

WORKING WITH STUDENTS WITH FASD AND THEIR FAMILIES

Working With Students with FASD and Their Families:

A Meta-Synthesis

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Abstract

Although the definition of Fetal Alcohol Spectrum Disorder has changed over the years, the amount of Alaska Native children born with prenatal exposure to alcohol remains on the rise. Students diagnosed and undiagnosed remain in classrooms all over Alaska. Teachers struggle to understand and help meet these student's needs to help them become successful. Connecting and bridging the gap between schools and home remains a challenge. This meta-synthesis investigates how teachers can best help students learn and effective ways to work with families of students with FASD effectively to make the student successful in school and in life.

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1. Introduction

1.1 Background

Alaska has one of the highest rates of Fetal Alcohol Syndrome Disorder in the United States. Approximately 126 infants are born each year in Alaska who have been affected by maternal alcohol use during pregnancy. Specifically, Alaska Natives, have a FASD rate of 4.8 per 1,000 live births.

Currently FASD is not identified as a specific category of disability; instead, it is a medical diagnosis. Eligibility for therapeutic services requires meeting federal, state, or district criteria, which involves the use of standardized testing of functioning and functionality. Standardized testing often includes IQ testing as a baseline, and most individuals with FASD have average or above average IQ scores. Unfortunately, their learning, developmental and social functioning is often far below their intelligence. Standard testing for cognitive, motor, language and emotional functioning often do not “catch” the functioning problems associated with the type of brain damage resulting from prenatal alcohol exposure. Many health care, social, and educators are not familiar with the broad range of effects associated with FASD and so, do not understand the implications an FASD diagnosis may have for the individual’s development.

The question often comes up to whether or not we should diagnose an individual with FASD or does that just label a child unnecessarily? There is a difference between labeling and diagnosing for sure. The state believes that an accurate diagnosis of all medical conditions is critical to understanding the condition, the root cause of the

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condition, what type of services, interventions, or treatments are needed to improve outcomes and to increase our knowledge and ability to develop strategies for prevention. I agree with most of this. The problem is that there are currently not a lot of services provided for these students labeled or unlabeled with FASD. So the label does very little for providing services. The label can however put a tremendous amount of guilt on the parent of that child and possibly drive a wedge between home and school. Building strong relationships between school and home can make a difference in the success of a student with FASD. Family involvement in the educational progress of their children with FASD is indeed a worthy endeavor that is worth the work that has evidence of many potential benefits to offer children.

Unfortunately teachers entering the teaching field come in with little experience in diversity. In Alaska, especially in rural Alaska, teachers are often expected to teach multiple grade levels, multiple content areas, often with many disabilities including FASD diagnosed and undiagnosed. This poses a huge problem for teachers all over Alaska. Limited training exists on FASD, let alone the most effective ways to teach students with FASD.

1.2 Author's Beliefs and Experiences

Ten years ago, I accepted the offer to become a teacher in rural Alaska. Back then, I had never heard of Fetal Alcohol Syndrome and Fetal Alcohol Effects nor had I had the experience of working with a child that has it. Today, I remain in the very same village teaching many students with FAS and FAE As with most rural villages in Alaska comes the daunting task of teaching five different grade levels, ten different content areas

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without a special education teacher on site. We receive monthly visit, weather permitting, for a day and a half. This has proved to be a great challenge. Aside from a state mandated training video and a FAS pamphlet, I began my journey struggling to teach these students blindly.

Through the years I've witnessed these children struggle academically. FASD is not recognized as a category of a disability by the Individuals with Disabilities Education Act (1997). It is very prevalent among many native children in rural Alaska. These children are not automatically eligible for special education services. Some qualify for special education services on the basis of associated disorders. FASD students in most areas, end up in the regular education classroom with the regular education teacher being primarily responsible for their education experience. That means they receive their entire instructional day from one teacher that is simultaneously teaching four other grades ten content areas. At times, this can feel like an overwhelming experience.

Many of the students I currently teach have FAE. Most students have not been officially diagnosed. Some parents struggle with the label that comes along with the diagnosis. In some cases, mothers are ashamed because of the choice they made to drink while their children were developing in the wombs. Through the ten years I have lived in this village, I've learned each and every students' story, their history, and often times the sad truth of the life they were given before they were born.

Regardless of their stories, these children show up day after day in my classroom ready to learn. Physically they are present but many tasks and concepts with learning prove to be a great challenge. I have had students ask me why they are not as smart as

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their peers or why everything is so hard for them to learn. Some children do not even know that their mothers chose to drink alcohol while they were inside their mother's womb when their bodies and organs, including the brain were developing.

There are days when I ask myself if I am doing everything I can to help this child learn best. Sometimes I feel like I'm not doing enough because I don't know what to do or which way is best. Being alone working with these same children has led me down the special education path because I remain these children's only special education teacher they will ever know.

After ten years of working in this village, this subject is very near and dear to my heart. I have watched many of them struggle through school and grow into young adults. Some of them struggle to take state testing six or seven times before they can successfully pass them to receive a state-issued diploma. Many of them end up on an alternate plan that gets them a Certificate of Completion of high school because they are not able to pass these high-stakes mandated testing. I've also seen many of them struggle after leaving high school become successful members of society. There has got to be more we can do as educators to help these students succeed.

My experiences teaching students with FAS in a rural village has made me hope to find some answers these questions in my research on my meta-synthesis:

1. What does the current research show to be the most effective strategies for teaching students with Fetal Alcohol Syndrome/Fetal Alcohol Effects?
2. How do students with Fetal Alcohol Syndrome/Fetal Alcohol Effects learn best?

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3. How do we best help these students transition into the real world after high school and become successful members of society?

1.3 Purpose of this meta-synthesis

This meta-synthesis, which focused on students with Fetal Alcohol Spectrum Disorder has several purposes. The first purpose is to review journal articles related to effective ways for teachers to instruct and help students with FASD learn and be successful students in the classroom. A second purpose was to review journal articles related to building relationships with the families of these students. Looking for effective ways to help support families in working with their children together as a team in support of the child. The third purpose was to locate articles that help me as an educator help support students with FASD build determination and resiliency. The last and final purpose of this meta-synthesis was to identify themes that emerged in these articles and connect them to my own experiences as a rural educator in Alaska.

2. Methods

2.1. Selection Criteria

The 27 journal articles included in this meta-synthesis met the following criteria:

1. The articles explored the effects fetal alcohol exposure has on learning.
2. The articles explored the positive effects of teachers building relationships with families with students' diagnosed with FASD on the student.

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3. The articles explored effective instructional techniques that teachers can use when teaching students diagnosed with FASD.
4. The articles were published in peer-reviewed journals.
5. The articles were published between 2006 and 2012.

2.2 Search procedures

Database searches and ancestral searches were conducted to locate articles for this meta-synthesis.

2.2.1 Database searches

In fall of 2012, I conducted systematic searches of two databases that index articles related to teaching students diagnosed with FASD, effects FASD has on learning in the classroom, and working and building relationships with families of students diagnosed with FASD. These two databases included: Education Resources Information Center (ERIC, Ebsost) and Education Journals (ProQuest). I used the following search term combinations to conduct Boolean searches of each database:

1. (“teaching students with Fetal Alcohol Syndrome Disorder”)
2. (“successful teaching strategies for students with Fetal Alcohol Spectrum Disorder”)
3. (“building teacher-family relationships”)
4. (“learning with Fetal Alcohol Spectrum Disorder”)
5. (“working with families with students with Fetal Alcohol Spectrum Disorder”)

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6. (“effects of Fetal Alcohol Spectrum Disorder on learning”)

The various database searches yielded a total of 28 articles that met my selection criteria (Astley, Jirikowic, & Olson, 2012; Astley, Olswang, & Svensson, 2010; Barker, Brenna, Knorr, & Kulyk, 2011; Beck, Gelo, Olson, & Oti, 2009; Bibber, Rutman, 2009; Blackburn, Carpenter, & Eggerton, 2010; Boschma-Wynn, Brems, Dewane, Edwards, Robinson, N.D.; Buckley, Gossage; Hoyme, Kalberg, Manning, May, Robinson, 2009; Carpenter, 2011; Coggins, Olswang, Timler, 2007; Crichton, Edmonds, 2008; Duquette, Fullarton, Hagglund, & Stodel, 2006; Dybdahl & Ryan 2009; Ferguson & Ryan 2006; Gerteisen, 2008; Goodlett, Hannigan, Kelly, 2009; Green, 2007; Green, Mihic, Munoz, Nikkel, Rasmussen, Reynolds, Stade, 2008; Hunt, Ratcliff, 2009; Kersey, Masterson, N.D., Lewis, May, & Shipman, 2012; Norris, 2010; O’Connor, Paley, 2009; Plane, Wilton, 2006; Rogers-Adkinson, Stuart, 2007; Ryan, 2006

2.3 Coding Procedures

I developed a coding form to categorize the information presented in each of the 27 articles. This coding form was based on: (a) publication type; (b) research design; (c) participants; (d) data sources; and (e) finding of the studies.

2.3.1 Publication Type

Each journal article was evaluated and classified according to publication type (e.g., research study, descriptive article, guide, descriptive work, review of the literature).

Research studies use systematic methods to gather and/or analyze quantitative and/or qualitative data. *Descriptive articles* describe experiences or phenomena but do not

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employ systematic methods to gather and analyze data. *Guides* recommend specific strategies and/or explain how practitioners might implement a particular agenda. *Reviews of literature* analyze the published literature on a topic through summary, classification, and comparison.

2.3.2 Research Design

Each empirical study was further classified by research design (i.e., quantitative, qualitative, mixed methods research). *Quantitative* research uses quantifiable data to convey information. *Qualitative* research utilizes methods that seek to discern the quality explaining the how and why of a phenomenon. Mixed methods research combines quantitative and qualitative methods to explain information within a study.

2.3.3 Participants, data sources, and findings

I identified the participants in each of the studies (e.g., students with FASD, teachers of students with FASD, parents of students with FASD). I also identified the data sources that were analyzed for each study (e.g., observations, interviews, surveys). Finally, I summarized the findings of each study (Table 2).

2.4 Data analysis

I used a modified version of the Stevick-Colaizzi-Keen method previously employed by Duke and Ward (2009) to analyze the 27 articles included in this meta-synthesis. I first identified significant statements within each article. For the purpose of this meta-synthesis, I defined significant statements that addressed issues related to: (a) successful teaching strategies for students with FASD; (b) more public

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awareness can cause prevention; (c) building student/family relationships; (d) behaviors of students

With FASD; (e) labeling of FASD; (f) teacher training/preparedness. I then developed a list of non-repetitive, non-overlapping (verbatim) significant statements with (paraphrased) formulated meanings. These (paraphrased) formulated meanings represented my interpretation of each significant statement. Finally, I grouped the formulated meanings from all 27 articles into theme clusters (or emergent themes). These emergent themes represented the essence (or content of the entire body of literature (Table 3).

3. Results

3.1 Publication Type

I located 27 articles that met my selection criteria. The publication type of each article is located in Table 1. Nineteen of the 27 articles (70%) included in this meta synthesis were research studies (Astley, Jirikowic, Olson, 2012; Astley, Olswang, Svensson, 2010; Barker, Brenna, Knorr, Kulyk, 2011; Bibber, Rutman, 2009; Boschma-Wynn, Brems, Dewane, Edwards, Robinson; Coggins, Olswang, Timler, 2007; Crichton, Edmonds, 2008; Duquette, Fullarton, Hagglund, Stodel, 2006; Dybdahl & Ryan 2009; Ferguson & Ryan 2006; Green, Mihic, Munoz, Nikkel, Rasmussen, Reynolds, Stade, 2008; Lewis, May, Shipman, 2012; Norris, 2010; Ryan, 2006). Four of the articles (15%) were guides (Blackburn, Carpenter, Eggerton, 2010; Carpenter, 2011; Hunt, Ratcliff, 2009; Kersey, Masterson). Six of the articles (22%) were descriptive articles

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(Beck, Gelo, Olson, Oti, 2009; Duquette, Fullarton, Hagglund, Stodel, 2006; Gerteisen, 2008; O'Connor, Paley, 2009; Plane, Wilton, 2006). Four of the articles (15%) were a literature reviews (Buckley, Gossage, Hoyme, Kalberg, Manning, May, Robinson, 2009; Goodlett, Hannigan, Kelly 2009, Green, 2007; Rogers-Adkinson, Stuart, 2007).

| Author(s) & Year of Publication | Publication Type |
|--|-------------------------|
| Astley, Jirikowic, & Olson, 2012 | Research Study |
| Astley, Olswang, & Svensson, 2010 | Research Study |
| Barker, Brenna, Knorr, & Kulyk, 2011 | Research Study |
| Beck, Gelo, Olson, & Oti, 2009 | Descriptive Article |
| Blackburn, Carpenter, & Eggerton, 2010 | Guide |
| Boschma-Wynn, Brems, Dewane, Edwards, & Robinson, (N.D.) | Research Study |
| Buckley, Gossage, Hoyme, Kalberg, Manning, May, & Robinson, 2009 | Review of Literature |
| Carpenter, 2011 | Guide |
| Coggins, Olswang, & Timler, 2007 | Research Study |
| Crichton & Edmonds, 2008 | Research Study |
| Duquette, Fullarton, Hagglund, & Stodel, 2006 | Descriptive Article |
| Duquette, Fullarton, Hagglund, & Stodel, 2006 | Research Study |
| Dybdahl & Ryan 2009 | Research Study |
| Ferguson & Ryan 2006 | Research Study |

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| Gerteisen, 2008 | Descriptive Article |
| Goodlett, Hannigan, & Kelly, 2009 | Review of Literature |
| Green, 2007 | Review of Literature |
| Green, Mihic, Munoz, Nikkel, Rasmussen, Reynolds, & Stade, 2008 | Research Study |
| Hewitt, Thomas, & Warren, 2010 | Descriptive Article |
| Hunt & Ratcliff, 2009 | Guide |
| Kersey & Masterson, 2009 | Guide |
| Lewis, May, & Shipman, 2012 | Research Study |
| Norris, 2010 | Research Study |
| O'Connor & Paley, 2009 | Descriptive Article |
| Plane & Wilton, 2006 | Descriptive Article |
| Rogers-Adkinson & Stuart, 2007 | Review of Literature |
| Rutman & Van Bibber, 2009 | Research Study |
| Ryan, 2006 | Research Study |

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Table 2

| Authors | Research Design | Participants | Data Sources | Findings |
|----------------------------------|-----------------|--|--|---|
| Astley, Jirikowic, & Olson, 2012 | Quantitative | 52 children 5-12 years old with FASD from the University of Washington FAS Diagnostic and Prevention Network | Standardized questionnaires, neurodevelopmental assessments. | Parent-reported problems in children's behavior regulation, an aspect of executive function. Sensory processing deficits were the strongest predictors of child-related parenting stress, together accounting for 62% of variance. Children's sensory processing deficits and executive function impairments affect the parent-child system and should be central considerations when developing family-centered supports for children with FASD. |
| Astley, Olswang & Svensson, 2010 | Mixed Methods | 12 children with FASD paired with typically developing peers ages 7-12. Each child was matched based on gender and age across 12 different classrooms. | Classroom observations using a social communication coding system, observations. | Results suggest children with mild FASD performed differently than their peers in regard to classroom social communication, which was consistent with parent and teacher behavioral reports. |

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| Barker, Brenna, Knorr & Kulyk, 2011 | Qualitative | 75 North American youth fiction novels that depict characters with disabilities. | Analysis of the books. | There are many more books depicting Autism than FASD. FASD is often associated with secrecy and shame. |
| Boschma-Wynn, Brems, Dewane, Edwards & Robinson (N.D.) | Mixed Methods | Academic directors of 52 health and allied health programs. | Online surveys, interviews. | Results show directors of training programs are open to FASD education for their trainees but include few resources and program requirements to support such education within their own programs. |
| Coggins, Olswang & Timler, 2007 | Mixed Methods | 573 school-aged children from 6-12 yrs. diagnosed with FASD | Three sets of data from the ACCESS database. This is a quantitative diagnostic scale using a 4-digit code to characterize where the child falls on the spectrum. Interviews with the children. | Children with FASD are disproportionately subject to negative or unpredictable caregiving environments. Social communication looms as a key deficit in these children. These children often come from homes where the parents abuse alcohol putting them at risk for other types of abuse. |
| Crichton & Edmonds, 2008 | Qualitative | 5 participants, ages 16-20 all diagnosed with FASD. An educational program. | Observations, surveys, interview responses. | By offering individualized and customized education, along with counseling and life support, it has proven to be effective for young adults with FASD. The program showed they can learn and want to become productive members of society. |

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| Duquette, Fullarton, Hagglund & Stodel, 2006 | Qualitative | 8 adolescents with FASD from Canada | Questionnaires and in-depth interviews. | Parental advocacy is an environmental factor that may protect adolescents with FASD from dropping out of high school. |
| Dybdahl & Ryan 2009 | Qualitative | At least one student with FASD over 3 year period in 3 school districts in the Pacific Northwest | Interviews, observations, medical and educational documents | Teacher training for FAS inclusion had either not occurred or was perceived as ineffective by the participants. Teachers spoke of the need for FASD training. All teachers believe FASD students should be included in the classroom and were making progress. All teachers had similar difficulties in teaching patterns and behaviors of the students and a need to establish a positive relationship and individual attention to them. |
| Ferguson & Ryan, 2006 | Qualitative | 5 Alaskan students with FASD | Semi-structured interviews, observations, analysis of documents, informal e-mail or telephone conversations. | Increase in public awareness but limited provision of services for children with FASD and their families. Use of differentiated instruction by experienced teachers but new teachers were less likely to adapt and became frustrated. Limited support provided to families. |
| Green, Mihic, Munoz, Nikkel, | Quantitative | 189 students from Canada (92 were control | Test Results: CANTAB research tool (Cambridge Neuropsychological | dren with FASD exhibited longer reaction and decision times suggesting |

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| Rasmussen, Reynolds & Stade, 2008 | | children 40 males, 52 females. 97 diagnosed with FASD, pFASD, or ARND) | Tests Automated Battery) | deficits in attention. They also demonstrated deficits in planning and spatial working memory. |
| Lewis, May & Shipman, 2012 | Quantitative | 176 Northern Plains American Indian mothers whose children have been diagnosed with FASD. | Interviews | A combination of mothers' higher prenatal alcohol consumption, low SES, and higher Total Distress scores was more likely to be associated with children's FASD diagnoses than with mother's prenatal alcohol consumption alone. It appears that more education and awareness might lead to prevention. |
| Norris, 2010 | Qualitative | 5 parents from diverse family structures. | Discussions, Panel interviews. | It is essential to prepare teachers to be able to teach anywhere no matter how diverse the situation is. Pre-service teachers need to understand the importance of developing relationships with diverse families and how it affects the classroom. |
| Rutman, Van Bibber, 2009 | Qualitative | 59 people from 5 diverse communities in British Columbia (15 suspected with FASD) | Interviews | Findings revealed prevailing ignorance about the nature of FASD and the day-to-day support needs of those living with FASD. The need for positive policy and practice-related change is needed for working |

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| | | | | with parents with FASD and children with FASD. |
| Ryan, 2006 | Qualitative | Various educators of students with FASD across Alaska. | Interviews | Helpful instructional tips include: Think person/child first, build relationship with the student's family, develop partnerships and build collaboration between families, develop social skills, provide a structured environment, use repetition and consistency, modify the classroom environment and curriculum, and make referrals to special education when needed. |

3.2.1 Research design

Eight of the 14 studies (57%) included in this meta-synthesis employed a qualitative research design (Barker, Brenna, Knorr & Kulyk, 2011; Crichton & Edmonds, 2008; Duquette, Fullarton, Hagglund & Stodel, 2006; Dybdahl & Ryan 2009; Ferguson & Ryan 2006; Norris, 2010; Rutman & Van Bibber, 2009; Ryan, 2006). Three of the studies (21%) used quantitative research design (Astley, Jirikowic & Olson, 2012; Green, Mihic, Munoz, Nikkel, Rasmussen, Reynolds & Stadel, 2008; Lewis, May & Shipman, 2012). Three of the studies employed mixed methods research design, collecting and analyzing a combination of both qualitative (i.e., non-numerical) and quantitative (i.e.,

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non-numerical) data (Astley, Olswang & Svensson, 2010; Boschma-Wynn, Brems, Dewane, Edwards & Robinson; Coggins, Olswang & Timler, 2007).

3.2.2 Participants and data sources

The majority of the 14 research studies included in this meta-synthesis analyzed data from adolescents with FASD. Eight of the studies (57%) analyzed data collected from students with FASD ranging in age from 5-20 years of age (Astley & Jirikowic, Olson, 2012; Astley, Olswang & Svensson, 2010; Coggins, Olswang & Timler, 2007; Crichton, Edmonds, 2008; Duquette, Fullarton, Hagglund & Stodel, 2006; Dybdahl & Ryan 2009; Ferguson & Ryan 2006; Green, Mihic, Munoz, Nikkel, Rasmussen, Reynolds & Stade, 2008). Three of the studies (21%) analyzed data collected from parents and community members who have children diagnosed with FASD and suspected to have FASD (Lewis, May & Shipman, 2012; Norris, 2010; Rutman & Van Bibber, 2009). One study (7%) analyzed data collected from educators with students who have been diagnosed with FASD (Ryan, 2006). One study (7%) analyzed data collected from academic directors from health programs (Boschma-Wynn, Brems, Dewane, Edwards & Robinson). One study (7%) analyzed data collected from various Navtive American youth fiction books with characters that have FASD (Barker, Brenna, Knorr, Kulyk, 2011).

3.2.3 Findings of the studies

The findings of the 14 studies included in this meta-synthesis can be summarized as follows:

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1. There exists a lack of training and education for teachers for effective teaching strategies for students with FASD. Teacher preparedness programs need to prepare teachers to work with diverse groups of students.
2. Some effective strategies when dealing with students with FASD starts with building strong relationships with the student and family. Consistency, repetition, and modifying classroom routines and curriculum when needed is essential to the success of a student with FASD. Offering individualized and customized education, along with counseling and life support, it has proven to be effective for young adults with FASD.
3. More awareness and education for the public could help lead to prevention. More family-centered support systems could be very helpful for parents dealing with children with FASD.

3.3 Emergent themes

Six themes emerged from my analysis of the 28 articles included in this meta-synthesis. These emergent themes, or theme clusters, include (a) successful teaching strategies for students with FASD; (b) more public awareness can cause prevention; (c) building student/family relationships; (d) behaviors of students with FASD; (e) affects that can go with the labeling of FASD; (f) Teacher training/preparedness. These six themes clusters and their associated formulated meanings are delineated in Table 3.

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Table 3

| Theme Clusters | Formulated Meanings |
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| <p>Successful Teaching Strategies for Students with FASD</p> | <ul style="list-style-type: none"> ● Experienced teachers use repetition, consistency, and practice when working with students with FASD. ● Redirecting and boundary setting can be successful strategies when working with students with FASD. ● Differentiated instructional techniques for students with FASD can be successful. ● Building a healthy relationship with the student with FASD can make a difference in the success of that student in the classroom. ● Students with FASD benefit from multisensory approaches to learning. ● Students with FASD benefit from a structured environment in the classroom. ● Students with FASD benefit from the teacher breaking concepts into smaller chunks. ● Students with FASD need clear explanations and benefit from repeated directions and procedures. ● Students with FASD benefit from hands-on activities and concrete material. ● Teachers should take the time to learn their students' strengths and weaknesses. ● Students with FASD benefit from extra in-class assistance either one-on-one or small group. ● Teachers need to build upon their positive personality characteristics, strengths and talents, and manage the learning environment to allow these to flourish. ● Promoting self-control for students with FASD can be a successful strategy. ● Students with FASD can benefit from individual attention time. |
| <p>More Public Awareness Can Cause Prevention</p> | <ul style="list-style-type: none"> ● Many parents do not understand the cognitive/learning delays that drinking can cause on their children. ● An understanding of the impact of prenatal exposure to alcohol on the brain is essential. |

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| | <ul style="list-style-type: none"> ● The lack of awareness is striking given that natural history data from several countries document the lifespan implications of this condition. ● Prevention of FASD is gaining in importance, and recruitment of diverse disciplines in delivering prevention to women of childbearing age is essential. ● Despite increased knowledge related to the dangers of prenatal alcohol exposure and two public health advisory warnings by Surgeons General in 1981 and 2005, 12% of pregnant women report drinking alcohol. |
| <p style="text-align: center;">Building Student/Family Relationships</p> | <ul style="list-style-type: none"> ● Students with FASD are the most successful when they feel like their teachers care about them. ● Building a relationship with the family of a student with FASD can foster success with that student and help the parents learn effective strategies when dealing with undesirable behaviors. ● There is little data that exists to describe the impact on the family raising a child with FASD. ● Teachers should attempt to involve families of students with FASD even if they are a little apprehensive at first. ● Teachers should get to know the family first before drawing any conclusions about the family. ● When a strong relationship exists between school/family, the children are more motivated to succeed. ● It's up to teachers to learn the best way to share information and bridge the gap between school and home and build strong relationships. ● Many parents need affirmation and reassurance to build trust and deal with their feelings of uncertainty, inadequacy, or sometimes even intimidation. ● Some parents hesitate to become involved because they may feel inadequate in terms of their own education. ● Some teachers use language to describe their child's education that doesn't make sense to the parents discouraging them away from being involved. ● If teachers first connect with parents in positive ways, then strong and trusting relationships will already have been established when problems come along. ● Parents don't want to only be in contact when their child has done something wrong, they also would like to know when they have done something good. ● When designing intervention strategies, it's important to involve the family in the process. |

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| | <ul style="list-style-type: none"> ● Many parents have never experienced or observed a positive role model in relation to parenting so teachers can offer positive support if given the chance. |
| <p style="text-align: center;">Behaviors of Students with FASD</p> | <ul style="list-style-type: none"> ● Students with FASD have difficulties with impulsivity and executive functions (e.g., attention, planning, organizing, self-regulation, and self-monitoring). ● Students with FASD are often first diagnosed with Attention Deficit/Hyperactivity Disorder. ● Students with FASD processing and memory difficulties may result in a diagnosis of learning disabilities. ● Sometimes students with FASD do not display the facial abnormalities that can go along with FASD and their condition is sometimes “hidden”. ● FASD is considered a primary disability but some secondary disabilities can develop during adolescence (e.g., depression, homelessness, trouble with the law, difficulty keeping a job, ect.) ● Students with FASD are often easily distracted and have short attention spans. ● Students with FASD often have trouble initiating and completing tasks. ● Students with FASD have difficulties adapting to change. ● Students with FASD have difficulty understanding cause and effect: do not learn from consequences, blame others. ● Students with FASD have poor social judgement and deficiencies. ● Students with FASD have difficulties identifying and labeling feelings. ● Students with FASD need to be refocused often and directed back to tasks. ● Students with FASD struggle with social, behavioral, and language problems that disrupt interactions with peers and are influenced by task complexity. |
| <p style="text-align: center;">Labeling of FASD</p> | <ul style="list-style-type: none"> ● A great deal of shame can come from the parent of a child with the diagnosis of FASD. ● Many children are not formally diagnosed and go misdiagnosed because of the negative label FASD can have on the child and the parent. ● There aren't a lot of services provided to students that have been diagnosed with FASD. ● Providing appropriate educational experiences to children with FASD is a challenge. ● Some parents may be reluctant to get involved thinking their child is the bad kid in school. |

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| | <ul style="list-style-type: none"> ● Parents are reluctant to seek assistance for their child’s secondary disability related to FASD, for fear of that their needs for support would be viewed as evidence of their parenting incapability. ● The majority of parents of students with FASD, have high hopes, goals, and dreams for their children. ● Some parents struggle with addictions of their own. |
| <p>Teacher Training/ Preparedness</p> | <ul style="list-style-type: none"> ● Inexperienced and untrained teachers can become excessively frustrated when teaching students with FASD. ● Inexperienced teachers do not use differentiated instruction for students with FASD. ● Professional development and training needs to be available for teachers that work with students with FASD. ● It is critical for educators to understand the individual needs of students with FASD. ● Effective teachers can teach students with FASD to monitor and modify their own behaviors. ● A lack of training exists for teachers on FASD. ● Teachers perceive the trainings they do get on FASD as ineffective. ● Many teachers are not aware they have students in their class with FASD. ● Teachers feel that the training they do get on FASD, is unrelated to the reality of their classrooms and so it is ineffective. ● Teachers feel like the training they do receive on FASD would only work if they were able to be one-on one with that student. ● Teachers need to know how to respond to their learning needs effectively and enable them to maximize their potential, improve their life chances and take their places alongside their mainstream peers as citizens. |

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4. Discussion

In this section, I summarized the major themes that emerged from my analysis of the 28 articles included in my meta-synthesis. I then connected these emergent themes to my teaching practice, and to my personal and professional experiences as a teacher who teaches students with FASD.

4.1 Successful teaching strategies for students with FASD

The review of the literature consistently shows that experienced teachers that have been trained in working with students with FASD have similar successful strategies. Some of these strategies include repetition and consistency practice. These students can benefit from multisensory approaches to learning allowing them the opportunity to learn through whatever approach is best for them. These teachers have well-structured classrooms allowing for these students to know and understand the expectations at all times. The research shows that breaking concepts down into smaller chunks will allow students to process information piece by piece.

The research shows that the teachers that take the time to build a healthy relationship with their student will in turn have better success while working with these students. The teachers that take the time to get to know their students' strengths and weaknesses will allow them to take the best approach to most effectively teach them and be successful in building a strong bond.

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In my own experience working with students' with FASD, I have found that all of these strategies help when used. My first experience working with a student with FASD proved to be quite difficult. This student did not want to receive instruction from someone he did not trust or know. After months of getting to know him and his interests, the barriers slowly began to come down as he truly felt like I cared about him and his success. The remainder of the year and teaching experience improved a great deal after this initial relationship was established.

4.2 More public awareness can cause prevention

Although there exists some degree of public knowledge of the prevention of FASD, some mothers still continue to drink during pregnancy putting their unborn fetuses at risk for cognitive/developmental disabilities. The research shows that many parents do not fully understand the devastating cognitive/learning delays that can result from drinking. The research continues to say that more awareness/advocacy is needed in the younger childbearing years of the population. Educating younger children before they are able to make that decision can make a difference. The research also shows that more education and awareness is needed publically about FASD if we want to help with prevention.

I have to admit that I always knew that drinking while I was pregnant would be a harmful thing for my unborn child but I never really understood the devastating repercussions that could result. In fact, I knew very little about FASD until I entered the field of education and came to Alaska. I had no idea that drinking while I was pregnant could affect my child for the rest of their life. I think for some parents, if the child comes

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out physically with no deformities than the child is fine without realizing the cognitive effects that can follow them for the rest of their lives. We teach our children the effects of drinking at a young age. I think this would be the time to begin early education about FASD.

4.3 Building student/family relationships

When teachers take the time to build a strong healthy relationship with a student with FASD, it can determine how successful that child will become in the classroom. When a student feels like their teacher cares about them and believes in them, it can turn a difficult learning experience into a motivated successful outcome.

Building a strong relationship with the family of a student with FASD can foster success for the student not only at school but in the home as well. Many parents do not know successful strategies when working with their own children and can greatly benefit from teacher expertise in this field. It is important that teachers use language the parents can understand when working with the families. Some parents can feel inadequate as parents and can feel inadequate of their own education and sometimes avoid interaction with the teachers of their children. This relationship may need to be encouraged and pursued by the teacher to occur at times. Some apprehension sometimes exists in the beginning but it is important for the teacher to continue to try to include parents whenever possible to help build and maintain a relationship for the student.

After working in the same rural Alaskan village for the past ten years, I have seen this make an incredible difference in my own success with my students with FASD. I

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remember my first attempts at building a relationship with some families to be quite unsuccessful and discouraging at times. With persistence and time, those walls slowly came down and trust began to build. Those very same parents that did not want to be involved and did not trust me are now very involved and the relationship that exists has made the difference for my students.

4.4 Behaviors of students with FASD

A variety of behaviors exist in children with FASD. Some of these behaviors can include attention, planning, organizing, self-regulation, and self-monitoring. Some students struggle with memory difficulties, trouble initiating and completing tasks, and adapting to change. Teachers often need to redirect these students and help them refocus on tasks at hand. Social struggles often exist in these students as well. They have poor social judgement and can keep positive relationships from forming. Behavior problems can arise due to the lack of acceptance and become a class issue. These can pose a great challenge for teachers and students in the regular education classroom.

Research shows communication can also be difficult for students with FASD. These children have a difficult time identifying and labeling their feelings. When this happens frustration can set in and communication barriers arise. This type of environment isn't healthy for any classroom. Secondary disabilities can develop during adolescence including depression, homelessness, and trouble with the law.

My own experiences when dealing with students with FASD in my own classroom is the ability to meet the needs of these students while meeting the needs of all

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my other students at the same time. This can prove to be quite challenging at times especially when there is no special education support in rural settings. One benefit I have found in rural Alaska is being able to have the same students year after year is having the opportunity to build a strong relationship with these students building trust and understanding between each other. There were times when I did not feel very successful as an educator for my students with FASD. I have had many failed attempts at making progress with these students and become overwhelmingly frustrated. I believe these are all very normal and can be expected at times when dealing with students with FASD. I feel like if I had been more trained and prepared prior to working with these students, I could have avoided a great deal of frustration and uncertainty.

4.5 Labeling of FASD

Some parents carry a great deal of shame with the diagnosis of FASD on their children. This is why many children can go undiagnosed or become misdiagnosed at times. Most parents want the best educational experience for their children but often distance themselves from the school and teachers and are reluctant to become involved. Sometimes parents want to keep their distance because they are afraid their child is the bad kid in school. Parents that have difficulties in early childhood with their children are often reluctant to ask for assistance when experiencing secondary disabilities with their children during adolescence. In many families, the parents often struggle with addictions of their own as well.

I've witnessed many IEP meetings with parents that have a great deal of shame when we discuss their children's learning difficulties. I've sat through numerous meetings

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when parents are in tears about their children's struggles with school, learning and lack of progress. I've also witnessed parents refusing medical testing and having their children medically diagnosed purely due to the fear of exposing the truth of what they had done during their children's developing months in the womb.

4.6 Teacher training/preparedness

Research shows that a lack of teacher professional development and training in working with students with FASD. Inexperienced teachers do not use differentiated instruction with these students and can become excessively frustrated when teaching students with FASD. This can result in a very bad educational experience for the student with FASD. This research says that the teachers that do receive training feel that the training is ineffective and the strategies that are presented are not practical in a classroom with so many students and only one teacher. It remains critical for educators understand the individual needs of these student to maximize their learning potential for them to become successful in school and in life.

I've found great success with these strategies when working with students with FASD in my own classroom. I've been lucky enough to have small student-teacher ratios that have allowed me to do them effectively. I am a firm believer that many of these strategies are good for all students and can be done in a larger classroom with more students effectively.

5. Conclusion

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The findings of this meta-synthesis have highlighted the need for more public awareness for Fetal Alcohol Spectrum Disorder. The majority of the public does not realize the devastating lifelong effects FASD can have on learning and social issues that can follow children forever.

The research shows that building a relationship with the student and family of the student can foster better outcomes in the classroom and student success. Teachers that get to know their students and show that they care about the individual with FASD will make the most progress with their students. If the teacher is able to do this, the student feels a sense of belonging and that they care about their success.

There seems to be a lack of training in the teacher preparation programs in working with students with FASD. The training that does exist is very minimal for regular education students.

The findings of this study show that students with FASD continue to need teachers to take the time to reach out and get to know their students and their families. The results show that building strong relationships with both will help the students succeed in the classroom. All children deserve the right to have teachers that have proper training no matter what their learning challenges may be. With a well structured environment, trained and caring teachers, and the right environment, all students, including those with FASD can learn and be successful.

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