*
Information on how to identify FAS	21	36.2	-	-	2	16.7	4	30.8	27	27.6
Strategies to use with students with FAS	19	32.8	2	13.3	2	16.7	3	23.1	26	26.5
Any and all information – no specifics given	14	24.1	6	40.0	2	16.7	2	15.4	24	24.5
Current research on FAS	13	22.4	1	6.7	2	16.7	6	46.2	22	22.4
Literature on FAS	5	8.6	2	13.3	2	16.7	-	-	9	9.2
How to help students with FAS	5	8.6	1	6.7	-	-	2	15.4	8	8.2
Modifications for students with FAS	4	6.9	1	6.7	2	16.7	-	-	7	7.1

Table continued on next page...

Workshops on FAS	5	8.6	1	6.7	1	8.3	-	-	7	7.1
Professional Development	3	5.2	-	-	1	8.3	1	7.7	5	5.1
Information on diagnosis	2	3.4	-	-	1	8.3	1	7.7	4	4.1
Behaviour modification techniques	3	5.2	1	6.7	-	-	-	-	4	4.1
No response	8	13.8	3	20.0	3	25.0	1	7.7	15	15.3

* Proportion of role group

**Percentages are based on number of participants in role groups who indicated they would be interested in more information on FAS (question #37).

Table H43

Responses to Question #39 by role

Question #39 – What method of presentation do you prefer for getting information?
(n=98)**

	Role								Total	
	Classroom Teachers (n=58)		EPA (n=15)		Resource Teacher (n=12)		Administrator (n=13)		n	%*
	n	%*	n	%*	n	%*	n	%*		
Workshops, seminars, conferences	50	86.2	14	9.3	9	75.0	11	8.5	84	85.7
Printed material	35	60.3	8	53.3	5	41.7	6	46.2	54	55.1
Multimedia	19	32.8	3	20.0	2	16.7	5	38.5	29	29.6
Other	11	19.0	1	6.7	-	-	1	7.7	13	13.3

* Proportion of role group

** Percentages are based on the number of participants in role groups who indicated they would be interested in more information on FAS (question #37).

Appendix I

Comments and responses of interest from participants

What educators feel they need to better help these students...
<p>We need info! Info to handout to all staff and parents, so that this "well kept secret" is out in the open and considered a serious problem. Then perhaps we will get the support these children need via funding. If there's no info, there's no \$.</p>
<p>Demonstrate compassion and a willingness to do anything in your power to assist this child</p>
<p>It's like taking a building and building from the top down. Prepared to teach - yes. Prepared to get compliance from everyone involved to put the effective I.P.P. in place - it's hard. We need resources.</p>
<p>No one goes to a restaurant and tells the cook how to cook a meal. You don't fly and tell the pilot how to fly the plane. But teachers are being overridden by parents and a system that doesn't allow teachers to follow through on what they think is best as professionals. If a parent knows their kid and can provide helpful information, we should be open to that. But we may see things the parent doesn't. We should have a say on how to act accordingly. We need the system that surrounds us to back us up. This may include, children's aid, bylaws, MPs ... whatever. The big picture here is it's complicated. There are no easy answers.</p>
<p>There is no political will to do so. FAS is seen as largely a 'native Canadian issue' and rates little attention, except for the negative stories. Our country, particularly our gov't, indicates by its actions, it has little regard for issues re our First Nations Peoples (housing, medical care, sanitation, employment etc.)</p>
<p>I'd have to be convinced of the need which I am not now.</p>

FAS is not really considered an issue in the schools...

FAS is not commonly talked about so not enough is know about it.

I'd like more info! It seems that FAS is a well kept secret. We have tons of info on every other disorder - but next to nothing on FAS.

Stigma attached to FAS...

How do you approach this problem in a high socio-economic (white) area where the subject is taboo and how do you even begin to bring it up to parents with the stigma attached.

The student I am referring to continues to have social problems, and academic difficulties in my school. Most staff know FAS could be a contributing factor, but it is not openly discussed and the principal does not want this in any form whatsoever. I feel the student is not getting all the help she could be provided for because of this wall of silence, but how can you prove it is FAS without making mother so defensive and probably harming the process of help for this student. My real concern is when she is in J.H. and the opportunities she will have herself to indulge in drugs, drinking, etc as she has low impulse control and her job at home is to bring beer to her dad nightly from the fridge.

Difficulty dealing with families...

Often b/c of the system FAS is never mentioned especially to parents who would react to "taking" the blame for the child's problem. - that said we want solutions not finger pointing.

It [difficulties associated with prenatal alcohol exposure] is addressed in the Resource Programme and Social Skills Programme but FAS has never been brought up with the family although it was known mother drinks, drank in pregnancy and student shows some physical (facial) abnormalities.

Reactions to participation in this study...

This was a great eye opener for me. I work in a school where there seems to be few FAS children. Often we are not aware of the difficulties some children face unless we deal with that type of child. It made me think of how little I know about this topic and realize as an educator we should be on the outlook for children with various syndromes. We tend to focus on those syndromes that children in our class might have. Often we neglect to learn more about things that do not directly affect us. If we had more information about FAS we would be better equipped to recognize those symptoms in children who may be in a class.

I have never had a child with FAS or I should say I am not aware of having taught such a child. This activity is certainly bringing awareness of FAS children and I am questioning myself about certain behaviors I see or have seen in children.