

“WE DON’T DO THAT AT SCHOOL”: SCHOOL PSYCHOLOGISTS’ REPORTS OF  
INAPPROPRIATE SEXUAL BEHAVIORS BY STUDENTS WITH DEVELOPMENTAL  
DISABILITIES AT SCHOOL

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### **Abstract**

The reported occurrence of inappropriate sexual behaviors (ISBs) at school by students with developmental disabilities was examined. A questionnaire and an attitude scale were designed to assess the occurrence of these behaviors at school. Participants were practicing school psychologists from nine different states. The participants first identified students with developmental disabilities on their caseloads that engaged in ISBs at school. Descriptive statistics on the reported ISBs by student demographic data are presented. The total behaviors each student engaged in were summed to create a behavior composite score. ANOVAs were conducted to determine relationships between demographic data and the behavior composite score. There was no relationship between student gender, grade level, or special education exceptionality and the number of ISBs a student engaged in.

A 20-item attitude scale was factor analyzed using maximum likelihood extraction with promax rotation. Two factors, Comfort with Managing ISBs and Attitude Toward Sexuality and Sex Education, were identified. An attitude score was created for each participant. The participants' scores on the attitude scale items were summed to create the attitude score. The participants' attitude scores and demographic variables were analyzed using ANOVA and linear regression. There was no relationship between participants' gender, race, and level education on overall attitude toward managing ISBs. There were two significant relationships. The first relationship was between receiving training on ISBs and attitude. The second relationship was between participants' years of experience and attitude. Linear regression showed a positive relationship between years of experience and attitude toward managing ISBs. Implications for research and practice as well as study limitations are also discussed.

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## **Introduction**

Mark is a 14 year-old boy with severe autism and intellectual disability. He is enrolled at a public high school in a functional skills classroom. Mark has a history of challenging behaviors beginning in elementary school; he hit his teachers or classmates when he did not get his way and ran from the classroom when he was frustrated. With a positive behavior support plan in place, Mark has not engaged in any aggressive behavior in the past two years. One day, however, Mark grabbed a paraprofessional from behind and gripped her tightly while thrusting his hips forcefully against her. Mark's teacher reprimanded him and contacted the school psychologist, visibly shaken. Both professionals met to discuss what should be done about Mark's inappropriate sexual behavior, but both are confused and not terribly confident about how to proceed.

In another class, Jonathan, a 13 year-old boy with a seizure disorder and moderate intellectual disability, is enrolled in a public middle school and spends most of his day in the functional skills classroom. Jonathan's teacher has noticed that Jonathan is regularly putting his hand down his pants and fondling his genitals under his desk. Jonathan's teacher has reminded him to take his hands out of his pants and that his behavior is "not appropriate for school." His teacher would like to implement a class-wide sex education program for her students to learn about the difference between public and private body parts and behavior. She wonders if there are any sex education programs available for students with disabilities and if they will be useful for her students' diverse needs and learning styles. She asks the school psychologist what he thinks she should do.

To address these problems Mark's and Jonathan's teachers would probably consult their school teams and the boys' parents. They might discuss approaches they could take to help

reduce the occurrence of these behaviors at school or teach the boys about sexuality and socially appropriate behaviors. A school team member might even look to the research literature to see if there are evidence based interventions or sex education curricula for students with developmental disabilities. If team members were to review the available educational or psychological literature for answers, they would find little. Although the educational and psychological literature has commented on the need for sex education for students with disabilities to manage inappropriate behaviors for some time (McCabe, 1993), little research has been conducted that specifically examines inappropriate sexual behaviors of individuals with developmental disabilities. Students with developmental disabilities and the professionals who support them are in great need of help and accurate information about their students' inappropriate sexual behavior in school. However, before the field can go forward in developing interventions to address inappropriate sexual behaviors at school, researchers first need to identify the scope of the problem. This section provides a foundation on which the literature review will be based. Key concepts will be defined such as developmental disability, the process of typical sexual development, and a definition of inappropriate sexual behavior for this project.

### **Developmental Disability**

The Centers for Disease Control (CDC, 2013) defines developmental disability as a group of conditions that begin during fetal or early childhood development that lead to impairments in physical, cognitive, communication, or behavioral development. These impairments remain throughout the lifespan. The CDC estimates that about 15% of children in the United States ages three through 17 have some kind of developmental disability. The CDC includes a wide range of diagnoses in its definition of developmental disabilities including autism spectrum disorder, intellectual disability, learning disability, attention

deficit/hyperactivity disorder, and cerebral palsy, to name a few (CDC, 2013). Children with developmental disabilities typically demonstrate deficits in age appropriate functioning in cognitive, academic, and social domains. Usually developmental problems show up early in life and are diagnosed during or prior to the preschool years (CDC, 2013). Boys may be up to four times more likely than girls to be diagnosed with a developmental disability (Boyle et al., 2011). Boys are about 1.5 times more likely to be diagnosed with an intellectual disability and about four times more likely to be diagnosed with autism (Boyle et al., 2011). Students with developmental disabilities may receive special education services in their public school districts (National Institutes of Health, 2012). The federal government reported that in 2011 nearly six million children in the United States received some kind of special education services (National Center for Education Statistics, 2012). For the purposes of this paper, “developmental disability” refers to those individuals who show a marked delay in cognitive, communication, behavioral, and social development and receive special education services primarily under the autism and/or intellectual disability exceptionalities.

### **Sexual Development**

Sexual development is a multidimensional process which involves the need to be liked and accepted, giving and receiving affection, feeling attractive and valued, and sharing intimate thoughts and feelings (Murphy & Elias, 2006). Although the development of sexuality is thought to occur primarily in adolescence, the process actually begins as early as infancy. According to the Sexuality Information and Education Council for the United States (SIECUS, 2004), people begin the process of sexual development the moment they are born. In early childhood, children begin to learn about touch and affection from their parents and caregivers. During middle and late childhood children learn about relationships with friends and how to foster intimacy between

friends. During adolescence, children also mature in their emotional, moral, and intellectual capacities for appropriate sexual relationships. In addition to these cognitive and emotional changes, physiological changes to the reproductive organs and other body parts occur. Simultaneously, adolescents must develop a sexual identity consistent with their social and cultural norms. In short, sexual development is not a simple process that begins and ends with physiological change; it is a lifelong process that involves developing friendships as well as romantic relationships (SIECUS, 2004). For people with developmental disabilities, sexual development can be fraught with challenges both related to their disability as well as society's perception of their disability (DiGiulio, 2003; Hellemans et al., 2010; Irvine, 2005; Murphy & Elias, 2005; & Sullivan & Caterino, 2008).

### **Inappropriate Sexual Behavior**

For the purposes of this paper, inappropriate sexual behaviors (ISBs) include unwanted touching of another person, touching of one's own genitals in public, public masturbation, using socially inappropriate language or making requests of another person for one's own gratification, or removing one's clothing, among other behaviors that could be interpreted as sexual (for example stalking, ogling, or refusing to touch one's genitals when using the bathroom). These selected behaviors are consistent with previous literature that has defined inappropriate sexual behaviors in this way (Gremo, 2014; Hellemans et al., 2010; Ruble & Dalrymple, 1993; Stokes & Kaur, 2005).

At present, there is almost no research in general about ISBs of children and adolescents with developmental disabilities in the United States. This includes information on the scope of the problem as well as the effectiveness of interventions to address these behaviors. Some studies have examined the attitudes, knowledge, and sexual experiences of adolescents and adults with

mild intellectual disabilities. Overwhelmingly, these studies have found that people with developmental disabilities have sexual interests and desire romantic relationships but are often lacking in sexual knowledge (Healey, McGuire, Evans, & Carley, 2009; Kelly, Crowley, & Hamilton, 2009; Lofgren-Martenson, 2004).

A few studies have examined the ISBs of individuals with more significant developmental disabilities, usually comorbid autism spectrum disorder and intellectual disability. These studies have shown that individuals with more significant impairments are much more likely to engage in ISBs than their less impaired or typically developing peers (Hellemans et al., 2010; Ousley & Mesibov, 1991; Pownall, Jahoda, & Hastings, 2012; Reid, 1995; Stokes & Kaur, 2005).

As for research that focuses on school professionals' experiences and needs in managing inappropriate sexual behaviors, there are no studies available. The closest study that could be found was done in Greece (Kalyva, 2010). This study examined teachers' views of the ISBs of their students with autism. More often, studies examining ISBs have utilized adult day program or residential staff (Gilmore & Chambers, 2010; Healey, et al., 2004; McConkey & Ryan, 2001; Meaney-Tavares & Gavidia-Payne, 2012; Young, Gore, & McCarthy, 2012). Overall, these studies have found a generally positive view of sexuality for people with developmental disabilities. Participants in these studies generally reported that they viewed sexuality as a normal and healthy part of living for people with developmental disabilities and reported that people with developmental disabilities have a right to healthy romantic relationships. However, the researchers found that many staff members have encountered ISBs of their residential or day program clients, particularly in more significantly impaired individuals.

## **Rationale**

It is important to understand what school professionals have experienced in regards to ISBs of their students. These experiences are often discussed among those in the field (Gremo, 2014; Kalyva, 2010; Wilkenfeld & Ballan, 2011), but little research exists on the actual magnitude of the problem. Further, due to the sensitive nature of these behaviors, they are often not directly observed by professionals outside of the school setting who work with children with developmental disabilities such as pediatricians, child psychiatrists, or child psychologists. Surveying school professionals is a good first step to gain information about the prevalence of these problems. After an extensive review of the literature there is very little information available on how often these behaviors occur, how many students with developmental disabilities are engaging in these behaviors, the characteristics of these students, and the attitudes toward ISBs held by the staff members who support these students. Understanding attitudes is important because the attitude that caregivers and professionals have toward a problem may influence whether the problem is reported at all or the way it is addressed. Gaining information on the types of behaviors that school professionals regularly encounter, as well as the characteristics of the students and the attitudes of staff members, can help further research on intervention approaches as well as the development of relevant sex education curriculum.

For the current study, the school professionals that will be examined will be school psychologists. School psychologists were chosen as participants because they are typically aware of most of the challenging behaviors that occur in a school, including ISBs. In many cases, the school psychologist is the “go-to” person in the school for teachers and administrators to consult with on challenging behaviors in the school (Fagan & Wise, 2007). Although school

psychologists may not be present to directly observe all incidents of ISB, as teachers might, they are probably aware of it through consultations or conversations with teachers. Further, school psychologists are probably directly involved with designing interventions to address ISBs that occur in their schools. Teachers are certainly involved with carrying out interventions for students in their class, but likely do not know of students outside of their classrooms who are engaging in similar behaviors. School psychologists, in contrast, are involved in interventions for the majority of students with disabilities on their caseloads.

In the pilot version of this study (Gremo, 2014), special education teachers were included in the participant sample along with school psychologists in a single state. Attempts at recruiting special education teachers in other states for the current project failed. A variety of organizations for teachers were contacted without success. As a result, this study focused on a multi-state sample of school psychologists.

Next, gaining the perspective on the scope of the problem from the vantage point of education staff in the United States is crucial. Nearly all of the, admittedly few, studies on the subject of ISBs and sexuality of people with developmental disabilities available in the literature were conducted in either Europe or Australia. Although this research is necessary for an understanding of the problem of ISB in general, it does not address the specific needs and experiences of people in the United States. The cultural values held by people in other countries could color their view of sexuality and ISBs. Some researchers directly addressed the issue of culture and its role on the way that participants in their research viewed sexuality and inappropriate sexual behaviors. For example, Helleman et al. (2010) conducted research on this topic in Belgium and argued that their access to the participants as well as the sexual behaviors that were allowed in the institution they utilized was probably related to Belgians' more positive



attitudes about sexuality. For example, participants reported that residents were allowed to engage in sexual behaviors in privacy and discussions about these behaviors were held openly between residents and staff members. In contrast, Kelly et al. (2009) surveyed adults with mild to moderate intellectual disabilities at an adult day program in Ireland about their knowledge of sexuality and relationships. Kelly and colleagues (2009) found that the participants had very little knowledge about relationships and basic sexual anatomy. The authors hypothesized that the limited information the participants had about sex and sexuality was likely due to the more conservative Irish Catholic culture that the participants grew up in. Sexuality was not discussed among the day program participants and the staff members (Kelly et al., 2009).

In the United States different regions likely hold different views about sexuality and sex education that can affect how ISBs are handled at school. For example, the Guttmacher Institute (2012) reported on the state of sex education in America in 2006. The report showed that what is taught in sex education varies widely between states and between school districts. The United States does not have a singular national curriculum or guide for states to follow in their schools. Rather, sex education approaches are left up to the individual states or local school districts (SIECUS, 2014). The two main types of sex education are abstinence and comprehensive sex education. Abstinence sex education programs either emphasize the benefits of abstaining from sexual activities or require that students abstain from any sexual contact until they are married. Information on contraceptives is minimized or ignored completely (SIECUS, 2014). In contrast, comprehensive sex education provides information throughout the school years that is age-appropriate, medically accurate and involves all aspects of sexuality. Topics include human development, abstinence, contraception, and healthy relationships (SIECUS, 2014). The

Guttmacher Institute (2012) report found that as of 2006, 37 states required that sex education included abstinence and 26 of those states required that abstinence be “stressed.”

### **Purpose**

There were two primary goals of the present study. First, the present study intended to gather information on the occurrence of ISBs by students with developmental disabilities in a school setting by surveying school psychologists. This includes the number of students who engaged in ISBs, the type of behavior(s) they displayed, and demographic information about the students. Although this study approximated a prevalence study, it cannot be classified as such. Measuring prevalence allows researchers and health care providers to know how common a disease or disorder was for a population in a given time period (Anderson, Langemo, Hanson, Thompson, & Hunter, 2013). While the current study collected information on whether participants had a student on their caseloads who engaged in ISB during a limited time frame with respect to the size of their overall caseloads, the research could be extended to all individuals with a developmental disability in the United States.

The second purpose of the present study is to gather information on school psychologists' attitudes toward ISBs and the sexuality of their students with developmental disabilities. These attitudes include beliefs about the sexuality of young people with developmental disabilities, their feelings about ISBs, beliefs about the necessity and appropriateness of sex education for their students, and their confidence in handling ISBs. It is important to the research literature to have this information because attitudes that individuals hold toward a group or problem can impact the way in which it is treated. Social psychological research has shown that the attitudes an individual holds impacts the way that he or she thinks, feels, and acts. When people hold negative beliefs and make negative attributions for a person's behavior based on their group

membership, they are showing prejudice (Allport, 1954). Previous research has shown that there are negative beliefs and prejudices about people with disabilities in general, and about their sexuality in specific, which can occur at the explicit or implicit level of awareness (Block, 2000; DiGiulio, 2005; Irvine, 2003; Rohmer & Louvet, 2012). It is hypothesized that if school personnel hold prejudiced beliefs about sexuality among people with disabilities they will be less likely to effectively manage inappropriate sexual behaviors of people with disabilities or believe that any intervention they undertake will be effective. Therefore, it is advantageous to the literature to understand the attitudes of school psychologists toward the problem of ISB by students with developmental disabilities at school.

## **Literature Review**

This chapter provides a basis for the research questions, the selection of measures, and the research strategy. Several key concepts necessary for understanding the research questions will be described: sexuality in people with developmental disabilities, the importance of caregivers' attitudes toward sexuality in persons with developmental disabilities, the need for sex education for people with developmental disabilities, and the author's previous research in this area. Second, the rationale for ascertaining estimated rates of ISB by students with developmental disabilities will be discussed. Finally, a justification for using school psychologists as the source of these data will be examined.

### **Sexuality in People with Developmental Disabilities**

There are a number of myths and misconceptions about the sexuality of people with developmental disabilities. Irvine (2005), DiGiulio (2003), and Block (2000) outlined these myths as well as the detrimental impact they have on the lives of individuals with developmental disabilities. First, people with disabilities are often viewed as childlike and asexual (DiGiulio, 2003; Irvine, 2005). People believe that those with disabilities remain as perpetual young children without sexual interests or development in spite of physical maturation. This belief is more prevalent when the individual requires additional supports for daily care activities such as bathing or feeding. Women with developmental disabilities are more likely to be perceived in this way than men with developmental disabilities (Block, 2000). Block argues that this belief in the naiveté of women with developmental disabilities has led to them being sterilized or kept segregated from male companions or caregivers in order to "protect" them from relationships with men.

A second myth about the sexuality of people with developmental disabilities is that if they do experience sexuality, they are unable to control their desires and behaviors (Block, 2000; DiGiulio, 2003). This negative belief is typically applied only to men with developmental disabilities. When men and boys begin to show interest in sexuality, there is a fear that it will be accompanied by uncontrollable aggression or a sexual interest in young children (Block, 2000). Women with developmental disabilities, however, are not immune to having their sexuality perceived as dangerous. Block (2000) wrote that women with developmental disabilities are often viewed by society as being more wanton with their sexuality and more likely to “flaunt” themselves in front of men. In fact, this belief has been used as a defense for men accused of raping young women with developmental disabilities as recently as the 1990s (Block, 2000). As a result, family members, educators, and other caregivers are likely to limit the person’s ability to express their sexuality. Historically, a fear of aggressive sexuality in individuals with disabilities has led to sterilization (Irvine, 2005).

A third persistent myth regarding the sexuality and reproduction of people with developmental disabilities is that they will pass on their developmental disability to their children (Block, 2000). Block (2000) explores the issue of preventing people with developmental disabilities, particularly women, from reproducing. She cites the work of the American eugenics movement which sought to prevent “feeble minded” people from reproducing. In 1912 the work of psychologist Henry Goddard and his study of the “Kallikak” family reinforced these beliefs (Goddard, 1912). Goddard followed a woman, “Deborah Kallikak,” who was determined to be feeble-minded and noted that all of her family and her children were feeble-minded. Goddard argued that feeble-minded people were unfit to be parents and must be stopped lest the burden to society be too great.

Research has affirmed the normal sexual development of individuals with developmental disabilities (Murphy & Elias, 2006; Murphy & Young, 2005; Sullivan & Caterino, 2008).

Research has shown that people with developmental disabilities experience similar onset of puberty as their non-disabled peers. However, Murphy and Young (2005) reported that some individuals with developmental disabilities may be slightly delayed in the onset of puberty due to the increased presence of gastrointestinal problems in this population. Murphy and Elias (2006) examined the sexuality of children and adolescents with developmental disabilities. Adolescents with developmental disabilities, absent of physical disability, experience puberty at similar ages to adolescents without disabilities. In contrast, children with a neurodevelopmental disability, such as spina bifida, are 20 times more likely than their peers without disabilities to experience precocious puberty (Murphy & Elias, 2006). Sullivan and Caterino (2008) reviewed the literature on pubertal changes in young people with autism spectrum disorders. Again, the authors found that physical maturation for adolescents with autism spectrum disorders began at about the same time as adolescents without autism spectrum disorders. However, Sullivan and Caterino also found that the emotional changes associated with puberty were delayed or prolonged in the individuals with autism spectrum disorders. Eaves and Ho (1996) reported that between 10 and 30% of young people with autism developed more significant behavioral challenges during the years they were in puberty. This was particularly true for those with more severe symptoms of autism and intellectual disability. Hellemans et al. (2010) argued that youth with autism spectrum disorders may be struggling more emotionally with the physical and emotional changes that accompany puberty. The authors wrote that the changes associated with puberty were difficult for young people with autism to accept due to the strong aversion to change that is associated with autism spectrum disorders.

Several studies have also affirmed the sexuality and desire for relationships of people with developmental disabilities. Research on the sexuality of individuals with disabilities has included both those with mild as well as profound disabilities. Sullivan and Caterino (2008) reviewed the literature on the sexuality of people with autism spectrum disorders. Overall, the authors found that about 75% of people with autism exhibit some kind of sexual behavior. Most of the individuals with autism in the study were reported to masturbate. Sullivan and Caterino (2008) also reported that overall, men were more likely to engage in sexual behaviors than women. Reid (1995) interviewed caregivers about the sexual behaviors of the residents in a residential facility in Scotland for individuals with profound intellectual disabilities. The author found that the majority of the individuals in the study were known to engage in some type of sexual activity. There was no difference between women and men in the amount or frequency of sexual activities reported.

Kelly et al. (2009) and Healy et al. (2009) examined the sexual experiences and needs of adolescents and adults with mild to moderate intellectual disability in focus groups in adult day programs in Ireland. In both studies the participants had an overall positive view of relationships and liked the idea of having a partner. Both studies also found that the participants were likely to have or have had romantic relationships. Healy et al. (2009) probed sex and sexuality more thoroughly in their focus groups. Many of the participants had a desire for intimacy but had little knowledge about sex, contraception, or sexually transmitted diseases. In fact, most of the participants acknowledged that what little they knew about sex and relationships came from watching popular Irish soap operas on television.

## **Inappropriate Sexual Behavior**

While studies have affirmed the sexuality of people with developmental disabilities and their desire for meaningful romantic relationships, several other studies have found that people with developmental disabilities often engaged in ISBs. Hellemans and colleagues (2010) studied the sexual behaviors and knowledge of institutionalized Belgian male adolescents and young adults with autism and borderline/mild intellectual disability compared with adolescents with intellectual disability alone. The authors surveyed caregivers on the boys' knowledge and practice of self-care and socio-sexual skills. Hellemans et al. (2010) found that boys with autism displayed significantly more difficulties with the external bodily changes associated with puberty than those without autism. The authors postulated that this difference was probably due to the resistance to change that is associated with autism. There was no difference between the groups on their knowledge and practice of self-care and socio-sexual skills. Caregivers' reports on the boys' masturbation habits were harder to ascertain. For about half of all of the participants, it was unknown whether they engaged in any masturbatory behaviors. However, the number of boys that were known to masturbate in each group was about equal. Boys with autism were more likely than those without autism to need training in appropriate techniques for masturbation. Person-oriented sexual behavior was also surveyed. Person-oriented sexual behaviors are those that involve another individual, whether or not that person is a voluntary participant in the act. Both groups of boys engaged in comparable levels of person-oriented consensual behaviors such as cuddling, hugging, or kissing. Caregivers reported no difference in the number of boys whose person-oriented behavior was unwanted by the other party. The boys without autism were significantly more likely to have had a sexual relationship than the boys with autism. The authors also surveyed caregivers about the boys' unusual sexual behavior or desires. The boys with



autism were more likely to have unusual sexual interests than the boys without autism. For example, some of the boys with autism exhibited “partialism,” which refers to feelings of sexual arousal when viewing specific body parts. Sexual problems were reported for more individuals with autism than those without; however, this difference was not significant. The problems reported were related to obsessions about sexuality that may again be due to the obsessive thinking and compulsive behavior often associated with autism.

Stokes and Kaur (2005) surveyed parents of Australian boys with Asperger’s syndrome or high functioning autism and typically developing boys. Overall, the parents of boys with high functioning autism reported that their sons had poorer social behaviors, engaged in fewer privacy behaviors, and had poorer knowledge of privacy than their typically developing peers. The parents of boys with high functioning autism reported that their sons engaged in more ISBs such as touching others inappropriately, touching their private body parts in public, masturbating in public, removing clothing in public, and speaking publically about sexual activities, than the typically developing boys. While the boys with high functioning autism engaged in many more inappropriate behaviors than the typically developing boys, they were much less likely to receive sex education than the typically developing boys.

Ruble and Dalrymple (1993) surveyed the parents of boys with autism in Indiana about their sexual behaviors and associated social skills. The majority of the parents reported that their children engaged in ISBs. For example, 65% of parents reported that their children touched their private body parts in public, 28% removed clothing in public, and 23% masturbated in public. Relatedly, most parents had concerns about their children’s behavior and sexual development. The concern about their children’s behaviors did not translate into action for all of the children,

however. The children with greater verbal skills were more likely to receive sex education at home or school as compared to the children with limited verbal skills.

Reid (1995) reported that the majority of the residents of a facility for profoundly mentally disabled (IQ less than 20) adults in Scotland were reported to engage in sexual behaviors. However, many of the behaviors the residents engaged in were inappropriate in some way. Common ISBs reported by caregivers were rubbing genitals on unsafe surfaces such as metal grates or the corners of furniture, engaging in sexual behaviors in common areas, and pursuing partners who were unable or unwilling to consent to sexual interactions.

Sullivan and Caterino (2008) reported that young people with autism are more likely to demonstrate ISBs during puberty. The authors argued that this was likely to the lack of social involvement that is common in the adolescent years. Sullivan and Caterino (2008) reported that young people learn about appropriate ways to express sexuality primarily through interactions with their peers and romantic partners. Young people with autism often do not experience this same level of social involvement and therefore miss this crucial component of sexual development. Sullivan and Caterino (2008) also argued that a lack of social awareness by people with autism can lead to the increase in ISBs. Young people with autism may not notice that others find their behavior inappropriate and will continue to engage in it because it is pleasurable. This can be problematic for young people with autism who are attending school or involved in other community activities.

### **Educators' Perspectives**

Kalyva (2010) and Wilkenfeld and Ballan (2011) looked at educators' experiences and needs related to sexuality and sex education of people with developmental disabilities.

Wilkenfeld and Ballan (2011) conducted interviews with classroom teachers and day program

instructors about their views of sexuality and sex education for individuals with developmental disabilities. The authors found that the participants held generally positive views of the sexuality of their students with developmental disabilities. They viewed sexuality as a normal part of life and development for all individuals, including those with developmental disabilities. The participants also reported a great need for sex education for their students so that they could make better, healthier decisions in regards to sex and relationships.

Kalyva (2010) surveyed Greek teachers of young people with autism and compared their responses based on the severity of their students' autism. Students who were considered low functioning, having an IQ below 70, were reported by their teachers as engaging in more ISBs, engaging in fewer privacy-seeking behaviors, and engaging in fewer socially acceptable behaviors than students who were considered higher functioning, having an IQ above 70. Nearly all of the teachers surveyed reported that they did not feel confident in handling sexual issues with their students, regardless of their students' level of functioning or gender. Interestingly, the teachers only held significant worries about the futures of the high functioning students. The teachers felt that these students were more likely to have or desire romantic or sexual relationships than the low functioning group. The teachers worried that others might misunderstand the high functioning group's motives and behaviors. They were concerned that their high functioning students would face greater rejection from peers and potential romantic partners. There was less concern about the low functioning group because the teachers believed that the students in the low functioning group would not be interested in seeking out relationships presently or in the future.

Finally, researchers have examined the experiences and needs of staff members at adult residential or day programs for people with developmental disabilities. McConkey and Ryan

(2001) asked staff members at residential and day programs in Northern Ireland to read several short vignettes about different sexual behaviors and relationship issues involving adults with developmental disabilities. The participants then reported whether they had ever encountered a similar situation, how confident they felt in handling it, if they sought help from another staff member, and their ability to handle a similar situation in the future. The hypothetical situations included a client masturbating in public, a client becoming depressed after a break-up, and a client making sexual advances toward them, among others. Forty-one percent of the participants said that they had encountered two or more of the situations, 24% encountered at least one, and 35% had never experienced any of the situations described. The most common situation the participants reported that they had experienced was encountering a client masturbating in public. The participants reported that they felt the most confident handling inappropriate behaviors like a client's unwanted sexual advances toward them or public masturbation. The participants reported that they felt the least confident in their ability to counsel and support a client who was feeling depressed after a break-up. Participants who received training on sexuality and relationship issues reported greater confidence than those who had not received training. Unfortunately, only 22% of participants reported that they had received any training or coursework in this area.

### **The Need for Sex Education**

Based on the information presented above, it follows that young people with developmental disabilities are in need of sex education. Sex education programs for people with developmental disabilities, however, are often inadequate. McCabe (1993) reviewed the research on sex education programs for people with developmental disabilities from the 1960s to the 1980s. She found that while sex education is necessary for healthy living and preventing sexual abuse, many people with developmental disabilities were not receiving it. When they did have

access to sex education, it was often inadequate and narrow in scope. Adults and adolescents with intellectual disabilities demonstrated significantly less knowledge about sex and relationships than their non-disabled peers. What information they did have was focused primarily on hygiene and abstinence. When McCabe (1993) examined the research methodologies of sex education programs, she again found them wanting. Programs often lacked rigorous studies of their effectiveness and whether or not students learned anything or maintained what they had learned.

Further, McCabe (1993) found that parents and other caregivers' beliefs about their children's cognitive abilities influenced what information the individuals received. Many parents and caregivers had negative views of their children engaging in sexual relationships with other people. As a result they did not want to teach them about sex education out of concern that their child would have sexual intercourse. Overall, many parents felt uncomfortable with their children receiving sex education and therefore did not provide it at home or ask teachers or day program staff to provide it.

Grieveo, McLaren, and Lindsay (2005) followed up on McCabe's (1993) work. Grieveo and colleagues (2005) reviewed the research on sex education programs and curriculum packages available primarily in the United Kingdom. Again, the researchers found troubling results. The authors reported that the majority of the curriculum packages would be best suited for students with mild intellectual disabilities without communication problems. Many curriculum packages required the student to have knowledge of both spoken and written language and required the student to use abstract thinking skills in the planned activities. The curriculum packages also lacked suggestions for teachers to tailor the lessons to lower functioning students. Further, the curriculum packages often did not specify what intellectual and

communication range the curriculum was appropriate for, making the selection of programs difficult for teachers. Finally, most curriculum packages did not provide the teacher with information about the reliability or validity of the curricula or how effective they were at teaching the desired skills. For example, most did not provide evidence that students maintained the information they learned after completing the course or generalized the information in practice.

McCabe (1993) and Grieveo et al. (2005) showed that many sex education programs and the research behind them are lacking. Recent studies of the effectiveness of sex education programs with adolescents and adults with mild disabilities have followed the same pattern. Like the previous reviewers found, the studies showed effectiveness only in narrow areas and the knowledge the participants gained was not always maintained over time. Garwood and McCabe (2000) examined the effectiveness of two sex education programs for men with mild intellectual disabilities in Canada. Both programs covered similar topics including relevant social skills and factual information about sex and sexuality. Both programs covered feelings, self-awareness, friendships and sexual relationships, and body language as well as the human life cycle, puberty, pregnancy and childbirth, contraception, and protective behavior. The researchers assessed the participants' knowledge and attitudes about sex and relationships pre- and post-intervention. Overall, the men showed minimal increases in knowledge about sex and sexuality. They also demonstrated some more positive attitudes toward relationships, particularly having a female friend. There were no real differences in effectiveness between the two sex education programs.

Dukes and McGuire (2009) examined the effectiveness of a sex education program in Ireland for young people with developmental disabilities enrolled in a day program. The authors wanted to know whether the program increased the participants' knowledge about sex and

sexuality and their ability to consent to sexual relationships. The participants served as their own controls and had their knowledge assessed each week for fifteen weeks. In addition, the participants' caregivers at their day program reported whether the participants engaged in ISBs during each week of the program. The intervention was delivered individually based on the participants' level of functioning in two 45-minute sessions each week. The intervention covered safe sex practices, knowledge about sexual functioning, and knowledge of choices and consequences related to sexual relationships. Following the intervention, all of the participants had greater scores on a test of sex knowledge than they did prior to the intervention. At a six-month follow-up, the participants demonstrated maintenance of their knowledge of safe sex practices but with some small decay in their overall sexual knowledge. Interestingly, none of the participants showed improvement in their knowledge of appropriate versus inappropriate behavior. Further, the staff ratings of the participants' engagement in ISB did not change over the course of the program.

The previous studies show that sex education for people with developmental disabilities can be effective. Although the studies did not always find gains in all aspects of sexual knowledge, the participants still showed improvement in at least a few areas. Sullivan and Caterino (2008) reviewed some promising sex education programs for people with developmental disabilities available in the United States. However, only one of the programs they reviewed, the TEACCH method from the University of North Carolina Chapel Hill, is available for teachers to use with students. The other programs are offered only at specific institutions in the United States and Canada and therefore not accessible to others. Further research is needed on the effectiveness of sex education programs at increasing knowledge of sexuality issues and reducing ISB.

## **Pilot Studies**

Over the last two years the author has done preliminary research in the area of professionals' responses to ISBs and the need for sex education programs for students with developmental disabilities. The author's Ed.S. project was a series of qualitative interviews with three professionals who served children and adolescents with developmental disabilities: a functional skills special education teacher, a school psychologist, and a pediatric psychiatrist. All three participants had similar experiences and needs in regards to managing ISBs of the individuals they served. All three had professional experience working with individuals who engaged in ISBs. These behaviors included undressing in public, masturbating in public, unwanted touching of others, making inappropriate comments, and stalking. While ISBs were a common problem for each of the participants, none felt that they had received adequate training to address these challenges. They each reported a desire for additional information and training in this area. Only the pediatric psychiatrist reported having received any additional training in sexuality issues for children and adolescents. The participants also had limited knowledge about the available resources and sex education materials for individuals with developmental disabilities. Only two of the participants, the teacher and school psychologist, were aware of any sex education programs and resources for youth with developmental disabilities. Further, while they were aware of and had used a few different programs, they both felt that the programs were not suited for many of the students they served. Both reported that the materials were too complicated and language-heavy for students with more significant impairments.

A second study of special education teachers and school psychologists in Kansas was a pilot of the current research project. Teachers and school psychologists were asked to complete a



short online survey of their experiences and needs with managing ISBs in their students. The participants were asked some demographic information, whether they had ever had a student engage in an ISB, how they managed the behavior, and the exceptionalities of the students who had engaged in the ISBs. The participants were also asked to identify any standardized sex education curricula that they had heard of as well as any that they had used. Last, the participants responded to Likert-type items related to their attitudes and opinions about ISB. The attitude questions included items such as “I feel comfortable addressing inappropriate sexual behaviors,” “The standardized sex education curriculum is appropriate for all special education students,” and “Inappropriate behaviors will go away if they are ignored.”

The findings of this pilot were consistent with the hypotheses that teachers and school psychologists had experienced their students engaging in ISBs, had little knowledge of how to handle these behaviors, and did not have knowledge about standardized sex education curricula for students with disabilities. Seventy-seven percent of the participants had, at some point in their career, seen a student engage in an ISB. Forty-one percent reported an incident of ISB in the past school year. Forty-five percent of the students who engaged in ISBs were identified as having autism, followed closely by students with intellectual disability at 42%. The participants reported a variety of different kinds of ISBs that they had observed. These behaviors included touching one’s private body parts, 69.8%; masturbating, 40%; removing clothing in public, 31.5%; and touching others’ private body parts, 28.1%. The participants were also asked to select all of the methods they used to address ISBs. These methods included telling the student that their behavior was not appropriate without further explanation, ignoring the behavior, sending the student out of the room, putting the student in time out, contacting the school psychologist or autism specialist, and using a social story. Both teachers and school psychologists reported using

a variety of approaches when dealing with ISBs. When asked whether they were aware of any standardized sex education curricula, 77% were not. Ninety-three percent of teachers and school psychologists had never used a standardized sex education curriculum with their students. These findings are alarming given how many participants reported having a student engage in ISBs.

The survey used to assess participants' attitudes and needs was analyzed and for meaningful factors. Three distinct factors emerged in the analysis: Comfort, Support, and Responsibility/Appropriateness of Curriculum. The Comfort factor assessed how at ease participants felt both with communicating with the child's family or IEP team about ISBs as well as their level of comfort with delivering an intervention. The Support factor assessed the participants' perceived administrative and instructional support for handling ISBs. For both the Comfort and Support factors, there was no significant difference between teachers and school psychologists. Last, the Responsibility/Appropriateness of Curriculum factor examined who the participants felt was responsible for delivering services to the child engaging in ISB. This factor also included items that were critical of current sex education curricula for students with disabilities. For example, "Sex education materials for students with disabilities are too language-heavy." There was a difference between teachers and school psychologists on the Responsibility/Appropriateness of Curriculum factor with teachers reporting that they felt that others outside of the school, such as medical staff or the child's parents, had more responsibility for dealing with ISB. School psychologists were significantly more likely to report that they felt a sense of responsibility for managing these behaviors and were more likely to be critical of the current curricular materials.

## **Rationale for the Present Study**

The preceding literature demonstrates that people with developmental disabilities do experience typical sexual development (Murphy & Elias, 2006; Sullivan & Caterino, 2008) and desire intimate and romantic relationships (Healey et al., 2009; Kelly et al., 2009). However, people with developmental disabilities are likely to engage in ISBs (Gremo, 2014; Hellemans et al., 2010; Reid, 1995; Ruble & Dalrymple, 1993; Stokes & Kaur, 2005; Sullivan & Caterino, 2008) and have less access to sex education (McCabe, 1993). Taken together, the reviewed literature demonstrates that the sexuality of people with developmental disabilities, particularly in the area of ISB, has been significantly overlooked. The research literature has demonstrated that there is a definite need for further examination in this area. Gremo (2014) and Kalyva (2010) found that ISB by students with developmental disabilities at school was a significant issue faced by both special education teachers and school psychologists. Further, these school professionals often felt unsure of how to handle ISBs when they did occur and reported that they lacked training (Gremo, 2014; Kalyva, 2010). However, these are the only two studies that have examined ISB at school. It is important to look at behaviors that occur in school because most young people spend approximately half of the days of the year in schools for a large portion of the day (Education Commission of the States, 2011). For students with disabilities, the school day has increased importance. Students with disabilities receive individually mandated educational and related service support from qualified professionals during this time. In fact, for many students with disabilities, this is the primary way in which they receive intervention services (Hardman, Drew, & Egan, 2010).

The current study attempted to estimate the occurrence of ISBs by students with developmental disabilities through reports of school psychologists. Information was collected on characteristics of the students and the types of ISBs. This information provided the necessary groundwork needed for further research in this area. This information could also serve as a foundation for specific sex education curricula to address ISB for students with developmental disabilities. Further, the present study examined the occurrence of ISBs by girls and prepubescent children. The reviewed literature on ISB by individuals with developmental disabilities focused primarily on adolescents and boys. Only two studies included girls in their samples or reviews of ISBs (Sullivan & Caterino, 2008; Reid, 1995). Prepubescent children have also been ignored in the research. Similarly, only one study (Ruble & Dalrymple, 1993) included prepubescent children in their sample. The present study allowed participants to report on preschool- and school-aged boys and girls.

### **Why School Psychologists?**

School psychologists were selected as participants for the current study for both their extensive involvement with students with developmental disabilities as well as for practical reasons related to data collection. First, school psychologists were selected for their exposure to a larger number of students with developmental disabilities than other educational staff at a school or district. School psychologists often serve multiple buildings and, as a result, multiple special education classrooms. They are involved with most of the students in special education in some way. School psychologists can have contact with students through evaluation, consultation, or direct intervention services such as counseling (NASP, 2014). Even when a school psychologist does not have direct involvement in a particular case, the case is often brought up to the school psychologist by the student's teacher, principal, or student improvement team. In addition to

their wide exposure to students with developmental disabilities, school psychologists were also selected so they could report on the number of students who engaged in ISBs in comparison to their overall workload of students with developmental disabilities.

School psychologists were also selected as participants for the current study for practical reasons. The pilot of the present study (Gremo, 2014) included both special education teachers and school psychologists in one state. It was initially intended that special education teachers would be included in the current study's multi-state participant pool. However, multiple attempts at contacting teachers' organizations were met with failure. Responses were not received from several state departments of education, a national teachers' union, or several special education interest groups for teachers. As a result, teachers were excluded from the current study.

Although school psychologists are a great source of information on the occurrence of ISBs by students with developmental disabilities, there are some limitations of using this population. First, school psychologists may not have close relationships or know the students as well as their classroom teachers. School psychologists are involved in many students' cases but do not spend nearly as much time with students as their teachers do. Another potential limitation of using school psychologists alone is that they may not be aware of students who are engaging in less provocative forms of ISB. Teachers may not specifically refer a student to the school psychologist if they do not think that the student's ISB is particularly problematic. However, it is likely that they may still share with the school psychologist the behavior that the student is engaging in at least in passing. Teachers may feel that they can independently manage a student's ISB if it is not excessive or not affecting other students or staff members. School psychologists have large workloads and caseloads and may not recall students who engaged in less severe behaviors at school. In spite of these potential limitations, school psychologists are

still good sources of information on students' ISBs. School psychologists are involved with many students with developmental disabilities either through evaluation or consultation. Further, teachers are likely to contact their school psychologists when a student engages in ISBs at school.

## **Method**

To best estimate the number of students with developmental disabilities engaging in ISBs at school and school psychologists' attitudes toward these behaviors, data were gathered from school psychologists in several states. Practicing school psychologists from participating states provided information on these issues by completing an online survey.

### **Participants**

Participants were practicing school psychologists who work with students with developmental disabilities in a school setting. Participants were recruited through state school psychology professional associations. Professional organizations were chosen because these organizations have access to the participant pool of interest. The state associations were selected to represent the ten federal regions of the United States (Department of Health and Human Services, 2006). A state association in each region was randomly contacted and asked about its interest in participating. If an association declined, another association in the same region was randomly selected to replace it. Nine state organizations agreed to participate in the study: Alaska, Florida, Louisiana, Minnesota, Missouri, Kansas, New Hampshire, New Jersey, and Pennsylvania. Kansas and Missouri were added after a low response rate from the other state organizations. The associations that agreed to participate either distributed the survey to their membership via distribution lists or posted the survey link on their websites for members. These approaches varied based on the associations' own research policies.

Utilizing these different regions allowed for a semi-nationally representative sample of school psychologists. This approach allowed for different perspectives on the issue of ISB at school. The United States has a variety of local cultures and views that may differ throughout the

country. Assessing the views of school psychologists in these different regions could provide a better picture of the issue of ISB at school and the attitudes toward it.

Other large-scale recruitment approaches were attempted without success. First, researchers affiliated with state boards of education in several states were contacted via e-mail by one of the co-chairs. There was no response from any of the researchers, likely due to the large number of research requests that educational systems receive on a regular basis. A second recruitment approach was to contact the National Association of School Psychologists (NASP) to utilize membership lists. NASP was selected because many school psychologists are members of this organization. NASP, however, according to their research policy posted on their website and from a conversation with a member of the research board, does not electronically distribute online survey links to their membership. Instead, the research department at NASP randomly sends postcards to a set number of members with directions to follow a link to the online survey. This option was not selected because the author and advisors felt that many recipients would not type in a link to the survey on the postcard.

## **Procedure**

The author created a solicitation letter the organizations could use when they contacted their members. The solicitation letter requested school psychologists who worked with students with developmental disabilities to participate in a study about ISBs by students with developmental disabilities. The letter also included the estimated time it would take to complete the survey as well as a notice that the survey would be anonymous. Some state organizations required written proposals for the research or other paperwork that was evaluated by the organizations' executive boards or research committees. The state professional organizations distributed the survey to their members in accordance with their research policies. The survey



was made available to participants during the months of January and February 2015. The participants completed the survey anonymously through the survey hosting software, Qualtrics. The survey was divided into three sections and took about 10-15 minutes to complete depending on the number of students the participants identified. The average completion time for the survey was assessed by asking individuals unfamiliar with the survey to complete the items with made-up information. The survey questions are available in Appendix A. Qualtrics automatically saved responses that could be downloaded in a variety of formats for the author to view. The author closed access to the survey at the end of February 2015.

### **Survey**

The survey had three sections that participants completed. The first section collected demographic information about the participant. The second section asked the participants to describe the different ISBs they have encountered during the previous semester (August-December 2014). The final section was an attitude survey relating to the participants' experiences with ISB of students with developmental disabilities.

**Demographics.** The survey first asked participants to provide some personal demographic information. They were asked to identify their gender, race/ethnicity, home state, highest level of education achieved, and how long they have been practicing as a school psychologist. This information was used to describe the sample as well as to determine how representative the sample was when compared to the overall demographics of school psychologists in the United States using the demographic information compiled by Curtis, Castillo, and Gelley (2010) who analyzed the most recent NASP membership. The participants were also asked to identify some information about the amount of professional training they had received on sexuality and ISB in students with developmental disabilities, and whether or not

they had been contacted by a parent or other school professional about a student's ISB at any time during their career and specifically during the August-December 2014 semester. If the participants reported that they had not been contacted about any ISB during the August-December 2014 semester, they were redirected to the attitude section of the survey.

**Estimates of inappropriate sexual behavior.** The second section of the survey concerned participants' estimates of the number of students engaging in ISB in their school. The participant did not have to directly observe the behavior, they only had to be aware that the behavior occurred. The participants might be aware of these behaviors through a variety of means, such as private discussions, consultations, student improvement team meetings, informal discussions in the faculty lounge, or working directly with the student to address their behavior.

Participants identified all of the students on their caseloads that they knew of who engaged in ISB during the preceding semester. First, they reported some demographic information about the student, such as the student's gender, grade, and special education exceptionality. Each student the participant described was counted only once. Next, the school psychologist participants were asked to identify specific ISB(s) they were aware of that the student engaged in during the previous semester. Participants chose from a list of behaviors including removing clothing, touching private body parts (genitals and for girls, breasts), touching the private body parts of others, masturbating in public, sexually harassing other students or staff members, stalking other students or staff members online or in person, openly discussing private body parts or sexual acts when inappropriate, refusing to touch their own genitals when using the bathroom, or using school computers to look at or download pornography. Participants could also write in other behaviors that were not listed. The participants could select multiple behaviors for each student. After completing this information

for a student, participants were asked if they had any more students who they knew engaged in ISB during the previous semester. If they had additional students who fit these criteria, they were directed to repeat the process of identifying student demographic data and ISBs. If they were finished, they were directed to the attitude rating scale.

**Rating scale.** A pilot version of the rating scale was used in a statewide study in Kansas (Gremo, 2014). Participants were special education teachers and school psychologists. The 18-item rating scale assessed participants' attitudes toward managing ISBs. Participants responded to attitude questions using a Likert-type scale ranging from "strongly disagree" to "strongly agree." Some of the pilot scale items were reverse scored to be consistent with the direction of the overall scale. Reverse scoring the items also reflected the meaning of the items. For example, one item, "I feel uncomfortable addressing inappropriate sexual behavior," had to be changed to reflect the meaning of its ratings. A rating of strongly agree would be opposite from the items that are framed in a positive direction. Reverse scoring the items was confirmed by examining the reliability of the individual items on the scale as a whole. Items with a negative value were identified and then reversed to have positive values. Reverse scoring for negatively worded items was continued for the same items on the present study. Reverse scored scale items are indicated by an asterisk in Appendix A.

Exploratory factor analysis with maximum likelihood extraction and promax rotation revealed three factors, Comfort, Support, and Responsibility/Appropriateness of Curriculum. The three factors represented different concepts. The Comfort and Support factors represented internal states and the personal experiences of the school psychologists while the Responsibility/Appropriateness of Curriculum factor represented external aspects related to managing ISBs. The Comfort factor assessed how comfortable participants felt addressing their

students' ISB at school. This factor included items such as, "I feel comfortable addressing inappropriate sexual behaviors," and "If a student is engaging in inappropriate sexual behavior, I feel comfortable speaking to the child's parents about the behavior." The Support factor assessed participants' level of training on ISBs and their perceived level of administrative support for handling ISBs or implementing sex education for students with disabilities. Some items from this factor included, "My administrators support sex education for students with disabilities," "The student's IEP team can adequately address inappropriate sexual behaviors," and "My training has prepared me to handle inappropriate sexual behaviors in the classroom." The last factor, Responsibility/Appropriateness of Curriculum examined the participants' sense of responsibility for handling ISBs as well as how appropriate they felt that current sex education curricula are for students with disabilities. Items on this factor included, "It is the responsibility of professionals outside the school (psychologist, psychiatrist, physician) to address inappropriate sexual behaviors, not the school," and "The curriculum materials are too language heavy for many students with developmental disabilities."

The rating scale's reliability and validity were also assessed. Internal consistency was calculated to determine the reliability of the scale. Internal consistency was assessed for the overall scale as well as the three individual factors using Cronbach's alpha with maximum likelihood estimation to assess the correlation between the factors. The overall scale reliability was .783. The Comfort factor had the largest alpha value of .803, followed by the Support factor at .710, and the Responsibility/Appropriateness of Curriculum factor at .573. All individual items loaded on their respective factors with a value of at least .239. Therefore, the three factors were considered acceptable measures of their content and all pilot items were retained.

Measures of external validity for the rating scale could not be calculated. There are no other rating scales currently available that assess attitudes toward managing ISB at school. As such, it was not possible to make comparisons to other instruments. An extensive literature review could only find questionnaires on attitudes toward the sexuality of members of the general population and for adults with intellectual disabilities. These questionnaires, the Attitudes to Sexuality Questionnaires (Gilmore & Chambers, 2010) and the Sexuality and Mental Retardation Attitudes Inventory (Brantlinger, 1983) do not include attitudes toward managing ISBs. Instead, they assess attitudes toward sex and relationships between consenting adults with and without intellectual disabilities. For example, the Attitudes to Sexuality Questionnaires (Gilmore & Chambers, 2010) includes items relating to how appropriate people find romantic and sexual relationships between two consenting adults with intellectual disability. Some authors have also developed questionnaires similar to the Attitudes to Sexuality Questionnaires (Gilmore & Chambers, 2010) with items also relating to issues of sex and dating among individuals with intellectual disability. Most often, these measures were used to assess attitudes of either the general population who did not directly interact with individuals with developmental disabilities or day program or residential care workers who worked with individuals with developmental disabilities.

With the exceptions of the Attitudes to Sexuality Questionnaires (Gilmore & Chambers, 2010) and the Sexuality and Mental Retardation Attitudes Inventory (Brantlinger, 1983), studies of adults' attitudes toward sexuality issues for people with developmental disabilities were conducted primarily through qualitative interviews rather than quantitative attitude scales (Pownall, Jahoda, & Hastings, 2012; Wilkenfeld & Ballan, 2011; Young, Gore, & McCarthy, 2012). More often, studies of sexual behaviors of individuals with developmental disabilities did

not include an attitude survey. These studies were small in scale and typically reported on what parents, teachers, or caregivers had witnessed or what information individuals with developmental disabilities knew about sex and sexuality.

In spite of a lack of external validity for the developed scale, the rating scale used in the current study has good content validity. Items in the rating scale were based on a thorough literature review of sexuality and sex education of people with developmental disabilities. The literature review for the survey items looked at studies from the United States and abroad that examined sex, sexuality, and sex education of adolescents and adults with developmental disabilities (Garwood & McCabe, 2000; Grieveo et al., 2006; Healey et al., 2009; Hellemans et al., 2010; Kelly et al., 2009; Koller, 2000; McCabe, 1993; Ousley & Mesibov, 1991; Pownall et al., 2012; Reid, 1995; Ruble & Dalrymple, 1993; Stokes & Kaur, 2005; Sullivan & Caterino, 2008; Van Bourgondien et al., 1997). Attitude questions were designed based on previous attitude studies of day program and school professionals in the United States, Australia, and Europe (Bazzo et al., 2007; Cuskelly & Byrde, 2004; Evans et al., 2009; Gilmore & Chambers, 2010; Kalyva, 2010; McConkey & Ryan, 2001; Meaney-Tavares & Gavidia-Payne, 2012; Pownall et al., 2012; Wilkenfeld & Ballan, 2011; Young et al., 2012). Further, items were constructed following interviews with professionals in the field that were done as part of the author's Ed.S. project. The participants' input on these issues helped to establish the questions that would be included on the rating scale.

The pilot study rating scale initially included both school psychologists and special education teachers in its sample. In order to better understand the responses of school psychologists, the data from pilot study was re-analyzed using only the school psychologists' responses. Again, exploratory factor analysis with maximum likelihood extraction and promax

rotation yielded three factors. These factors were the same as when special education teachers were included in the sample; however, some items appeared on different factors for school psychologists. One item loaded almost evenly across the three factors. As a result, the item was placed on the factor that made most theoretical sense. All other items loaded onto a specific factor. Internal consistency was reassessed using Cronbach's alpha. The internal consistency for the entire scale using only the school psychologists' responses was .677. Internal consistency for the Comfort factor was .745, .709 for the Support factor, and .608 for the Responsibility/Appropriateness of Curriculum factor.

After reanalyzing the factors for the school psychologists using the pilot study data, the individual items were assessed to determine if any should be dropped for the current project. Although there were some weak items in the scale, it was determined that all items should be retained. Some items were statistically weaker than others in terms of the overall scale, but the information from the items was still relevant to the project. Further, these items were not significantly correlated with other factors and they contributed to the overall reliability of their factors.

As a result of the reanalysis, some changes were made to the current rating scale based on the pilot findings (Gremo, 2014). First, additional questions were added to reflect some of the qualitative information from the participants in the pilot as well as from the literature. For example, several pilot study participants wrote in different behaviors that were not available options in the pilot survey. These added behaviors included in-person or online stalking and looking at pornography on school computers. Existing surveys on attitudes toward the sexuality of individuals with disabilities were also examined. These surveys were geared toward professionals and parents and included questions about the participants' attitude toward sexuality

in general and the sexuality of individuals with disabilities (Kalyva, 2010; Stokes & Kaur, 2005; Wilkenfeld & Ballan, 2011). Similar survey items were added to the current study. A more positive attitude toward sexuality may be associated with a more positive attitude toward the other factors of the pilot scale such as the Comfort and the Responsibility/Appropriateness of Curriculum factors.

In summary, the attitude scale used in the present study was developed based on a thorough literature review and was piloted with a sample of special education teachers and school psychologists. No other attitude scales currently exist that assess ISBs, therefore, external validity is unknown. However, a review of the literature and examination of similar attitude scales provides a basis for the items in the scale. Some items on the scale are reverse scored in order to keep the scores consistent with the overall meaning of the scale. The items were factor analyzed using exploratory factor analysis with maximum likelihood extraction and promax rotation. The entire scale, as well as its individual factors, has strong internal consistency.

### **Data Analysis**

**Descriptive Statistics.** Descriptive statistics were prepared for all data collected. Sample demographics were compared against national demographic data available from NASP for school psychologists in order to determine the representativeness of the sample to the profession as a whole. Percentages were calculated to determine how many of the participants have experienced inappropriate sexual behaviors, the type of behaviors observed, and the characteristics of the students engaging in ISBs.

**Analysis of Variance (ANOVA).** Comparing groups based on demographic variables, such as race, gender, and level of education, may reveal differences on the attitude scale. The attitude score was computed by summing the participants' scores on the items of the attitude



scale. An attitude score was created in order to more easily analyze the data and to provide a single score that represented the participants' general views toward the ISBs of their students. The participants' responses ranged from strongly disagree, and a score of one, to strongly agree, and a score of five. The responses were examined and some items were reversed scored in order for all scores to be moving in a positive direction. Higher scores on the attitude score meant an overall more positive attitude toward managing ISBs. Similarly, ANOVAs were also computed using student information. Demographic variables were used to identify groups to determine if their behavior composite scores differed. A total behavior composite was computed for each student, summing his or her total reported ISBs.

**Regression.** Regression analysis was also used to examine the strength of the relationship between participants' attitudes and the length of the participants' careers in years. Regression analysis was used to determine if the more years a participant had in his or her career was correlated with a more positive attitude toward managing ISBs and toward the sexuality of students with developmental disabilities. This trend of a more positive attitude related to the longer a participant's career spanned was found in the pilot study (Gremo, 2014).

## **Results**

In this chapter, the demographic information for the participants and the students they described will be examined. Second, descriptive information on the reported ISBs will be presented. Third, the properties of the attitude scale will be analyzed, including the structure of the scale factors, internal consistency of the scale, and the properties of the attitude score. The research questions will be explored including the reported occurrence of ISBs by students with developmental disabilities and the school psychologist's responses to the attitude scale.

### **Participants**

Initially seven state school psychology associations were contacted about participating in the survey: Alaska, Florida, Louisiana, Minnesota, New Hampshire, New Jersey, and Pennsylvania. After a poor response rate from several state organizations, two additional state organizations, Kansas and Missouri, were added. The total number of current members in each state organization was obtained. Alaska's organization has 70 members, Florida has 332, Kansas has 184, Louisiana has 225, Minnesota has 226, Missouri has 150, New Hampshire has 179, New Jersey has 560, and Pennsylvania has 514. This totals 2,440 possible participants. However, a response rate could not be calculated due to the organizations using different methods of contacting participants. Some organizations used email distribution lists and others posted the survey link on their websites or social media accounts, such as FaceBook and Twitter, for participants to access. Alaska, Florida, and New Jersey used email distribution lists. Louisiana and Missouri posted on their organizations' websites. Kansas sent the link out via both an email distribution list and posted the link on their social media accounts. Last, Pennsylvania shared the link with their participants via email, posting on their website, and sharing the link via social

media accounts. The number of participants from each state is summarized in Table 1. There were no responses from the New Hampshire and Minnesota school psychology associations.

Table 1

*Participants by State*

State	Number of Respondents	Percent of Respondents
Alaska	12	16.0
Florida	15	20.0
Louisiana	1	1.3
New Jersey	19	25.3
Pennsylvania	10	13.3
Kansas	4	5.3
Missouri	14	18.7
Total	75	100.0

**Participant demographics.** Seventy-five participants completed the demographic portion of the survey. Sixty-three (84%) were women, 11 (14.7%) were men, and one (1.3%) preferred not to report his or her gender. The majority of participants, 69, were White and non-Hispanic (92%), four were Hispanic (5.3%), one identified as bi- or multiracial (1.3%), and one (1.3%) preferred not to report his or her race. The participants also reported their highest level of education attained. Forty-four participants held a specialist degree in school psychology (58.7%), 14 held a doctoral degree (18.7%), six held Masters degrees (8%), and 10 (13.3%) held a degree not listed. Other degrees the participants reported included a M.S. CAS, and a Ph.D. in clinical psychology.

The demographics of the participants in this study are consistent with the national demographics obtained by NASP in 2010 (Curtis, Castillo, & Gelley, 2010). Curtis and colleagues (2010) conducted a national survey of NASP members to obtain demographic information, such as race/ethnicity, gender, degrees held, and employment setting. In their national examination of school psychologists the authors reported that 90.7% of school psychologists were White and 3.4% were Hispanic; bi- or multiracial was not an examined category. Curtis and colleagues (2010) reported that 76.1% of school-based practitioners were women. Curtis and colleagues (2010) also reported that 25.1% held a master's degree, 45.8% held a specialist degree, and 24.2% held a doctoral degree. The nationally representative demographics described by Curtis, Castillo, and Gelley (2010) are mostly consistent with the demographic data for the participants in the present study. The majority of the participants in the present study were women, White, and held an educational specialist degree.

Seventy-four participants reported their years in practice; these results are summarized in Table 2. The values in this table were calculated using a frequency count of the years the participants reported that they had practiced as a school psychologist. Participants were able to select the exact number of years they had practiced as a school psychologist on the survey, however, the results of this frequency count is reported in five year bands. More than half of the (percentage) participants were early career school psychologists with 10 or fewer years of experience.

Table 2

*Participants' Years In Practice As a School Psychologist*

Years of Practice	Number of Participants	Percentage of Participants
1–5	36	48.6
6–10	14	18.9
11–15	11	14.9
16–20	7	9.4
21–25	1	1.4
26–30	2	2.7
31–34	2	2.7
35–40	1	1.4
Total	74	100.0

*Note.* Years of practice are reported in five-year bands. Participants were allowed to select the exact number of years that had practiced as a school psychologist.

Last, participants in the current study reported the ages and grade levels of the students in the buildings they are located in. Participants were allowed to select multiple options for the students they serve because school psychologists frequently cover multiple buildings across grade levels (Fagan & Wise, 2007). Forty-four (59.4%) participants worked with students in early childhood and kindergarten, 59 (79.7%) worked with elementary grade-level students, 29 (39.1%) worked with middle school students, 30 (40.5%) worked with high school students, and 16 (21.6%) worked with students at the transition level; students with disabilities who are between ages 18-22 and are continuing to receive special education services beyond high school.

Participants were asked specific questions regarding their experience with ISBs. Participants were also asked about the training they had received related to ISBs, whether they

had experienced these behaviors at any time in their career, and if they had experienced a student engaging in these behaviors during the August-December 2014 semester. Seventy-three participants answered these questions. Most of the participants, 64.2%, reported that they had not received any training on managing ISBs by students with developmental disabilities. A large percentage of participants, 77.8%, had experienced a student with developmental disabilities engaging in ISBs at some time during their career. Last, 56.2% of participants in the present study reported that they had experienced a student engaging in ISBs at school during the August-December 2014 semester. Participants who reported that they had experienced a student engaging in ISBs during the August-December 2014 semester were then asked to report on the students who engaged in these behaviors.

**Student demographics.** Participants identified 67 students with developmental disabilities who engaged in ISBs during the August-December 2014 semester. Not all participants identified a student who engaged in ISBs. If participants did not identify any students on their caseload who engaged in these behaviors, they were allowed to continue on to the attitude scale section of the survey. Participants from all participating states identified at least one student who engaged in ISBs. Two states, New Hampshire and Minnesota, did not have any participants. It is possible that no one from these states experienced a student engaging in ISBs, but it may be more likely due to poor survey distribution practices by their state school psychology organizations.

Thirty-eight participants identified at least one student who engaged in an ISB during the previous semester. Eighteen participants identified two students, eight identified three students, two reported four students, and one participant identified five students who engaged in ISBs. Fifty-three (79.1%) of the students who engaged in these behaviors were boys and 14 were girls

(20.9%). The participants also described the students by their special education exceptionalities. Participants selected from four exceptionalities: autism, developmental delay, intellectual disability, and an “other” to describe exceptionalities or conditions that were not listed. The school psychologist participants were allowed to select multiple exceptionalities for each student on their caseload who engaged in an ISB. Thirty-two students were identified as having autism, 10 had a developmental delay, 29 had intellectual disability, and 14 had other diagnoses or were served under other special education exceptionalities that were not listed. Other special education exceptionalities the participants reported included Other Health Impairment, Emotional Disturbance, Specific Learning Disability, and Visual Impairment. Students were also reported to have other psychiatric diagnoses including attention deficit hyperactivity disorder, bipolar disorder, and schizophrenia. Fifteen students had two or more exceptionalities reported; twelve had two exceptionalities reported and three had three exceptionalities reported. Seven students were reported to have autism and intellectual disability, two had autism and developmental delay, two had intellectual disability and another category; two had autism, intellectual disability, and another exceptionality not listed; and one had autism, developmental delay, and another exceptionality not listed. The students’ grade levels were also identified with the exception of one student whose grade level was not reported. Six (9.1%) were in early childhood or kindergarten, 22 (33.3%) were in elementary grades, 14 (21.2%) were in middle school, 20 (27%) were in high school, and four (6.1%) were in transition settings.

### **Student inappropriate sexual behaviors**

Table 3 shows the number of students who were reported engaging in each ISB. The most common ISB the participants reported was touching one’s own private body parts in public. The least commonly reported behaviors included looking at pornography at school, in-person

and online stalking, refusing to touch one's own genitals when using the bathroom, and other behaviors not listed. The two other behaviors not listed were described by the respondents and included kissing classmates without consent and refusing to attend school in order to look at pornography at home.



Table 3

*Number and Percent of Inappropriate Sexual Behaviors*

ISB	Number	Percent
Touching Own Private Body Parts	35	22.7
Discussing Private Acts in Public	24	15.6
Masturbation	22	14.3
Sexual Harassment	20	12.9
Touching Others' Private Body Parts	18	11.7
Undressing in Public	15	9.74
Pornography at School	9	5.84
In-Person Stalking	5	3.25
Stalking Online	3	1.95
Other	2	1.30
Refusing to Touch Own Genitals	1	0.64
Total ISBs	154	100.0

*Note.* ISB = Inappropriate Sexual Behavior.

The types of behaviors were also examined by student demographic data. Behaviors were examined by disability and are summarized in Table 4. The results reported in this table were determined by conducting a frequency count of the behaviors by students dependent on their special education exceptionality. Students with autism were reported as engaging in the most ISBs while students in the developmental delay category engaged in the fewest behaviors. The number of behaviors reported in Table 4, 168, does not match the total reported behaviors, 154, in Table 3, because some of these behaviors were counted more than once due to participants being able to select multiple exceptionalities for their students. Fifteen students were listed as having more than one special education exceptionality, which caused the behaviors they engaged in to be counted for each of the exceptionalities they had listed. For example, if a student was reported to have autism and intellectual disability and the student engaged in one behavior, the behavior would be counted twice, once for autism and once for intellectual disability.

Table 4

*Number and Percent of Inappropriate Sexual Behaviors by Exceptionality*

Exceptionality	Number	Percent
Autism	68	40.4
Intellectual Disability	57	33.9
Developmental Delay	12	7.1
Other	31	18.5
Number of Behaviors by Exceptionality	168	100

*Note.* Participants were allowed to select more than one exceptionality for each student. Fifteen participants reported two or more exceptionalities. Behaviors for those students are counted under each exceptionality and are therefore included in this table more than once.

ISBs were also examined by gender. These results are reported in Table 5. Results reported in this table were calculated by conducting counts of the different ISBs by boys and by girls. A graph depicting the ISBs by gender is reported in Figure 1. The total reported behaviors, 154, are consistent with the total behaviors reported in Table 3. All participants identified a gender for their students. Each behavior was counted once because participants were only able to select one option for the student's gender. Boys engaged in 128 (83.1%) ISBs while girls engaged in 26 (16.8%) behaviors. Only boys were reported to look at or download pornographic materials at school and to refuse to touch their own genitals when using the bathroom.

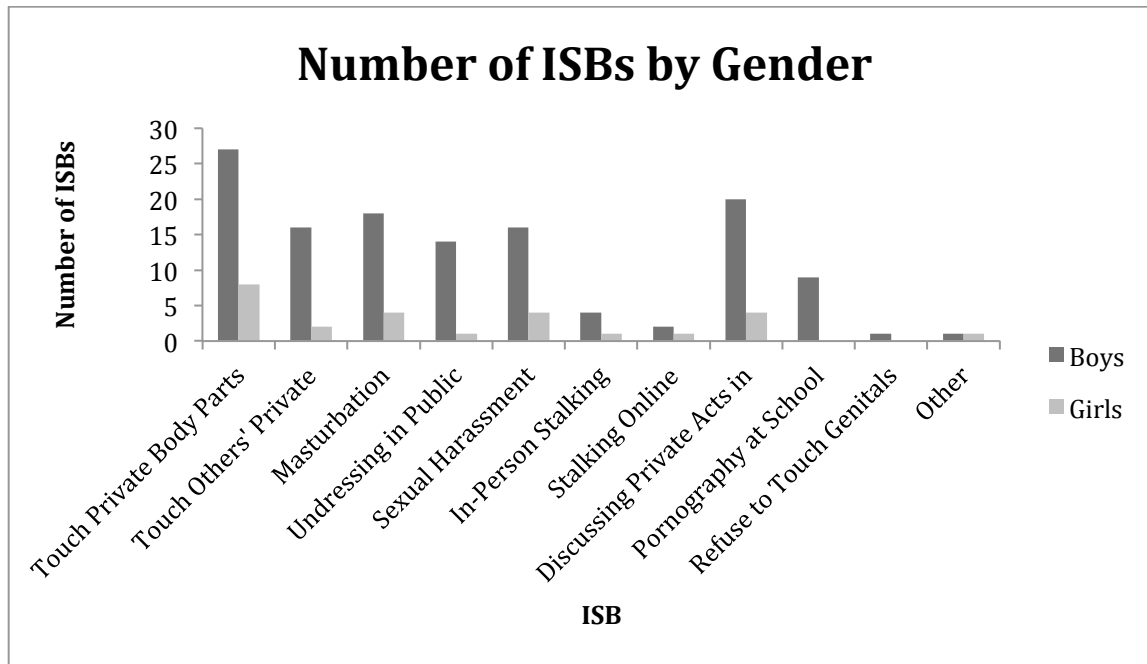
Table 5

*Number and Percent of Inappropriate Sexual Behaviors by Gender*

ISB	Number of ISBs Exhibited by Boys	Percent	Number of ISBs Exhibited by Girls	Percent
Touch Private Body Parts	27	77.1	8	22.9
Touch Others' Private Body Parts	16	88.9	2	11.1
Masturbation	18	81.1	4	18.2
Undressing in Public	14	93.3	1	6.7
Sexual Harassment	16	80.0	4	20.0
In-Person Stalking	4	80.0	1	20.0
Stalking Online	2	66.7	1	33.3
Discussing Private Acts in Public	20	83.3	4	16.7
Pornography at School	9	100.0		
Refuse to Touch Genitals	1	100.0		
Other*	1	50.0	1	50.0
Total	128	83.1	26	16.8

*Note.* ISB = Inappropriate Sexual Behavior. Girls were not reported to look at pornography at school or refuse to touch their genitals when using the bathroom.

\* = The other behaviors not listed included kissing classmates without their consent and staying home from school to watch pornography on the family computer.



*Figure 1.* Number of ISBs by gender. This graph shows the ISBs that boys and girls were reported to engage in.

ISBs were also examined by the students' grade level. These results are summarized in Table 6. Results reported in this table were derived by counting the different behaviors that were reported for students in each grade level. The results are also represented in a graph in Figure 2. The reported behaviors, 153, does not match the overall total, 154, reported in Table 3 because grade level was not reported for one student. Students in high school engaged in the largest number of behaviors, 59 (38.6%), and students in transition programs engaged in the fewest, eight (5.2%). This may be due to there being fewer students enrolled in school between the ages of 18 and 22.

Table 6

*Number of Inappropriate Sexual Behaviors by Grade Level*

ISB	Early Childhood	Elementary	Middle	High	Transition
Touch Private Body Parts	5	10	10	7	2
Touch Others' Private Body Parts	2	6	3	7	
Masturbation		6	8	6	2
Undressing in Public	2	5		8	
Sexual Harassment		6	4	9	1
In-Person Stalking				4	1
Stalking Online				3	
Discussing Private Acts in Public	1	7	5	11	
Pornography at School			4	4	1
Refuse to Touch Genitals					1
Other*			2		
Total	10	40	36	59	8
Total Percent	6.5	26.1	23.5	38.6	5.2

*Note.* ISB = Inappropriate Sexual Behavior

Participants were allowed to select more than one behavior for each student. The total behaviors in this table, 153, does not match the overall total, 154, because grade level was not reported for one student.

Blank cells indicate that students in that grade band were not associated with that particular ISB.

\* = The other behaviors not listed included kissing classmates without their consent and staying home from school to watch pornography on the family computer.

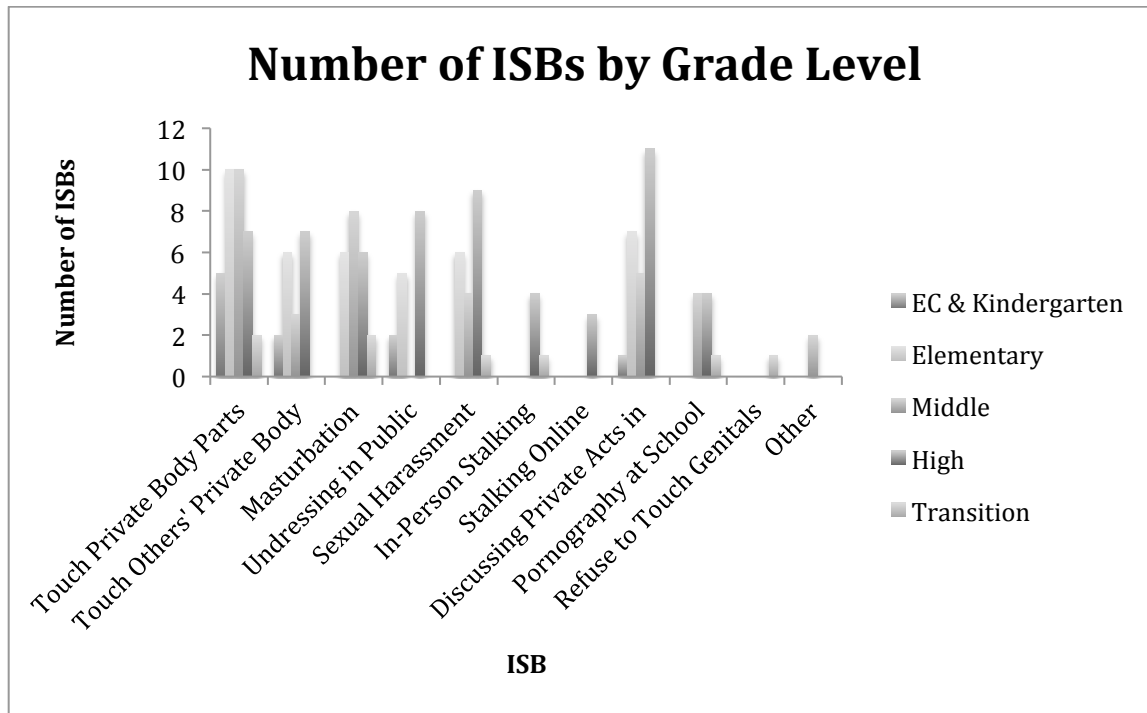


Figure 2. Number of ISBs by grade level. This graph shows the number of ISBs reported for each grade level.



Last, the behaviors were examined by the students' special education exceptionalities. These results are summarized in Table 7. The values in this table were derived by counting the different behaviors that students with each exceptionality engaged in. The total reported behaviors in this table, 199, is greater than the overall total of 154 reported in Table 3 because participants were allowed to select more than one exceptionality for each student. Fifteen students were reported to have two or more special education exceptionalities. Twelve students had two reported exceptionalities and three students had three reported exceptionalities. If a student were reported to have more than one exceptionality then their behaviors would be counted for each of their exceptionalities. For example, if a student was reported to have autism and developmental delay and the student engaged in three total inappropriate sexual behaviors, then the three behaviors would be counted both for the autism and developmental delay exceptionalities.

Table 7

*Number and Percent of Inappropriate Sexual Behaviors by Exceptionality*

ISB	Autism	Percent Autism	DD	Percent DD	ID	Percent ID	Other	Percent Other
Touch Private Body Parts	17	25.4	5	7.5	16	23.9	7	10.4
Touch Others' Private Body Parts	10	14.9	3	4.5	5	7.5	4	6.0
Masturbation	13	19.4	1	1.5	12	17.9	4	6.0
Undressing in Public	6	9.0	1	1.5	9	13.4	2	3.0
Sexual Harassment	8	11.9	1	1.5	10	14.9	7	10.4
In-Person Stalking	4	6.0			2	3.0	1	1.5
Stalking Online	2	3.0			1	1.5	2	3.0
Discussing Private Acts in Public	9	13	3	4.4	11	16.4	8	11.9
Pornography at School	6	9.0			2	3.0	4	6.0
Refuse to Touch Genitals			1	1.5				
Other*	2	3.0						
Total	77	38.7	15	7.5	68	34.2	39	19.6

*Note.* DD = Developmental Delay, ID = Intellectual Disability, ISB = Inappropriate Sexual Behavior.

Blank cells indicate that ISBs were not associated with that particular exceptionality.

\* = The two other behaviors were kissing classmates without their consent and staying home from school to look at pornography on the family computer.

**Behavior Composite.** A behavior composite was computed for each student by summing the ISBs that each student engaged in. This composite was used to make comparisons between students based on demographic data. The composite was evaluated using descriptive statistics. The mean for the behavior composite was 2.30. The distribution of the composite was examined using the Shapiro-Wilk test to determine whether the behavior composite was normally distributed. The behavior composite was not normally distributed,  $W(67) = .87, p < .05$ . The shape of this frequency distribution is reported in Figure 3 with the normal curve overlaid. The data were positively skewed.

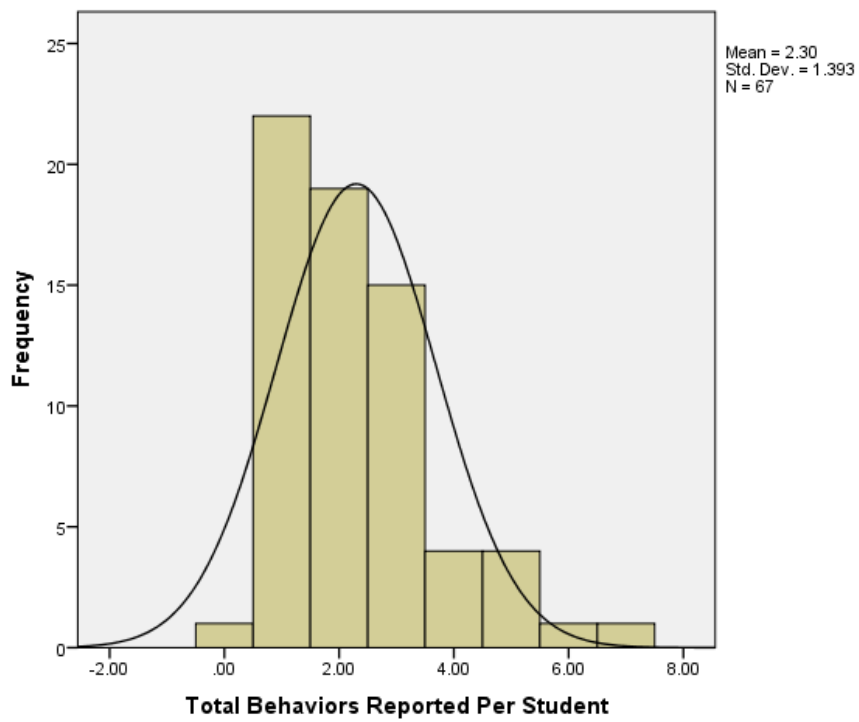


Figure 3. Frequency distribution of total ISBs per student. This distribution shows the number of ISBs for each student. The behaviors are not normally distributed.

**Research Question 1: Do numbers of ISBs vary by grade level or gender? Do boys engage in a greater variety of ISBs than girls? Do older students engage in a greater variety of ISBs than younger students?**

The behavior composite scores were not normally distributed; therefore, an analysis of the variances in the demographic data was necessary to determine if ANOVAs could be interpretable. Variances on the student demographic data were also examined to determine if the *F* test results were statistically significant. Variances that have a value less than three or four indicate that it is permissible to conduct an ANOVA F-test (Zaiontz, 2014). The variance for student grade level was 1.25 and the variance for gender was .17.

One-way ANOVA was used to determine if any differences in the behavior composite existed between students on the basis of demographic variables. A linear regression was not used due to grade level being measured in bands (e.g.; grades 6-8 representing middle school) rather than individual years. There was no significant difference in the variety of ISBs a student engaged in and grade level,  $F(4, 61) = 2.43, p = .058$ . One-way ANOVA was also used to determine differences in the variety of ISBs on the basis of gender. There was no significant difference in the variety of ISBs that boys and girls engaged in,  $F(1, 65) = 1.80, p = .19$ . Boys and girls in this sample had similar behavioral repertoires of ISBs and each engaged in about 2.3 ISBs even though boys accounted for about 80% of the sample.

It was hypothesized that there would be statistically significant differences between groups in the present sample for the variety of ISBs the students engaged in. ANOVAs demonstrated that there were no significant differences between students by gender or grade level in the present sample for the variety of ISBs the individual students engaged in. These

results cannot be extrapolated to the entire population of students with developmental disabilities in the United States. Rather, the results show that differences in the variety of ISBs do not exist on the basis on gender or grade level within this particular sample of students.

### **School Psychologists' Responses to the Attitude Scale**

The second half of the survey was an attitude scale assessing school psychologists' attitudes toward managing ISBs by students with developmental disabilities at school. The attitude survey items were analyzed using exploratory factor analysis with maximum likelihood extraction and promax rotation. Seventy-two participants completed the entire attitude survey. Seventy-seven participants began the survey but five did not complete it. These incomplete responses were retained because most of the items on the scale were completed. The number of participants who completed each item as well as the modal response per item is reported in Table 8.

Table 8

*Attitude Scale Item Descriptive Statistics*

Scale Item	<i>n</i>	Mode
Teachers should address inappropriate sexual behaviors in children with disabilities	77	4
My training has prepared me to handle inappropriate sexual behaviors in the classroom	77	2
I feel comfortable addressing inappropriate sexual behaviors	77	4
I have enough information and resources available to address inappropriate sexual behaviors in the classroom	77	2
My administrators support sex education for students with disabilities	77	3
If a student is engaging in inappropriate sexual behaviors in class, I feel comfortable speaking to the child's parents about the behavior	77	4
When a student asks questions about sex or sexuality I am able to address them	75	4
The curriculum materials are too language-heavy for many students with developmental disabilities	75	4
Addressing sexuality issues is a part of my job	74	4
I feel uncomfortable addressing inappropriate sexual behaviors	74	4
Inappropriate sexual behaviors will go away if they are ignored	74	4
Individuals with disabilities should not engage in any sexual behaviors	74	4
I have access to standardized sex education curricula for students with disabilities	72	2
I am comfortable addressing sexuality with all students, regardless of disability.	72	4
I would like to have standardized sex education materials for students with disabilities	72	4
It is the responsibility of professionals outside the school (psychologist, psychiatrist, physician) to address inappropriate sexual behaviors, not school staff	72	2

It is difficult to communicate with parents and outside professionals about inappropriate sexual behaviors at school	72	4
I am comfortable delivering sex education to students with disabilities	72	2
Sexuality is a normal part of life for all people, regardless of disability	72	5

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*Note.*  $n$  = Number of participants who answered the item, SD = Standard deviation

Seventy-seven participants began the survey and 72 completed it.

Scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree

**Attitude score.** In order to more easily analyze participants' responses to the attitude scale, an attitude score was computed. First, negatively worded items were reverse scored. Items that were reverse scored on the pilot were reverse scored again for the current project. For example, the item, "I feel uncomfortable addressing ISBs" was reverse scored due to higher scores corresponding with a more negative attitude and indicating that the participant was more uncomfortable with the behavior. Reverse scoring allowed for participants' answers to all of the individual items on the attitude scale to be summed. The sum of these scores created the attitude score. Higher attitude scores indicated a more positive attitude toward managing inappropriate sexual behaviors. The items ranged from strongly disagree, and a score of 1, to strongly agree, and a score of 5. Descriptive statistics were computed for the attitude score. The mean score was 66.01, the median was 67, the mode was 64, and the range was 34. The Shapiro-Wilk test of normality was also conducted to determine if scores were normally distributed among participants. The participants' responses to the attitude survey as defined by the attitude score were normally distributed,  $W(67) = .97, p = .10$ .

**Scale properties.** Exploratory factor analysis using maximum likelihood extraction and promax rotation was conducted on the attitude scale items to determine an underlying factor structure. In the pilot of this survey (Gremo, 2014), three factors were identified: Comfort, Support, and Responsibility/Appropriateness of Curriculum. The scree plot from the pilot study,



presented in Figure 3 in Appendix C, shows a three-factor solution. However, the third factor from the pilot, Responsibility/Appropriateness of Curriculum, had comparatively weak internal consistency, items with the weakest factor loadings, and items that did not make theoretical sense together. Given these weaknesses, the three-factor solution was reconsidered for the present study and a two-factor solution was used instead. Courtney (2013) and Ledesma and Valero-Mora (2007) discussed the decision-making process for determining the number of factors to retain when using exploratory factor analysis. The authors advise researchers to examine the percent of variance explained by the factors, the factors' Eigenvalues, and the scree plot to guide the researcher's decision-making process. Courtney (2013) and Ledesma and Valero-Mora (2007) state that the most important component to making the decision on what factors to retain is whether the items make theoretical sense together and if they provide a parsimonious solution. Each of the authors' suggestions on factor retention will be examined further.

Two factors were extracted from the scale in the present study, Comfort with Managing ISBs and Attitudes Toward Sexuality and Sex Education. The Comfort with Managing ISBs accounted for 29.06% of the variance and the Attitudes Toward Sexuality and Sex Education factor explained 14.32% of the variance. The items that would have been on the third factor only explained an additional 7.19% of the total variance. The Eigenvalues of the two retained factors were also reported. The Comfort with Managing ISBs had an Eigenvalue of 5.52 and the Attitudes Toward Sexuality and Sex Education factor had an Eigenvalue of 2.72. The third factor had an Eigenvalue of 1.37, which is less than the Eigenvalues of the two retained factors. Last, a scree plot for the present study was analyzed. The scree plot can be used to help a researcher determine how many factors to retain. Courtney (2013) and Ledesma and Valero-Mora (2007) identify the scree plot as a popular, although subjective method for guiding researchers on the

number of factors to retain. While it can be a helpful decision-making tool, the authors point out that the scree plot should not provide the final judgment on the number of factors to retain. A scree plot for the present study was created and is provided in Figure 4.

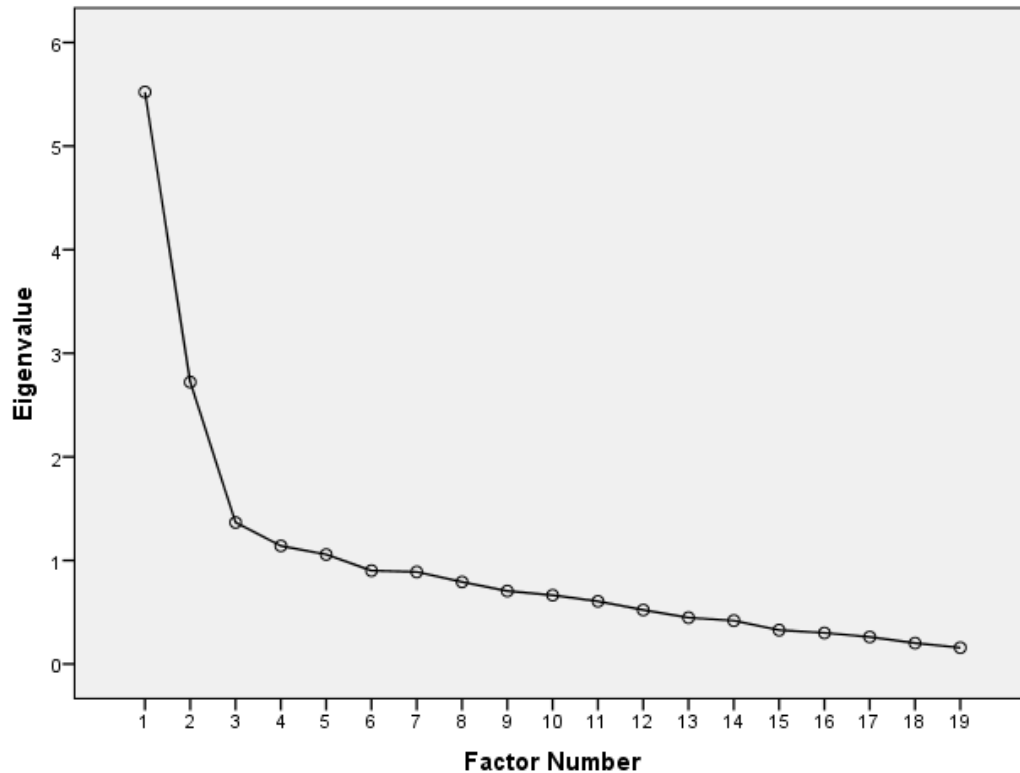


Figure 4. *Scree plot for the present study's exploratory factor analysis using maximum likelihood extraction and promax rotation.*

**Scale items.** The items and their factor loadings are summarized in Table 9. Three items, “It is the responsibility of parents alone to address their child’s inappropriate sexual behaviors,” “The standardized sex education curriculum is appropriate for all special education students,” and “It is the responsibility of the school nurse to address sex education for students with disabilities” were removed from the scale due to low factor loadings on either factor. Additionally, these factors did not add much to the internal consistency of the overall scale as well as to any of the factors. These removed items are noted in Table 9 with an asterisk (\*). These items were low performers on the pilot (Gremo, 2014) as well. The author considered removing these same items after the pilot but they were retained to see how they performed on the final version of the scale. These items continued to provide little information on the current version of this scale. Eliminating these items allowed for a more parsimonious scale as well as factors that made more sense theoretically. A factor loading of .3 was chosen as the threshold for retaining an item in the scale. This criterion was set using the guidelines from Tabachnick and Fidell (2012) who recommend retaining items with factor loadings of at least .32. Tabachnick and Fidell (2012) report that items with factor loadings of at least .32 are robust and provide enough meaningful information to the scale. All but one of the items on this factor have a factor loading of .3 or greater with most items having a factor loading of at least .6. The item with a factor loading of .28, “The student’s IEP team can adequately address inappropriate sexual behaviors,” was retained despite its low factor loading value because the item was relevant to school psychologists who are key members of IEP teams.

Table 9

*Factor Loadings for Exploratory Factor Analysis with Promax Rotation and Maximum Likelihood Extraction*

Scale Items	Comfort	Sex Education
I feel comfortable addressing inappropriate sexual behaviors	<b>.820</b>	.381
I am comfortable addressing sexuality with all students, regardless of disability	<b>.768</b>	.585
If a student is engaging in inappropriate sexual behaviors in class, I feel comfortable speaking to the child's parents about the behavior	<b>.666</b>	.469
My training has prepared me to handle inappropriate sexual behaviors	<b>.642</b>	.004
I feel uncomfortable addressing inappropriate sexual behaviors	<b>.659</b>	.439
I have enough information and resources available to address inappropriate sexual behaviors in the classroom	<b>.638</b>	.074
I am comfortable delivering sex education to students with disabilities	<b>.629</b>	.451
When a student asks questions about sex or sexuality, I am able to address them	<b>.521</b>	.427
It is difficult to communicate with parents and outside professionals about inappropriate sexual behaviors at school	<b>.459</b>	.307
Addressing sexuality issues is part of my job	<b>.372</b>	.214
My administrators support sex education for students with disabilities	<b>.322</b>	-.008
I have access to standardized sex education curricula for students with disabilities	<b>.312</b>	-.033
The student's IEP team can adequately address inappropriate sexual behaviors	<b>.289</b>	-.054
Individuals with disabilities should not engage in any sexual behaviors	.239	<b>.741</b>

Inappropriate sexual behaviors will go away if they are ignored	.215	<b>.684</b>
Sexuality is a normal part of life for all people, regardless of disability	.164	<b>.655</b>
I would like to have standardized sex education materials for students with disabilities	.137	<b>.631</b>
The curriculum materials are too language-heavy for students with developmental disabilities	.114	<b>.503</b>
Teachers should address inappropriate sexual behaviors in children with disabilities	.289	<b>.384</b>
It is the responsibility of professionals outside the school to address inappropriate sexual behaviors, not school staff	.127	<b>.377</b>
The standardized sex education curriculum is appropriate for all special education students	-.022	<b>*.268</b>
It is the responsibility of parents alone to address their child's inappropriate sexual behavior It is the responsibility of parents alone to address their child's inappropriate sexual behavior	.010	<b>*.119</b>
It is the responsibility of the school nurse to address sex education for students with developmental disabilities	.010	<b>*.063</b>

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*Note.* Sex Education = Attitudes Toward Sexuality and Sex Education

Comfort = Comfort with Managing ISBs

\* = Item removed from the scale due to low factor loading

The Comfort with Managing ISBs factor had 13 items and represented how comfortable participants felt addressing ISBs at school. Items were related to both directly addressing and managing ISBs as well as communicating with parents and other professionals about these behaviors. School psychologists are often responsible for addressing behaviors at school and communicating with the school team, outside professionals who work with the student, and the student's family members about the student's behaviors. "Addressing behaviors" refers to both direct intervention as well as consultation with parents or teachers. Reliability for this factor was assessed using Cronbach's alpha and yielded a reliability of .780. This factor accounted for 27.79% of the total variance.

The Attitudes Toward Sexuality and Sex Education factor had seven items and represented participants' attitudes toward sexuality in general, the sexuality of individuals with disabilities specifically, and attitudes toward sex education for both general and special education students. It also asked about the participants' attitudes toward standardized sex education materials for students with disabilities. Participants' knowledge of and attitudes toward sex education curricula for students with disabilities was examined more thoroughly in the pilot of the present study (Gremo, 2014). This was not the focus of the present study due to the sample being restricted to school psychologists. School psychologists may be aware of sex education programs but are not as likely to deliver these programs, as are teachers. Reliability for the Attitudes Toward Sexuality and Sex Education factor was .618. This factor accounted for 14.18% of the total variance. As with the Comfort with Managing ISBs factor, all of the items on the Attitudes Toward Sexuality and Sex Education factor had factor loadings greater than .30 and most being greater than .50.

The correlation between the two factors was also analyzed. There was a moderate correlation of .40 between factors one and two, indicating that the factors shared some similarities. This demonstrated that the promax rotation method was an appropriate analysis choice because it allows some correlation to occur between the factors. This is preferable because there is likely some theoretical relationship between the items.

In summary, two factors emerged from the attitude survey items relating to ISBs that explained 41.97% of the total variance. A two-factor solution was used instead of the three-factor solution that was used in the pilot (Gremo, 2014) due to low factor loadings, and a small additional amount of explained variance on the third factor. Three items were removed based on low factor loadings on the second factor. The two factors, Comfort with Managing ISBs and Attitudes Toward Sexuality and Sex Education, had robust reliabilities and strong factor loadings for their items. Table 10 summarizes the number of items, eigenvalues, factor loading range, and variance explained for each factor.

Table 10

*Summary of the Two Factors from Maximum Likelihood Factor Analysis*

Factor	Items	Eigenvalue	Factor Loading Range	Percent of Variance Explained
Comfort	13	5.56	.289-.820	27.79
Sex Education	7	2.84	.377-.741	14.18

*Note.* Comfort = Comfort with Managing ISBs

Sex Education = Attitudes Toward Sexuality and Sex Education

The extracted two-factor solution explained 41.97% of the total variance.

**Research Question 2: Is overall participant attitude toward inappropriate sexual behavior influenced by demographic variables? Is more years of practice and specific training in managing ISBs related to a more positive attitude toward sexuality and managing ISBs of individuals with developmental disabilities?**

One-way ANOVAs were computed to test the relationship between participants' race, gender, level of education, and whether they had received previous training on managing ISBs with the total attitude score. There was no statistically significant difference in attitude on the basis of race,  $F(2, 64) = .59, p = .56$ ; gender,  $F(1, 65) = .14, p = .71$ ; or participants' level of education,  $F(3, 63) = 1.23, p = .31$ . There was a statistically significant difference in attitude between school psychologists who had and had not received training in managing ISBs,  $F(1, 65) = 5.14, p < .05$ .

Linear regression was computed to further investigate the relationship between the participants' years of practice and their overall attitude. The participants' years of practice was measured as a continuous variable; participants selected how many years they had practiced as a school psychologist. Participants' years of practice significantly predicted a more positive attitude toward managing ISBs,  $\beta = .353, t(64) = 3.17, p < .05$ .



## **Discussion**

The purpose of this study was to examine the occurrence of school psychologist reported ISBs by students with developmental disabilities at school and to examine school psychologists' attitudes toward these behaviors. The results of the analyses will be discussed as well as implications for research and practice and study limitations.

The present study demonstrated that the majority of participants had experienced a student engaging in ISBs both at some point during their careers and during the August-December 2014 semester, yet many had not received any specific training to address these behaviors. These results support the findings of Gremo (2014), Kalyva (2010), and Wilkenfeld and Ballan (2011) who examined how often students with disabilities engaged in ISBs at school and the attitudes of school staff members toward these behaviors.

### **The reported occurrence of inappropriate sexual behaviors**

Previous research demonstrated that individuals with developmental disabilities experienced physical sexual development at similar onsets to their peers without disabilities (Murphy & Elias, 2006; & Murphy & Young, 2005). Research demonstrated that adults with developmental disabilities were found to experience similar feelings of love and sexual desire as adults without disabilities (Healey et al., 2009; & Kelly et al., 2009). However, research also shows that individuals with developmental disabilities engage in ISBs (Gremo, 2014; Hellemans et al., 2010; Pownall et al., 2012; Reid, 1995; & Ruble & Dalrymple, 1993; & Sullivan & Caterino, 2008). Individuals with developmental disabilities were also more likely to engage in ISBs than their same-age non-disabled peers (Stokes & Kaur, 2005).

The results from the present study were similar to the findings of previous studies examining the occurrence of ISBs by young people with developmental disabilities. Students

with developmental disabilities identified in the present study reportedly engaged in a number of ISBs at school ranging from touching one's genitals to making unwanted sexual comments or advances toward other students and staff. School psychologist participants in the present study identified 67 students with developmental disabilities who engaged in at least one ISB during the previous semester.

**Research Question 1: Do numbers of ISBs vary by grade level or gender? Do boys engage in a greater variety of ISBs than girls? Do older students engage in a greater variety of ISBs than younger students?**

There was no relationship between demographic group membership, such as grade, gender, and special education exceptionalities, and the variety of ISBs that the students displayed. It was initially hypothesized that boys would engage in more ISBs than girls because there were more boys than girls reported in the sample. However, the larger number of boys in the present sample is likely related to there being more boys identified as having developmental disabilities than girls. It was also initially hypothesized that older students would engage in a greater variety of ISBs than younger students because younger students not yet experiencing physical sexual development and perhaps being less likely to engage in these behaviors if they had not yet reached sexual maturity (Murphy & Elias, 2006; Murphy & Young, 2005). In fact, the results from the present study demonstrated that boys, girls, and students across all grade levels had the same number of unique ISBs in their behavioral repertoire. The results from the present study cannot be extrapolated to the population of students with developmental disabilities in the United States. The results of the present study only show that differences do not exist between boys and girls and between grade levels in the different types of ISBs the students engaged in within this particular sample.

### **Attitude scale**

An attitude scale was utilized to gain information on school psychologists' attitudes toward the sexuality of individuals with developmental disabilities and toward managing ISBs. This is the first study to utilize an attitude scale to assess professionals' attitudes toward ISBs. Some previous studies assessing the attitudes of adults toward sexuality and intimate relationships among adults with developmental disabilities utilized attitude surveys and questionnaires (Bazzo et al., 2007; Brantlinger, 1983; Cuskelly & Bryde, 2004; Gilmore & Chambers, 2010; McConkey & Ryan, 2001; Meaney-Tavares & Gavidia-Payne, 2012; Young et al., 2012), but only two (Brantlinger, 1983; Cuskelly & Bryde, 2004) developed attitude scales that were factor analyzed and evaluated for consistency. These scales, however, focused on adults' attitudes toward consensual sex and relationships between adults with developmental disabilities, not ISBs. Further, these studies did not include the attitudes of school professionals.

Only two of the studies described in the literature review examined the attitudes of school professionals. Kalyva (2010) and Wilkenfeld and Ballan, (2011) surveyed special education teachers on the occurrence of ISBs by their students at school. School psychologists were not included in the sample for either study. Wilkenfeld and Ballan (2011) conducted qualitative interviews with special education teachers in the United States and Kalyva (2010) used a questionnaire to ask special education teachers in Greece about their students' sexuality and concerns about their behaviors. Both studies demonstrated that educators had concerns about their students with developmental disabilities engaging in ISBs, but neither utilized an attitude scale.

The present study utilized an attitude scale that was based on a thorough review of the literature as well as qualitative interviews with professionals who work with children and

adolescents with developmental disabilities. The study was piloted with school psychologists and special education teachers in a single state (Gremo, 2014). Following data collection for the current study, the scale was re-analyzed using a two-factor solution instead of the original three-factor solution. Three items were removed due to low factor loadings on either factor and 20 items were retained. The reliability of both the overall scale and the individual factors was strong. A total attitude score was computed for each participant by summing the scores for each of the retained items.

**Research Question 2: Is overall participant attitude toward inappropriate sexual behavior influenced by demographic variables? Is more years of practice and specific training in managing ISBs related to a more positive attitude toward sexuality and managing ISBs of individuals with developmental disabilities?**

There were no effects of participant race or gender on attitudes toward managing ISBs. The relationship between participants' level of education and their attitudes was also examined. It was also hypothesized that school psychologist participants with doctoral degrees would have a more positive attitude than their peers with masters and specialist degrees due to having more training and coursework than their peers with masters and specialist degrees. This hypothesis, however, was not supported. Participants' level of education was not related to their overall attitude toward managing ISBs.

It was also hypothesized that receiving training on interventions for ISBs as well as years in practice as a school psychologist would be associated with a more positive attitude toward ISBs. There were significant relationships between having received training on managing ISBs on participant's overall attitude toward ISBs. Participants who received training had significantly higher attitude scores than participants who did not receive training. This finding makes

theoretical sense as being trained in a particular area or skill can help clinicians feel more confident and comfortable addressing the target problem. This same outcome was found in McConkey and Ryan (2001) who found that day program staff that had training in managing ISBs had a more positive attitude toward their clients' sexuality. Lambert and Sandoval (1971) examined the role of experience in trainee school psychologists' attitudes toward working with teachers. The more experience the trainees had working in classrooms and interacting with teachers, the more positive attitudes they had toward teachers and were more likely to understand teachers' views on different problems that could arise in a classroom (Lambert & Sandoval, 1971).

There was also a significant relationship between the years a participant was in practice and a more positive attitude toward managing ISBs. As predicted, the longer a participant had practiced as a school psychologist, the more likely they were to have a more positive attitude toward managing ISBs. This could be due to school psychologists developing more confidence in their ability to address a variety of challenging behaviors throughout their careers (Lambert & Sandoval, 1971). School psychologists who are early in their careers may have less experience with different behaviors or populations and therefore have less confidence in their ability to adequately address ISBs.

### **Implications for future research**

This is the first study of school psychologists' experiences with and attitudes toward ISBs by students with developmental disabilities. The results of the present study demonstrate that ISBs by students with developmental disabilities do occur at school in the United States. As a result, further research into the experiences of school personnel are warranted. Second, the present study is unique because it included groups of individuals previously under-emphasized

by other studies of sexuality and ISBs by individuals with disabilities, for example girls and prepubescent children. Future research can address these populations more thoroughly. Last, the results of this study could provide a foundation for research into the effectiveness of intervention approaches for ISBs.

This is the first study of school psychologists' reported knowledge of and attitudes toward ISBs by students with developmental disabilities. This is also the first study of the occurrence of these behaviors in the United States. The majority of the studies described in the literature review were done in Europe and Australia. Further, those studies focused primarily on the experiences and attitudes of other professionals outside of school settings (Dukes & McGuire, 2009; Gilmore & Chambers, 2010; Grieveo et al., 2006; Healey et al., 2009; Hellemans et al., 2010; Kalyva, 2010; Kelly et al., 2009; Meaney-Tavares & Gavidia-Payne, 2012; McConkey & Ryan, 2001; Pownall et al., 2012; Reid, 1995; Stokes & Kaur, 2005; Young et al., 2012). While North American studies of ISB of individuals with disabilities have provided valuable information to the field, the research has focused on small groups of individuals or unique schools or care centers. The present study does not provide a large-scale examination of this issue but does provide a basis for a more thorough prevalence study in the future. Most studies focused on informants from a single state or school while the present study examined the experiences of a small number of school psychologists in nine different states. Although the results cannot be used to draw conclusions about the estimated prevalence of this problem, the results show that across several different states ISBs by students with developmental disabilities at school may be a salient problem for school psychologists. This may be due to the sensitive nature of the behaviors. Further, participants may have had an emotional reaction to these behaviors such as surprise or disturbance. A majority of the participants from nine states

surveyed identified that they had direct or indirect experience with a student engaging in ISBs at some point in their careers, and more than half reported that they had at least one student with a developmental disability engage in at least one ISB during the previous semester. Although this study does not show that ISBs by students with developmental delays are a persistent problem occurring on a daily basis, it does show that students with developmental delays are engaging in ISBs at school and school staff are aware of the problem. This finding is consistent with the results of the pilot study in Kansas (Gremo, 2014) where a similar percentage of participants reported knowing of a student engaging in ISBs at school at some point in their careers as well as during the previous school year. The present study results indicated that ISBs by students with developmental disabilities are a problem that many school professionals may encounter across the Midwest and Eastern United States.

An extensive literature review found only two studies of teachers' attitudes toward and experiences with ISBs of students with developmental disabilities (Kalyva, 2010; & Wilkenfeld & Ballan, 2011) and no studies examining school psychologists' experiences and needs in this area. A better understanding the needs and experiences of school psychologists can help create recommendations to support them in this challenging area.

Future research could examine the effectiveness of training on school psychologists' attitudes toward managing ISBs. Lambert and Sandoval (1971) found that the more experience trainee school psychologists had with working with classrooms, the more positive attitudes they had toward teachers and classroom management situations. Similarly, the current study found that school psychologists who have more experience and training are likely to have more positive attitudes toward managing ISBs than those who do not. Again, this finding is similar to the findings of McConkey and Ryan (2001).

Future studies should further examine ISBs of under-examined populations such as girls and young children. The present study examined the reported ISBs for boys and girls of all grade levels. Previous studies of ISBs have examined the occurrence of these behaviors by boys only (Hellemans et al., 2010; Ruble & Dalrymple, 1993; Stokes & Kaur, 2005) and only a few studies included girls in their samples or reviews (Reid, 1995; Sullivan & Caterino, 2008). The present study found that, proportionally, boys and girls engaged in the same number of unique ISBs. At first glance, it appeared that boys engaged in more ISBs than girls, however this is due to there being more boys than girls in the sample. Later studies of ISBs should attempt to include equal numbers of boys and girls in their samples to gain a better understanding of this problem and determine if gender differences do, in fact, exist.

The ISBs of young children also deserve further attention in the research. All but one of the studies reviewed Chapter 2 (Ruble & Dalrymple, 1993) excluded prepubescent children. These studies focused on adolescents and young adults. Research has shown that sexual development begins in infancy and early childhood and continues throughout the lifespan (SIECUS, 2004); therefore, it is important that the experiences and ISBs of young children be examined. The present study included early childhood and elementary students in the sample. Students in these groups were reported to engage in a variety of ISBs and there were no differences in the variety of ISBs by grade level. Later research could examine the types of behaviors and intervention needs of prepubescent students who engage in ISBs at school. Examining the specific needs and attitudes of early childhood staff members should also be considered because they may not be expecting their young students to engage in ISBs. In addition, behavior types and expectations change throughout the lifespan. For example, toddlers and young children often explore their bodies as a normal part of early development. Early



childhood educators may see these behaviors on a regular basis and do not consider them inappropriate.

Finally, the present study can provide a foundation for future research into intervention programs for reducing ISBs. One strategy that deserves further research is sex education for students with developmental disabilities. Previous studies have demonstrated an on-going need for appropriate sex education for adolescents and adults with developmental disabilities (Dukes & McGuire, 2009; Garwood & McCabe, 2000; Grieveo et al., 2006; McCabe, 1993; Ousley & Mesibov, 1991; Pownall et al., 2012). The present study showed that students with developmental disabilities engaged in ISBs at school. Follow up studies could examine whether the number of ISBs could be reduced through sex education programs. It is possible that sex education programs could help to prevent students with developmental disabilities from engaging in ISBs at school. SIECUS (2014) and the Guttmacher Institute have demonstrated the effectiveness of sex education programs in regular education. Students who received comprehensive sex education are more likely to make healthy and safe choices about sexuality compared to students who received no sex education or abstinence only sex education (SIECUS, 2009). Garwood and McCabe (2000) and Dukes and McGuire (2009) demonstrated that sex education programs can help young adults with developmental disabilities make informed decisions about their bodies, relationships, appropriate public behaviors, and consenting to sexual intercourse with a partner. Gaining more information on the effectiveness of sex education as an intervention and prevention strategy is especially valuable for students with developmental disabilities. Adults and adolescents with developmental disabilities are much more likely to be sexually assaulted or abused compared to the population without disabilities. It is estimated that 39-68% of girls and 16-30% of boys will be sexually abused or assaulted before

the age of 18 (Bowman, Scotti, & Morris, 2010). Sobsey and Doe (1991) reported that as many as 80% of women with developmental disabilities are sexually abused or assaulted at some point in their lives. The FBI confirms the higher rates of victimization for men and women with disabilities (Harrell, 2011). Wilczynski, Connolly, Dubard, Henderson, and McIntosh (2015) examined the role of school psychologists and special education staff in regards to helping prevent sexual abuse among students with developmental disabilities. The authors posit that sex education has shown to be effective in helping to reduce the incidence of sexual abuse and assault within this population. However, as previously stated, these programs still require more rigorous testing and research design to demonstrate their effectiveness.

Standardized sex education curricula could be developed for individuals with developmental disabilities that specifically address ISBs. Grieveo and colleagues (2006) reviewed sex education curricula such as *Picture Yourself* (Dixon & Craft, 1993) and *Living Safer Sexual Lives: A Training and Resource Pack for People with Learning Disabilities and Those Who Support Them* (Frawley, Johnson, Hillier, & Harrison, 2003) and found that many were not appropriate for individuals with more significant cognitive delays. Researchers and special educators should work together to develop an effective program for students who have more significant cognitive impairments and greater adaptive behavior needs. Effective programs should include information about physical development, the proper and slang names of body parts, social and romantic relationships, public versus private behavior, boundaries, abuse prevention, and safe sex (Caspar & Masters-Glidden, 2001; Grieveo et al., 2006; McCabe, 1993; Swango-Wilson, 2011). Curricula and guides for teachers and parents are available for purchase that address some of these different concepts, such as *Taking Care of Myself: A Hygiene, Puberty, and Personal Curriculum for Young People with Autism* (Wroble, 2003) and *A 5 is*

*Against the Law! Social Boundaries: Straight Up! An Honest Guide for Teens and Young Adults*

(Dunn Baron, 2007). These curricula and programs, however, often do not have a rigorous research background. As Grieveo and colleagues (2006) demonstrated, many programs do not have significant research behind them to demonstrate their effectiveness nor are they always appropriate for individuals with greater cognitive and adaptive needs. Further research must be conducted on sex education programs for special education students to demonstrate their effectiveness at increasing healthy behaviors and reducing ISBs.

### **Implications for practice**

The results of the present study also provide implications for practice for school psychologists. There are implications both for the training of school psychologists as well as for intervention approaches at school for students with developmental disabilities. A large majority of school psychologists in this study, 77%, reported that they had experienced a student engaging in inappropriate sexual behavior at some point in their career. The study did not require school psychologist participants to directly observe or intervene upon the behavior; they were only required to be aware that the behavior occurred. Therefore, it is likely that school psychologists will be required address ISBs in some way with students with disabilities. Further research is needed to show what is the best practice in managing ISBs. Approaches for managing these behaviors should be further explored.

School psychology training programs could address sexuality as a typical component of development. School psychologists are trained to recognize typical development in a variety of domains such as learning, emotions, and language development, but sexuality is not as emphasized. Training could also address how to handle ISBs that occur at school. NASP's Standards for Graduate Preparation (NASP, 2010) do not directly address sexuality or

inappropriate sexual behaviors as areas of preparation for graduate students. Further examination of this problem, by gathering prevalence data, may determine how valuable additional training will be to graduate students and practitioners in school psychology.

Another practice implication of this research relates to managing ISBs at school. Based on the small sample of school psychologists surveyed in this study, ISBs are a fairly salient problem that professionals encounter in the schools. Again, although a plurality of the school psychologist participants reported that they had experienced a student engage in ISBs during the first semester of the past school year, this may not mean that the behaviors are common. Rather, it is possible that memories of students engaging in ISBs are particularly salient for participants due to the sensitive nature of the behaviors. Strategies to manage these behaviors are likely to be desired by practicing school psychologists. Previous studies demonstrated that individually designed behavioral and educational interventions were found to be effective in managing ISBs in a school setting (Tarnai & Wolfe, 2008; Tissot, 2009). Tarnai and Wolfe (2008) discussed the use of individually designed social stories to teach students about sexual development and appropriate behaviors for school. Students were taught what behaviors were appropriate for school and what were “home behaviors.” Tissot (2009) reported several case studies addressing ISBs at a residential school for students with disabilities in England. Educators, psychologists, and social workers worked together to create individualized behavioral and educational programs to address behaviors ranging from masturbating in class to age-inappropriate sexual relationships between classmates. These approaches were largely successful and led to a decrease in challenging behaviors at school. School psychologists are often tasked with developing behavioral interventions for students with a variety of challenging behaviors (Fagan & Wise,

2007). It is conceivable that school psychologists would be involved in designing interventions for ISBs.

Another possible method to address ISBs at school is sex education. Chapter 2 outlined the history and continuing need for sex education for individuals with developmental disabilities. McCabe (1993) found that there was a significant need for sex education programs among this population. Researchers have consistently found that individuals with developmental disabilities are interested in sex and relationships but have very little knowledge of sexuality and even their own bodies (Healey et al., 2009; Kelly et al., 2009; McCabe, 1993). It is possible that having more knowledge on sex and sexuality can prevent individuals with developmental disabilities from engaging in ISBs at school. Sex education programs should address human development, socially appropriate behaviors, relationships with friends and intimate partners, consent, healthy boundaries, abuse prevention, and healthy ways to express sexual desire alone or with a consenting partner in a way that is developmentally appropriate for the student's age and level of understanding (Caspar & Masters-Glidden, 2001; Dukes & McGuire, 2009; Garwood & McCabe, 2000; Grieveo et al., 2006; SIECUS, 2004; Sullivan & Caterino, 2008).

### **Limitations of the Study**

Although the present study yielded important information on reported estimates of ISBs as well as the attitudes school psychologists hold toward these behaviors, there are some limitations: the sample focused only on school psychologists, the participants' responses were from memory and not permanent records, the study utilized convenience sampling, the setting the students received special education services was not examined, and there were some drawbacks in the construction of the survey.

First, the study only focused on school psychologists. There are other individuals involved in the education of students with developmental disabilities whose input could be more accurate to researchers' and practitioners' understanding of this problem. Other professionals who work with individuals with developmental disabilities, such as special education teachers, speech-language pathologists, occupational therapists, special recreation workers, and paraprofessionals, may have also experienced ISBs. As a result, this study may have under- or over-estimated the number of students who engaged in ISBs during the specified time period.

Input from special education teachers in particular could be very enlightening because they spend more time in direct service to these students. The degree to which special education teachers' experience these problems and their attitudes toward ISBs would be enlightening. Special education teachers were excluded from this sample because of the difficulty in contacting them for research purposes. As previously stated in Chapter 3, multiple attempts were made to include special education teachers in this sample. A number of teachers' organizations and state departments of education were contacted without success. Future studies should gather data from special education teachers because they spend a significant amount of time with their students and observe many of their behaviors directly, while other school professionals may learn about the behaviors secondhand.

Input from parents could also provide more in-depth information on the occurrence of ISBs. Parents were excluded from the present study because it focuses primarily on behaviors at school. Parents may very well know about any ISBs that occur at school, but they are probably not directly involved in addressing these behaviors. A follow-up study could be done to directly ask parents about their children's ISBs in the home and community.

Second, the information from the participants came from recollections and not from records or permanent products. The participants in the present study were asked to simply recall whether any students on their caseloads engaged in ISBs during the specified time period. The participants were not asked to review any notes or records to confirm that these behaviors occurred. As a result, participants may have incorrectly recalled the behaviors and the situations under which they occurred. It may have been more accurate to examine Individualized Education Plans (IEPs) for mentions of ISB in the document to determine whether students engaged in these behaviors. However, ISBs may not be mentioned in an IEP due to the sensitive nature of the behavior. Further, it would be more difficult to get access to IEPs or request that participants examined the IEPs of each of the students with developmental disabilities on their caseloads. This additional step in the procedure for participants likely would have reduced the number of school psychologists who agreed to participate in the present study.

Another limitation of the present study is that it only utilized participants who are members of state school psychology professional organizations. School psychologists are not required to be members of their state professional organizations so this survey reached only a portion of the school psychologists currently practicing that have experienced ISBs at school. Further, there may be differences between individuals who join their state professional organizations and those who do not. It is possible that school psychologists who join professional organizations may be more likely to seek out research studies or new information on particular problems. They may also be more likely than non-members to agree to participate in research.

Furthermore, a convenience sample of school psychologists chose to complete this survey. There is no way to know if the respondents were representative of their state school psychology organization as a whole. It is possible that school psychologists who had interactions

with students in this population who had exhibited ISBs would have been more likely to click on the link and respond to the questionnaire than school psychologists without such experience. Relatedly, the convenience sample was not representative of school psychologists across the United States. No state organizations from the Upper Midwest or the Western contiguous United States agreed to participate. The only state representing the Western United States was Alaska. Minnesota agreed to participate and would have represented the Upper Midwest, however no members of the Minnesota school psychology association completed surveys.

An additional limitation of the present study was that participants were not asked to identify the setting in which the students they reported on received special education services. Students with developmental disabilities may receive special education services in a variety of settings ranging from resource classrooms several times per day and having access to peers without disabilities to being in more restrictive day schools or residential schools entirely for students with disabilities (Hardman et al., 2010). The setting that the student received special education services could have influenced the way in which the student's behavior was perceived. Participants who served students at residential or day schools may have seen more challenging behaviors than participants who worked in traditional public schools. As a result, they may not recall less provocative ISBs than participants who worked with students with less severe disabilities. Relatedly, the building types that the participants worked in (early childhood, elementary, middle, high schools, or transition centers) could have influenced the types of behaviors the participants encountered and how those behaviors were perceived. For example, in early childhood centers it is likely common for staff to observe or be aware of children with and without disabilities who regularly touched their genitals (National Child Traumatic Stress Network, 2009). It is a normal part of sexual development for children to show interest in their



body parts and to touch them. As a result, school staff may not consider these behaviors ISBs. In contrast, had a high school student touched their genitals at school it likely would have been considered an ISB.

A final limitation of the study reflects the construction of the survey and the response options. The questionnaire allowed multiple responses for some options and categorized some demographic information in bands. This affected the way the data could be analyzed. Participants were allowed to select more than one exceptionality for each student. This was to allow for a more thorough description of the student and their needs. However, this led to some behaviors being counted more than once. For example, students who were reported to have both autism and some other exceptionality would have their ISBs counted twice, once for autism and again for the other category. In later examinations of ISBs by students with developmental disabilities, researchers could limit the number of exceptionalities participants could choose or could have some pre-selected dual exceptionalities. For example, it would be useful to examine the number and variety of ISBs by individuals with both autism and intellectual disability. Hellemans and colleagues (2010) found that children and adolescents with both autism and intellectual disability were more likely to engage in ISBs than those with autism or intellectual disability alone. Relatedly, some of the demographic information was presented in bands rather than exact values. Participants reported students' grade levels in bands that contained multiple grade levels; early childhood and kindergarten, elementary, middle, high, and transition. This was done to keep the survey easier for participants and reduce the likelihood of them dropping out of the study due to fatigue. However, this type of recording did not allow for predictive analyses such as multiple or logistic regression.

## Appendix A: Survey Questions

- This survey is meant for school psychologists who work with students with developmental disabilities, a primary special education exceptionality of autism or intellectual disability. If you do not work with students with developmental disabilities, please click below to exit. Thanks!
  - I work with students with developmental disabilities
  - I do not work with students with developmental disabilities (Skip logic to end of survey)
- Please complete this survey only if you are the only school psychologist responsible for your building(s). If you are a university student, practicum student, or sharing a building with another school psychologist, please do not complete this survey. Interns are permitted to complete this survey if they are the primary school psychologist for their building(s).
  - I am the primary school psychologist for the students in the building(s) I cover
  - I am not the primary school psychologist for the students in the building(s) I cover
- Please select your state (dropdown menu)
- Please select your gender
  - Male
  - Female
  - Transgender
  - Prefer not to respond
- Please select your race/ethnicity
  - African American
  - Asian
  - Biracial or multiracial
  - Hispanic
  - Native American
  - White, non-Hispanic
  - Prefer not to respond
- Highest level of education attained
  - Special education Bachelor's degree
  - General education Bachelor's degree
  - Bachelor's degree other than education (please list major field)
  - Master's degree (please list major field)
  - Ed.S. in school psychology
  - Ed.S. in counseling psychology
  - Ed.D or Ph.D (please list major field)
  - Other (please list major field)
- Age of students you serve (select all that apply)
  - PreK-K (ages 3-6)
  - Elementary (grades 1-5)
  - Middle (grades 6-8)
  - High School (grades 9-12)
  - Transition (age 18-21)
- Years practicing in a school setting (Drop down list with options 1-40+)

- Please enter the total number of students with developmental disabilities (autism and intellectual disability) in all of your schools
- I have received specific training on managing inappropriate sexual behavior during my college or graduate education, through inservices, or continuing education classes.
  - Yes
  - No
- Have you had any contacts with a student, teacher, or a parent regarding a student engaging in an inappropriate sexual behavior any time during your career?
  - Yes
  - No
- How many students with developmental disabilities have you been contacted about regarding inappropriate sexual behavior between **August and December of 2014?**
  - Enter number
  - None (if this option is selected, skip logic to the attitude survey questions)

In the next section, think about each student with a developmental disability that you know of who engaged in inappropriate sexual behavior(s) **during the August-December 2014 semester.** You may have worked with this student directly, consulted with their teachers or parents, discussed this student in a student improvement meeting, or were simply aware of the student's behavior. Please do not count a student more than once. (Displayed one at a time, can add as needed.)

- Student's gender
  - Boy
  - Girl
  - Transgender
- Age or grade of student
  - PreK-K (ages 3-6)
  - Elementary (grades 1-5)
  - Middle (grades 6-8)
  - High School (grades 9-12)
  - Transition (age 18-21)
- Identify the student's special education exceptionalities (check all that apply)
  - Autism
  - Developmental delay
  - Intellectual disability (Mental retardation)
  - Other (please enter)
- Inappropriate sexual behaviors you were contacted about (check all that apply)
  - Removing clothing (Undressing self to expose the body, does not include removing a coat or sweater or sweatshirt with a shirt underneath)
  - Touching self in private areas (Touching one's genitals not in the context of using the bathroom, for girls this includes breasts)
  - Touching others in private areas (Touching other students' or staff members' breasts or genitals)
  - Masturbating in public (Masturbating either over or underneath clothing with the goal of sexual release)

- Sexually harassing other students or staff (Making unwanted sexual comments or advances)
- Stalking students or adults in person (Repeatedly following and harassing a specific person or persons)
- Stalking students or adults online (Following and harassing an individual over the Internet, may send them harassing messages)
- Talking about private body parts or sexual acts in inappropriate settings (Openly discussing sex and sexuality in socially inappropriate settings, this excludes time devoted to sex education)
- Refusing to touch one's genitals when using the restroom (For boys, refusing to hold their penis when urinating; for girls, refusing to touch the labia when wiping or using feminine hygiene products)
- Using school computers to look for pornography on the Internet (Searching, downloading, or distributing pornographic images or videos on the Internet)
- Not observed
- Other (please describe)
- Do you have another student who engaged in inappropriate sexual behavior during this time period?

Please rate the following statements on a scale of strongly disagree to strongly agree.

- Teachers should address inappropriate sexual behaviors in children with disabilities.
- My training has prepared me to handle inappropriate sexual behaviors in the classroom.
- I feel comfortable addressing inappropriate sexual behaviors.
- It is the responsibility of parents alone to address their child's inappropriate sexual behaviors. \*
- I have enough information and resources available to address inappropriate sexual behaviors in the classroom.
- My administrators support sex education for students with disabilities.
- If a student is engaging in inappropriate sexual behaviors in class, I feel comfortable speaking to the child's parents about the behavior.
- The student's IEP team can adequately address inappropriate sexual behaviors.
- The standardized sex education curriculum is appropriate for all special education students. \*
- When a student asks questions about sex or sexuality I am able to address them.
- The curriculum materials are too language-heavy for many students with developmental disabilities.
- Addressing sexuality issues is a part of my job.
- I feel uncomfortable addressing inappropriate sexual behaviors. \*
- Inappropriate sexual behaviors will go away if they are ignored. \*
- Individuals with disabilities should not engage in any sexual behaviors. \*
- I have access to standardized sex education curricula for students with disabilities.
- I am comfortable addressing sexuality with all students, regardless of disability.
- I would like to have standardized sex education materials for students with disabilities.
- It is the responsibility of professionals outside the school (psychologist, psychiatrist, physician) to address inappropriate sexual behaviors, not school staff.

- It is the responsibility of the school nurse to address sex education for students with disabilities. \*
- It is difficult to communicate with parents and outside professionals about inappropriate sexual behaviors at school. \*
- I am comfortable delivering sex education to students with disabilities.
- Sexuality is a normal part of life for all people, regardless of disability.

Note: An asterisk (\*) denotes that an item is reverse scored.

## Appendix B: Pilot Study Factor Loadings

Table 11

*Factor Loadings for Pilot Attitude Scale Items Using the Two-Factor Solution*

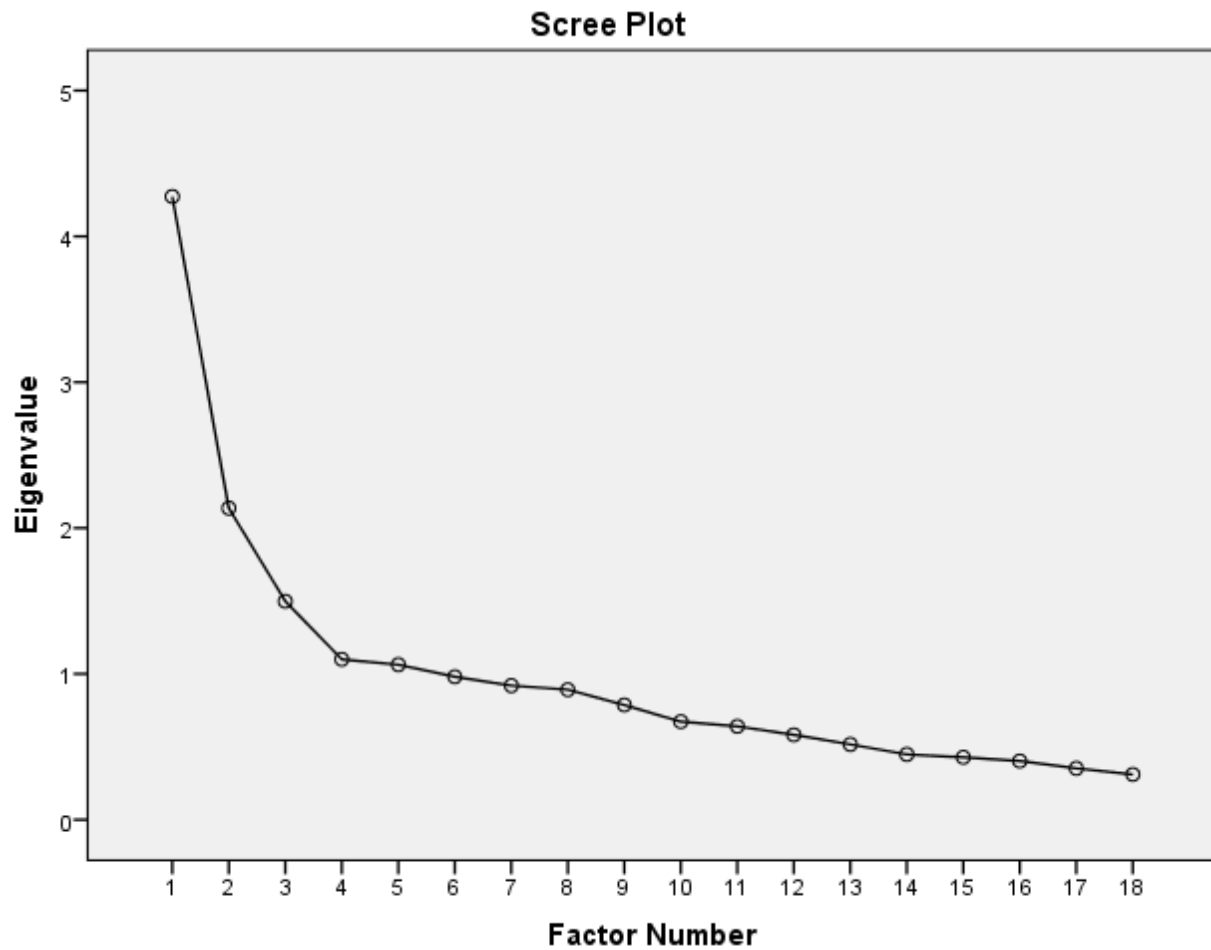
Scale Items	Comfort	Sex Education
I feel comfortable addressing inappropriate sexual behaviors	<b>.809</b>	.073
My training has prepared me to handle inappropriate sexual behaviors	<b>.648</b>	-.265
I have enough information and resources available to address inappropriate sexual behaviors in the classroom	<b>.607</b>	-.512
I feel uncomfortable addressing inappropriate sexual behaviors	<b>.556</b>	.075
If a student is engaging in inappropriate sexual behaviors in class, I feel comfortable speaking to the child's parents about the behavior	<b>.496</b>	.264
I am comfortable delivering sex education to students with disabilities	<b>.480</b>	.141
My administrators support sex education for students with disabilities	<b>.416</b>	-.254
It is difficult to communicate with parents and outside professionals about inappropriate sexual behaviors	<b>.400</b>	-.014
I have access to standardized sex education curricula for students with disabilities	<b>.392</b>	-.254
I would like to have standardized sex education materials for students with disabilities	.079	<b>.492</b>
It is the responsibility of professionals outside the school to address inappropriate sexual behaviors, not school staff	.165	<b>.458</b>
The curriculum materials are too language-heavy for many students with developmental disabilities	.038	<b>.401</b>
Inappropriate sexual behaviors will go away if they are ignored	-.108	<b>.288</b>
Teachers should address inappropriate sexual behaviors in children with disabilities	-.077	<b>.194</b>

*Note.* Comfort = Comfort with Managing Inappropriate Sexual Behaviors

Sex Education = Attitudes Toward Sexuality and Sex Education

This table represents the factor loadings of the pilot scale (Gremo, 2014) re-analyzed using the two-factor solution

### Appendix C: Pilot Study Scree Plot



*Figure 5.* Pilot study scree plot after weak items removed. This scree plot for the pilot scale using exploratory factor analysis with maximum likelihood extraction and promax rotation after the weak items were removed from the scale and re-analyzed.

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