1-Vinciguerra

by Rosalba Larcan

Submission date: 08-Feb-2022 05:54PM (UTC+0100)
Submission ID: 1757797991
File name: 1-Vinciguerra_68765_787124889.docx (125.95K)
Word count: 5880
Character count: 35848

CERIP
University of Messina

ISSN 2612-4033

Journal of Clinical & Developmental Psychology

Journal homepage: http://cab.unime.it/journals/index.php/JCDP/index

Developing the psychosexual knowledge of two adolescents with Special Educational Needs through a psycho-educational training

Vinciguerra G.[1], Iacomini S.[2*], Villani E.[2], Artoni V.[2], Cavallini F.[1,2]

[1] University of Parma, Italy
[2] Tice Live and Learn, Piacenza, Italy

ABSTRACT

Background: The purpose of this study was to assess the efficacy of an intervention on sexual and relational knowledge in adolescents with special educational needs (SEN) and their families. This training is intended to provide assistance and support in addressing the difficulties that adolescents with SEN may face when it comes to psychosexual functioning, while also increasing their knowledge and skills on the subject.
Methods: The study included two girls with Mild Intellectual Disability (DSM-5; APA, 2013), aged 14 and 15 years old, respectively. Both participants spent six hours per week at a learning center in Northern Italy. In this study, the dependent variable was psychosexual knowledge, as measured by responses to an ad hoc created questionnaire. The independent variable was the psycho-education training, which consisted of 14 sessions in which the psychologist trained the participants about sexuality and relationships.
Results: The results show that both participants gained more psychosexual and relational knowledge as result of their participation in the training program.
Conclusions: The current study supports the need for young people with intellectual disabilities to be educated and demonstrates the value of sexual and relationship education for adolescents and parents.

Keywords: *Adolescence; Sexuality; Special Needs; Sexual Education*.

* *Corresponding author*: Silvia Iacomini, Tice Live and Learn, Piacenza, Italy
E-mail address: silvia.iacomini@centrotice.it

https://doi.org/10.13129/2612-4033/0110-3287

Accepted/ Online first, February 2022

© 2021 by the Author(s); licensee Journal of Clinical & Developmental Psychology, Messina, Italy.
This article is an open access article, licensed under a Creative Commons Attribution 3.0 Unported License.

Introduction

Adolescence is regarded as a period of transition, marked by numerous physical, mental, and social challenges and changes (Dahl, 2004), preparing for the roles and responsibilities of adulthood (Crockett & Petersen, 1993). These challenges will necessitate the development of skills (Dahl, 2004; Santrock, 2005). One of the most important developmental tasks of adolescence is the development of good psychosexual functioning, which is triggered by physical and social maturation as well as hormonal changes at the onset of puberty (Fortenberry, 2013). Psychosexual development accelerates rapidly during adolescence (Tolman & McClelland, 2011).

Sexuality is a critical component of healthy personality development and can play a significant role in identifying and improving one's quality of life. Difficulties specific to disabled adolescents, such as communication, behavior, and learning, can complicate psychosexual development and impair individuals' ability to acquire developmentally appropriate knowledge and skills in sexuality and relationships (Foley, 2014; Hannah & Stagg, 2016).

Sex education can help to reduce these risks by empowering adolescents with disabilities and increasing their ability to seek help (McDaniels & Fleming, 2016). As a result, adolescents with disabilities are more likely to have sexual health problems and negative sexual experiences, such as problematic sexual behaviors, exploitation, and abuse, as well as lower levels of personal satisfaction and well-being (Chan & John, 2012; Thompson, O'Sullivan, Byers, & Shaughnessy, 2014). Historically, children, adolescents, and adults with intellectual and/or developmental disabilities have been classified as asexual on one end and sexually deviant on the other (Ailey, Marks, Crisp, & Hahn, 2003).

According to broadly accepted beliefs, individuals with intellectual disabilities are stereotyped as infantile, asexual, overly sexualized, or sexually aggressive (Ailey et al., 2003). Such stigma contributes to a lack of focus on sexuality issues in health care, education, and practitioner practice (Fouquier & Camune, 2015; Thompson et al., 2014; Winges-Yanez, 2014).

Numerous researchers have emphasized that when sexuality education is present, the curriculum is inadequate, based on retrograde concepts such as abstinence, and steeped in hetero-normative assumptions (Campbell, Löfgren-Mrtenson, & Martino, 2020).

There is a “hidden curriculum” in many sex education programs; in which refers to sex and relationships as exclusively heterosexual and unsuitable for people with disabilities (Campbell et al., 2020).

The exclusion of people with disabilities from formal sex education programs reflects the belief that they are vulnerable and unable to understand the complexities of sexual relationships (Löfgren-

Mrtenson, 2004; 2009). According to Campbell, Löfgren-Mrtenson, and Martino (2020), "sex education is essential, not only to increase the likelihood of people with disabilities enjoying romantic and sexual satisfaction, but also to engage in safe and satisfying sexual exploration".

Several studies have shed light on potential barriers to sex education (Brown & McCann, 2018; Caspar & Glidden, 2001; McCann et al., 2019; Sinclair, Unruh, Lindstrom, & Scanlon, 2015; Treacy, Taylor, & Abernathy, 2018). Although there is a clear need for sexual and relational psycho-education programs to be structured and delivered, the question of "what to teach" is frequently debated. Blanchett and Wolfe (2002) conducted a review of 12 sociosexual curricula for people with disabilities, focusing on four domains: a) biological and reproductive; b) health and hygiene; c) relationships; and d) self-protection and self-advocacy. Current research focuses on how to improve sex and relationship education programs (Corona, Fox, Christodulu, & Worlock, 2016; Dekker et al., 2015; Kim, 2016; Holland-Hall & Quint, 2017; Tullis & Zangrillo, 2013; Visser et al., 2015; Wiggins, Hepburn, & Rossiteret, 2013). Sex education should cover a wide range of topics rather than just safe sex and preventing STDs and unintended pregnancies (Visser et al., 2015). In particular, Chandra-Mouli & Patel (2017) highlight that (a) typically developing girls are not prepared for the arrival of menarche and are uninformed about changes in their bodies; (b) mothers are the primary source of information, but often the information comes late and is deficient; and (c) even today, menstruation is seen as taboo and something to be ashamed of.

Currently, sexual and romantic functioning education is frequently delayed until an adolescent with a disability has been victimized or has committed a "social mistake" such as unwanted touching, public masturbation, or a sexual offense (Griffin-Shelley, 2010; Hellemans, Roeyers, Leplae, Dewaele, & Deboutte, 2010).

Comprehensive sexuality education promotes positive aspects of sexuality while avoiding negative outcomes (Jahoda, & Pownall, 2014; McEachern, 2012; Wiggins et al., 2013). The Sexuality Information and Education Council of the United States (SIECUS) (2004) suggests integrating sexuality education programs, information, skills, and personal value exploration. The SIECUS guidelines outline curricula that cover 39 topics divided into six focus areas: human development, relationships, personal skills, sexual behavior, sexual health, society, and culture.

The current study arose from the need to structure services and programs that can effectively address the needs of adolescents with special educational needs (SEN) and their families, with a focus on sexual and relational needs. As a result, this training is intended to provide assistance and support in addressing the difficulties that adolescents with SEN may face when it comes to psychosexual functioning, while also increasing their knowledge and skills on the subject.

Method

Participants

Two girls with Mild Intellectual Disability (DSM-5; APA, 2013) aged 14 and 15 years, respectively, participated in the study. Both participants attended a learning center in Northern Italy for six hours per week. The criteria for participation in the study were:

1. Diagnosis of mild to moderate intellectual disability.
2. Age range between 14 and 16 years.
3. Verbal and text comprehension skills sufficient for participation in the training.
4. No previous participation in any training concerning the sphere of sexuality and relationships.

The two participants were considered eligible because, in addition to adhering to all pre-determined inclusion criteria, they exhibited high-risk behaviors, such as relationships with inappropriate older subjects, high sexualization, and misunderstanding of risk signals. When approaching people of the opposite sex, the two participants struggled greatly to understand social situations properly. For example, Participant 1 believed she was in a relationship with a young boy solely because they texted. Instead, Participant 2 has this pattern of wanting to unlock her adulthood and sexual maturity by finding a relationship and having sex. The patterns of this thought were formed in a family environment with a medium cultural level.

Their parents received and signed the informed consent after clarifying the teaching methods and the topics that would be analyzed and treated during the training meetings. Both participants were very supportive of participation in the training.

Settings and materials

The training sessions were conducted at a learning center in northern Italy, specifically in a private room, used as a study for psychological interviews for young people attending the center, separated from the common areas. Following appropriate training, the training was carried out and supervised by a professional psychologist of the structure, assisted by a graduate student in psychology. Before starting of the training, parents received and completed a test necessary to assess their perception of risk and get an overview of their assessment of the sexual and relational knowledge of the participants. Based on the ten main items of the *Children's Knowledge of Abuse Questionnaire* (C.K.A.Q.) (Tutty, 2020), we constructed an ad hoc test for the participants' parents, consisting of 18 items (Appendix B). In these items, parents were asked to predict their daughters' behaviors in the following areas: social behavior, privacy awareness, sex education, and sexual behavior. Instead, the two participants completed a questionnaire consisting of multiple-choice and open-ended questions consisting of 20 items (Appendix B), including two general information items. Six social stories concerning relationship management were then administered. The thematic areas investigated included

knowledge related to sexuality and sexual development and those related to appropriate or inappropriate relationships. We created the questionnaire specifically for the training program, and the items and knowledge areas investigated were extracted from the topics covered in the program. Participants completed the psychosexual knowledge test at the end of the first introductory meeting. The same questionnaire was then administered for a second time at the end of the final meeting session to measure and evaluate the increase in knowledge learned by the two girls. The dependent variable in this study was psychosexual knowledge, as measured by responses to the ad hoc created questionnaire. The independent variable was represented by the psycho-education training, organized in 14 sessions, in which the psychologist provided knowledge related to the area of sexuality and relationships to the participants.

Intervention Plan. To assess the level of psychosexual knowledge before and after the training, we used a single-subject experimental design with pre- and post-tests for each participant.
Table 1 describes the topics of the training sessions.

Topic	Description
My Period	Menstrual cycle and hygiene
Internet and social networks	How to manage risk and protection factors of internet and social networks
Bad Boy-friends	How to identify toxic people and avoid them
Dating	How to manage risk and protection factors of a date
S.O.S. I'm in love	How to understand your feelings
Boundaries	Definition of boundaries and how to respect and enforce them
Healthy or unhealthy?	How to understand whether the relationship we are in is healthy or not
What a confusion!	Sexual orientation
Sexual harassment	Understanding sexual harassment and strategies to manage it
STD	Sexually Transmitted Diseases
Self- love	Masturbation

Table 1. Topics explored in the training sessions.

Procedure

During the pre-test phase prior to the start of the training, the experimenter assessed the participants' psychosexual and relational knowledge using an ad hoc constructed questionnaire. During this introductory meeting, the experimenter explained to the participants how he would have conducted each training session, how long the program would have lasted overall, subject to any appropriate variations, what material he would have used, and the study's overall purpose. A questionnaire was

also distributed to the participants' parents in order to assess their risk perception and understand their evaluation of the participants' knowledge.

Training

The training for the development of psychosexual and relational knowledge in adolescents with disabilities included 14 one-hour sessions. Each session was conducted separately for the two participants by the experimenter. Two of the training sessions, on sexual harassment and masturbation, were split into two meetings because the topics required more time to ensure knowledge anchoring. Each training session focused on a specific topic (see Table 1): 1) Menstrual cycle and hygiene; 2) Internet and social; 3) How to recognize violent and manipulative subjects; 4) Dating; 5) Falling in love; 6) Managing boundaries and relationships; 7) Sexual orientation; 8) Sexual harassment; 9) Sexually transmitted diseases; 10) Masturbation and sexual intercourse.

All sessions were structured in this manner: the experimenter greeted the participants and informed them about the session's various topics; then, he alternated the presentation of the topics with exercises such as behavioral tests and knowledge deepening quizzes. For each training session, PowerPoint slides containing meeting-related information and exercises were created. To transform theoretical knowledge into concrete material, the visual material included videos and images related to the session's topic. Every training session, the experimenter used role-playing to simulate the most dangerous situations. Following each session, the adolescent was given a "homework assignment," which often consisted of conducting a brief interview with one of their parents about the topic covered in training or initiating a conversation with a friend. The goal of these tasks was to generalize the session's topics and implement parent-child dialogue on sexuality issues, management, and relationships; additionally, the goal was to foster an environment in which the adolescent could feel comfortable discussing and conversing about sexuality-related topics. The psychologist informed parents about the topic at the end of each training session. As a result, they became aware of the strengths and challenges that their girls encountered during the specific session. Participants were also aware of the feedback exchange with their parents.

The post-test was administered ten days after the last training session, and it was critical for evaluating psychosexual and relational knowledge implementation following program participation. When the participants finished the test, they received no feedback.

Results

Before the program began, participants had little psychosexual knowledge; as a result, the proportion of correct answers increased on almost all questions. Gender identity, sexually transmitted diseases,

the menstrual cycle, pregnancies and reproductive systems, and contraceptive methods were the most significant gaps.

We discovered differences between Participant 1 and Participant 2, which are detailed in Tables 2 and 3.

Participant 1 struggled to define gender identity, ovulation, pregnancy, sexually transmitted diseases, safe sex, bad boy, petting, appropriate places for sexual behavior, and dating during the pre-test; she also struggled to define the proper use of internal tampons. In the pre-test, the total number of correct responses was 44.4 percent (see table 2). She had no particular difficulties in the social stories that described relational scenarios.

	Questions	Pre-test responses	Post-test responses
1)	Gender identity definition	Incorrect	Correct
2)	Knowledge of reproductive systems	Correct	Correct
3)	Knowledge of reproductive systems (2)	Correct	Correct
4)	Ovulation	Incorrect	Correct
5)	Hygiene and menstruation	Correct	Correct
6)	Menstruation	Correct	Correct
7)	Masturbation definition	Correct	Correct
8)	Pregnancy	Incorrect	Correct
9)	Sexual harassment definition	Correct	Correct
10)	Sexually Transmitted Diseases	Incorrect	Correct
11)	Homosexuality definition	Correct	Correct
12)	Safe sex definition	Incorrect	Correct
13)	Bad boy/girl definition	Incorrect	Incorrect
14)	Petting definition	Incorrect	Correct
15)	Places and sexual behaviors	Incorrect	Correct
16)	Use of intimate pads	Correct	Correct
17)	Use of internal pads	Incorrect	Incorrect
18)	Dating	Incorrect	Correct
Total percentage of correct responses		**44,4%**	**88,8%**

Table 2. Correct and incorrect responses in pre-test and post-test questionnaire for Participant 1

Participant 2 found difficulty defining gender identity, reproductive systems, ovulation, menstruation, masturbation, pregnancies, sexual harassment, sexually transmitted diseases, safe sex, bad boy, safe dating, and petting. She also found difficulty in defining the correct use of internal and intimate pads. For a total of correct answers, in the pre-test, equivalent to 16.6% (see table 3).

	Questions	Pre-test responses	Post-test responses
1)	Gender identity definition	Incorrect	Correct
2)	Knowledge of reproductive systems	Incorrect	Correct
3)	Knowledge of reproductive systems (2)	Incorrect	Correct
4)	Ovulation	Incorrect	Incorrect
5)	Hygiene and menstruation	Correct	Correct
6)	Menstruation	Incorrect	Incorrect
7)	Masturbation definition	Incorrect	Correct
8)	Pregnancy	Incorrect	Correct
9)	Sexual harassment definition	Incorrect	Correct
10)	Sexually Transmitted Diseases	Incorrect	Incorrect
11)	Homosexuality definition	Correct	Correct
12)	Safe sex definition	Incorrect	Correct
13)	Bad boy/girl definition	Incorrect	Correct
14)	Petting definition	Incorrect	Correct
15)	Places and sexual behaviors	Correct	Correct
16)	Use of intimate pads	Incorrect	Incorrect
17)	Use of internal pads	Incorrect	Correct
18)	Dating	Incorrect	Correct
Total percentage of correct responses		**16,6%**	**77,7%**

Table 3. Correct and incorrect responses in pre-test and post-test questionnaire for Participant 2

Parents provided information on the participants' social behaviors, interest in romantic relationships, awareness of privacy, sexual behaviors and sex education, and concerns by completing an ad hoc test designed for the program. When the parents' test responses were compared to the participants' pre-test responses, it was discovered that the parents had overestimated the adolescents' psychosexual and relationship knowledge, as the data provided by the parents regarding relationship knowledge and management were incongruent with the participants' test results. Figure 1 shows for each participant, the total percentages of correct responses in the pre-test and post-test.

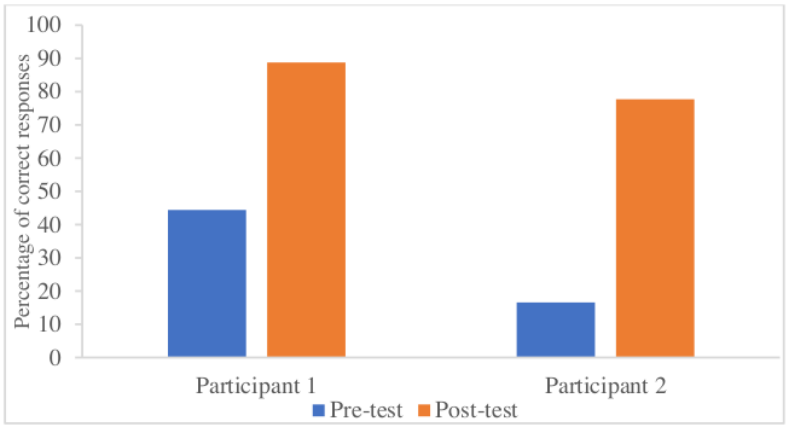

Figure 1- Percentage of correct responses in pre- and post- test for both participants.

The post-test results revealed a significant increase in knowledge: Participant 1 had a percentage of correct answers equal to 88.8 percent of the total in the post-test, compared to 44.4 percent in the pre-test; Participant 2 had a percentage of correct answers equal to 77.7 percent in the post-test, compared to 16.6 percent in the pre-test.

Discussion

The current study examined the effects of psycho-sexual and relational education training on two adolescents with mild intellectual disabilities. The results show that both participants gained more psychosexual and relational knowledge as a result of their participation in the training program. Furthermore, the acquired skills were generalized and maintained after the program ended, as evidenced by the administration of the post-test ten days after the last training. These findings support previous research, which is that participation in such programs improves the sexual and relational skills and knowledge of adolescents and adults with intellectual disabilities (Egemo-Helm, Miltenberger, Knudson, Finstrom, Jostad, & Johnson, 2007; Khemka, 2000; Khemka, Hickson, & Reynolds, 2005; Lee et al., 2001; Lee & Tang, 1998; Lumley, Miltenberger, Long, Rapp, & Roberts,1998; Miltenberger et al., 1999). Previous research (Kim, 2016) has shown that frequent and brief training sessions can aid in the learning process; parental support is critical. The parents of the participants were enthusiastic about the idea of educating their children about sexuality and relationship management; as a result, parents provided support to the participants during the training program. They encouraged participants' participation in the program, for example, by collaborating on the "homework" assigned to them after each training session. These findings, as previously noted

in the literature (Kok & Akyuz, 2015; Uslu & Girgin, 2009), suggest that parental collaboration may be critical to the success of psycho-educational sex and relationship programs. Overall, the current study supports the need for young people with intellectual disabilities to be educated and demonstrates the value of sexual and relationship education for adolescents and parents. Adequate sexual and relationship education not only helps adolescents reduce risk and improve their quality of life, but it is also critical in lowering risk perceptions in parents and increasing teachers' and providers' sense of efficacy. Comprehensive sexuality education promotes positive aspects of sexuality while avoiding negative outcomes (Jahoda & Pownall, 2014; McEachern, 2012; Wiggins et al., 2013). There are several limitations to the current study. Because of the small number of participants, the findings cannot be applied to the entire population of people with Intellectual Disabilities and SEN. Because both participants were female, it would be appropriate to look into the male population in terms of sexuality and relationships.

The participants in this study had adequate verbal skills to participate in the training program, but it should be justified to apply to adolescents with greater communication difficulties.

As a result, future research should assess the program's impact on children with varying levels of cognitive functioning. Furthermore, the sexual and relational psycho-education training program did not include parents of participants. Training sessions aimed at the participants' parents would be required to analyse and evaluate the actual reduction in risk perception and implementation of parent-child communication. Other limitations include the use of a non-standardized test for pre- and post-evaluation, as well as the girls being asked the same questions in the post-test.

Finally, a limitation is the lack of a normative and standardized sexual and relational education model aimed at the SEN population. Because a lack of adequate psychosexual knowledge has been linked to inappropriate sexual behaviors (Dekker et al., 2015; Kok & Akyuz, 2015; Visser et al., 2017; Somers & Paulson 2000), increasing the psychosexual knowledge of adolescents with intellectual disabilities appears to be a critical step in preparing them to become sexually effective and healthy adults. Long-term effects and research into the training program are most beneficial for deviant behavior, or researchers should investigate the risk of victimization in future studies.

Moreover, future research should establish a normative, standardized, and replicable model for the population with Intellectual Disabilities. As a result, the current training program may be a potentially useful tool for promoting the healthy development of adolescents with Intellectual Disabilities by encouraging the application of knowledge and skills. However, further research is required to generalize and expand on the current findings. The study was successful in achieving its intended goal of increasing knowledge about sexuality and relationships in two adolescents with mild intellectual disability. As a result, future research should focus on developing a generalizable and

replicable program model of sexual and relational psycho-education aimed at the population of adolescents with Intellectual Disabilities in order to increase knowledge and reduce risk factors.

Acknowledgements, Grants and Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of Interest statement: None.

Authors' contribution: All authors contributed to and have approved the final manuscript.

Ethical approval: All procedures performed in studies involving human participants were in accordance with the institutional and/or national research committee's ethical standards and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

References

Ailey, S. H., Marks, B. A., Crisp, C., & Hahn, J. E. (2003). Promoting sexuality across the life span for individuals with intellectual and developmental disabilities. *Nursing Clinics*, *38*(2), 229-252. https://doi.org/10.1016/S0029-6465(02)00056-7

American Psychiatric Association (APA) (2013). *DSM-5, Manuale diagnostico e statistico dei disturbi mentali*, tr. italiana Raffaello Cortina, Milano, 2014.

Borawska-Charko, M., Rohleder, P., & Finlay, W. M. L. (2017). The sexual health knowledge of people with intellectual disabilities: A review. *Sexuality Research and Social Policy*, *14*(*4*), 393-409. https://doi.org/10.1007/s13178-016-0267-4

Blanchett, W.J., & Wolfe, P.S. (2002). A Review of Sexuality Education Curricula: Meeting the Sexuality Education Needs of Individuals with Moderate and Severe Intellectual Disabilities. *Research and Practice for Persons with Severe Disabilities*, *27*(*1*), 43-57 https://doi.org/10.2511/rpsd.27.1.43

Brown, M., & McCann, E. (2018). Sexuality issues and the voices of adults with intellectual disabilities: A systematic review of the literature. *Research in Developmental Disabilities*, *74*, 124-138. https://doi.org/10.1016/j.ridd.2018.01.009

Campbell, M., Löfgren-Mårtenson, C., & Martino, A. S. (2020). Cripping Sex Education. *Sex Education*, *20*(*4*), 361-365. https://doi.org/10.1080/14681811.2020.1749470

Caspar, L. A., & Glidden, L. M. (2001). Sexuality Education for Adults with Developmental Disabilities. *Education and Training in Mental Retardation and Developmental Disabilities*, *36*(2), 172–177.

Chan, J., & John, R. M. (2012). Sexuality and sexual health in children and adolescents with autism. *The Journal for Nurse Practitioners*, *8*(*4*), 306-315. https://doi.org/10.1016/j.nurpra.2012.01.020

Chandra-Mouli, V., & Patel, S. V. (2017). Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low-and middle-income countries. In: Chris Bobel et al. *The Palgrave handbook of critical menstruation studies*, 609-636. https://doi.org/10.1007/978-981-15-0614-7

Corona, L. L., Fox, S. A., Christodulu, K. V., & Worlock, J. A. (2016). Providing education on sexuality and relationships to adolescents with autism spectrum disorder and their parents. *Sexuality and Disability*, *34*(*2*), 199-214. https://doi.org/10.1007/s11195-015-9424-6

Crockett, L. J., & Petersen, A. C. (1993). *Adolescent development: Health risks and opportunities for health promotion*. Promoting the health of adolescents: New directions for the twenty-first century, 13-37.

Dahl, R. E. (2004). Adolescent brain development: a period of vulnerabilities and opportunities. Keynote address. *Annals of the New York Academy of Sciences*, *1021*(*1*), 1-22. https://doi.org/0.1196/annals.1308.001

Dekker, L. P., Hartman, C. A., van der Vegt, E. J., Verhulst, F. C., van Oort, F. V., & Greaves-Lord, K. (2015). The longitudinal relation between childhood autistic traits and psychosexual problems in early adolescence: The Tracking Adolescents' Individual Lives Survey study. *Autism*, *19*(*6*), 684-693. https://doi.org/10.1177/1362361314547114

Egemo-Helm, K. R., Miltenberger, R. G., Knudson, P., Finstrom, N., Jostad, C., & Johnson, B. (2007). An evaluation of in situ training to teach sexual abuse prevention skills to women with mental retardation. Behavioral Interventions: *Theory & Practice in Residential & Community-Based Clinical Programs*, *22(2)*, 99-119. https://doi.org/10.1002/bin.234

Foley, S. (2014). A modest proposal regarding the power of parents to optimize the sexual well-being of their adult sons and daughters with Down syndrome. *Sexuality and Disability*, *32*(*3*), 383-396. https://doi.org/10.1007/s11195-013-9309-5

Fortenberry, J.D. (2013). Puberty and Adolescent Sexuality. *Hormones and Behavior*, *64*(2), 280-287. https://doi.org/10.1016/j.yhbeh.2013.03.007

Fouquier, K. F., & Camune, B. D. (2015). Meeting the reproductive needs of female adolescents with neurodevelopmental disabilities. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *44*(*4*), 553-563. https://doi.org/10.1111/1552-6909.12657

Griffin-Shelley, E. (2010). An Asperger's adolescent sex addict, sex offender: A case study. *Sexual Addiction & Compulsivity*, *17*(*1*), 46-64. https://doi.org/10.1080/10720161003646450

Hannah, L. A., & Stagg, S. D. (2016). Experiences of sex education and sexual awareness in young adults with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, *46*(*12*), 3678-3687. https://doi.org/10.1007/s10803-016-2906-2

Hellemans, H., Roeyers, H., Leplae, W., Dewaele, T., & Deboutte, D. (2010). Sexual behavior in male adolescents and young adults with autism spectrum disorder and borderline/mild mental retardation. *Sexuality and Disability*, *28*(2), 93-104. https://doi.org/10.1007/s11195-009-9145-9

Holland-Hall, C., & Quint, E. H. (2017). Sexuality and disability in adolescents. *Pediatric Clinics*, *64*(*2*), 435-449. https://doi.org/10.1016/j.pcl.2016.11.011

Khemka, I. (2000). Increasing independent decision-making skills of women with mental retardation in simulated interpersonal situations of abuse. *American Journal on Mental Retardation*, *105*(*5*), 387-401. https://doi.org/10.1352/0895-8017(2000)105<0387:IIDSOW>2.0.CO;2

Khemka, I., Hickson, L., & Reynolds, G. (2005). Evaluation of a decision-making curriculum designed to empower women with mental retardation to resist abuse. *American Journal on Mental Retardation*, *110*(*3*), 193-204. https://doi.org/10.1352/0895-8017(2005)110<193:EOADCD>2.0.CO;2

Kim, Y. (2016). Evaluation of a sexual abuse prevention program for children with intellectual disabilities. *Behavioral Interventions*, *31*(*2*), 195-209. https://doi.org/10.1002/bin.1439

Kok, G., & Akyuz, A. (2015). Evaluation of effectiveness of parent health education about the sexual developments of adolescents with intellectual disabilities. *Sexuality and Disability*, *33*(*2*), 157-174. https://doi.org/10.1007/s11195-015-9400-1

Jahoda, A., & Pownall, J. (2014). Sexual understanding,sources of information and social networks; the reports of young people with intellectual disabilities and their non-disabled peers. *Journal of Intellectual Disability Research*, *58*(*5*), 430-441. https://doi.org/10.1111/jir.12040

Lee, J. K., Kim, E. J., & Yom, Y. H. (2001). The needs of sexuality education in high school students. *Journal of Korean Academy of Community Health Nursing*, *12*(*1*), 71-80.

Lee, Y. K. S., & Tang, C. S. K. (1998). Evaluation of a sexual abuse prevention program for female Chinese adolescents with mild mental retardation. *American Journal on Mental Retardation*, *103*(*2*), 105-116. https://doi.org/10.1352/0895-8017(1998)103<0105:EOASAP>2.0.CO;2

Löfgren-Mårtenson, L. (2004). "May I?" About sexuality and love in the new generation with intellectual disabilities. *Sexuality and Disability*, 22(3), 197-207. https://doi.org/10.1023/B:SEDI.0000039062.73691.cb

Löfgren-Mårtenson, L. (2009). The invisibility of young homosexual women and men with intellectual disabilities. *Sexuality and Disability*, *27*(*1*), 21-26. https://doi.org/10.1007/s11195-008-9101-0

Lumley, V. A., Miltenberger, R. G., Long, E. S., Rapp, J. T., & Roberts, J. A. (1998). Evaluation of a sexual abuse prevention program for adults with mental retardation. *Journal of Applied Behavior Analysis*, *31*(*1*), 91-101. https://doi.org/10.1901/jaba.1998.31-91

McCann, E., Marsh, L., & Brown, M. (2019). People with intellectual disabilities, relationship and sex education programmes: A systematic review. *Health Education Journal*, *78*(*8*), 885-900. https://doi.org/10.1177/0017896919856047

McDaniels, B., & Fleming, A. (2016). Sexuality education and intellectual disability: Time to address the challenge. *Sexuality and Disability*, *34*(*2*), 215-225. https://doi.org/10.1007/s11195-016-9427-y

McEachern, A. G. (2012). Sexual abuse of individuals with disabilities: Prevention strategies for clinical practice. *Journal of Child Sexual Abuse*, *21*(*4*), 386-398. https://doi.org/10.1080/10538712.2012.675425

Miltenberger, R. G., Roberts, J. A., Ellingson, S., Galensky, T., Rapp, J. T., Long, E. S., & Lumley, V. A. (1999). Training and generalization of sexual abuse prevention skills for women with mental retardation. *Journal of Applied Behavior Analysis*, *32*(*3*), 385-388. https://doi.org/10.1901/jaba.1999.32-385

Sinclair, J., Unruh, D., Lindstrom, L., & Scanlon, D. (2015). Barriers to sexuality for individuals with intellectual and developmental disabilities: A literature review. *Education and training in autism and developmental disabilities*, *50*(*1*), 3-16.

Somers, C. L., & Paulson, S. E. (2000). Students' perceptions of parent–adolescent closeness and communication about sexuality: Relations with sexual knowledge, attitudes, and behaviors. *Journal of adolescence*, *23*(*5*), 629-644. https://doi.org/10.1006/jado.2000.0349

Thompson, A. E., O'Sullivan, L. F., Byers, E. S., & Shaughnessy, K. (2014). Young adults' implicit and explicit attitudes towards the sexuality of older adults. *Canadian Journal on Aging*, *33*(*3*), 259-270. https://doi.org/10.1017/S0714980814000208

Tolman, D. L., & McClelland, S. I. (2011). Normative sexuality development in adolescence: A decade in review, 2000–2009. *Journal of Research on Adolescence*, *21*(*1*), 242-255. https://doi.org/10.1111/j.1532-7795.2010.00726.x

Treacy, A. C., Taylor, S. S., & Abernathy, T. V. (2018). Sexual health education for individuals with disabilities: A call to action. *American Journal of Sexuality Education*, *13*(*1*), 65-93. https://doi.org/10.1080/15546128.2017.1399492

Tullis, C. A., & Zangrillo, A. N. (2013). Sexuality education for adolescents and adults with autism spectrum disorders. *Psychology in the Schools*, *50*(*9*), 866-875.https://doi.org/10.1002/pits.21713

Tutty, L. M. (2020). Children's Knowledge of Abuse Questionnaires (CKAQ)-Short: Two Brief Ten-Item Measures of Knowledge about Child Sexual Abuse Concepts. *Journal of Child Sexual Abuse*, *29*(*5*), 513-530. https://doi.org/10.1080/10538712.2019.1688443

Uslu, M., & Girgin, Ç. (2009). Determining and evaluating the needed psychological support and education to families of children with special health care needs. *Procedia-Social and Behavioral Sciences*, *1*(*1*), 1366-1371. https://doi.org/10.1016/j.sbspro.2009.01.241

Verhoef, M., Barf, H. A., Vroege, J. A., Post, M. W., Van Asbeck, F. W., Gooskens, R. H., & Prevo, A. J. (2005). Sex education, relationships, and sexuality in young adults with spina bifida. *Archives of physical medicine and rehabilitation*, *86*(*5*), 979-987. https://doi.org/10.1016/j.apmr.2004.10.042

Visser, K., Greaves-Lord, K., Tick, N. T., Verhulst, F. C., Maras, A., & van der Vegt, E. J. (2015). Study protocol: a randomized controlled trial investigating the effects of a psychosexual training program for adolescents with autism spectrum disorder. *BMC Psychiatry*, *15*(*1*), 1-10. https://doi.org/10.1186/s12888-015-0586-7

Visser, K., Greaves-Lord, K., Tick, N. T., Verhulst, F. C., Maras, A., & van der Vegt, E. J. (2017). An exploration of the judgement of sexual situations by adolescents with autism spectrum disorders versus typically developing adolescents. *Research in Autism Spectrum Disorders*, *36*, 35-43. https://doi.org/10.1016/j.rasd.2017.01.004

Wiggins, J., Hepburn, S., & Rossiter, R. (2013). Reducing harmful sexual behaviour in adolescents. *Learning Disability Practice*, *16*(*8*), 16-23. https://doi.org/10.7748/ldp2013.10.16.8.16.e1447

Winges-Yanez, N. (2014). Why all the talk about sex? An authoethnography identifying the troubling discourse of sexuality and intellectual disability. *Sexuality and Disability*, *32*(*1*), 107-116. https://doi.org/10.1007/s11195-013-9331-7

Appendix A - Questionnaire for parents

Part 1

Dear Parent,
the following questions are intended to identify, your perception regarding:
"What would my child do, in a hypothetical or perceived dangerous situation?"
Answer these questions (True/False), in the same manner that you believe your daughter would answer.

Item	Description	True	False
1	Sometimes it's okay not to keep promises made		
2	If someone hits you, you must and can tell your parents.		
3	If you don't like how someone is touching you, you can say "No!"		
4	It's okay to say your name to a stranger		
5	Even a person you like can touch you in a way that makes you feel uncomfortable		
6	If a person you don't know asks you for directions, it's okay to get in the car with him/her to show them the way		
7	If someone has attitudes that get you in trouble, it's okay to tell your parents		
8	Only a stranger would attempt to touch you without your consent		
9	If you feel you're in danger, you know who to call		
10	It's okay to go out alone, without telling anyone, with someone you met online		

Part 2

Dear Parent,
Answer the following questions in the same way you think your daughter would. Please mark an X under the answer you feel is most appropriate.

Item	How much can you…?	Never	Sometimes	Often	Always
1	Resist pressure from friends to do things that get you into trouble				
2	Resist if your friends push you to drink beer, wine or other alcoholic beverages				
3	Make friends in a group of people who already know each other				
4	Oppose your friends asking you to do something absurd or forbidden				
5	Say what you think, even when your friends disagree with you				
6	Resist if your friends push you to smoke				
7	Get by if someone bothers you or makes fun of you				
8	Say no to sexual intercourse if your/your partner doesn't want to use birth control or if you don't want/feel like it				

Appendix B - Questionnaire for participants

1. Regarding sexuality, you feel you have information:
□ Insufficient
□ Poor
□ Sufficient
□ Extensive

2. From whom did you receive the most information about sexuality? (also mark more than one answer if you want)
□ Friends
□ Parents
□ School
□ Television (movies, TV series) / mass media/books/magazines/newspapers
□ Other (please specify) _____

3. Gender identity is:
□ The awareness of being male or female
□ The name on the documents
□ Sexual orientation
□ I don't know

4.Since when, to your knowledge, are women biologically "ready" to have children?
□ From birth
□ From the appearance of the first menstruation
□ At the age of fifteen years old
□ I don't know

5. Do you think a girl can get pregnant when she has her first sexual intercourse?
□ Yes
□ No
□ I don't know

6. What is the time of the month when it is easiest for a woman to become pregnant?
□ During menstruation
□ Immediately after menstruation
□ During ovulation
□ I don't know

7. Is it possible to wash yourself during your menstrual cycle?
□ Yes
□ No
□ I don't know

8. To the best of your knowledge, at what age is a gynecologic examination necessary?
_____

9. What is masturbation?
□ Touching your private parts
□ Something not to do
□ Something I have never tried
□ I don't know

10. Can you get pregnant while having your menstrual period?
□ Yes
□ No
□ I don't know

Appendix B (continue)

11. What is sexual harassment? Write an example:
_____

12. Can you name, at least THREE sexually transmitted diseases?

_____

13. Homosexuality is defined as:
□ Being attracted to people of the opposite sex
□ Being attracted to people of the same sex
□ A pathological condition
□ I don't know

14. You often hear about "safe sex" meaning that....
□ There is no risk of contracting a disease or having a baby
□ Both partners are sexually satisfied with the relationship
□ Both partners are consenting
□ All answers can be true

15. Who do you think is a bad boyfriend? Describe him/her briefly

_____

16. What is Petting?
□ Caressing
□ Full sexual intercourse
□ Set of intimate touching
□ I don't know

17. Petting can be done in public?
□ Yes (If yes, please indicate where you think it should be done)
□ No

18. How many hours should an underwear pad be changed during the menstrual cycle?
□ Every two hours
□ Every four hours
□ Once a day

19. Can you sleep, all night long, without removing the internal pad?
□ Yes
□ No
□ I don't know

20. You have a date with a guy you met online, do you notice someone?
□ Yes (If yes, who?)
□ No

1-Vinciguerra

ORIGINALITY REPORT

13%	9%	6%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	doi.org Internet Source	4%
2	Kristien Michielsen, Laura Brockschmidt. "Barriers to sexuality education for children and young people with disabilities in the WHO European region: a scoping review", Sex Education, 2021 Publication	1%
3	Kim, Yu-Ri. "Evaluation of a Sexual Abuse Prevention Program for Children with Intellectual Disabilities : Sexual abuse prevention program", Behavioral Interventions, 2015. Publication	1%
4	core.ac.uk Internet Source	1%
5	hdl.handle.net Internet Source	1%
6	Linda P. Dekker, Esther J. M. van der Vegt, Kirsten Visser, Nouchka Tick et al. "Improving	<1%

	Psychosexual Knowledge in Adolescents with Autism Spectrum Disorder: Pilot of the Tackling Teenage Training Program", Journal of Autism and Developmental Disorders, 2014 Publication	
7	journals.sagepub.com Internet Source	<1 %
8	Submitted to University of Arizona Student Paper	<1 %
9	mobt3ath.com Internet Source	<1 %
10	onlinelibrary.wiley.com Internet Source	<1 %
11	www.mhnews-autism.org Internet Source	<1 %
12	Submitted to University of Liverpool Student Paper	<1 %
13	dro.deakin.edu.au Internet Source	<1 %
14	Leslie M. Tutty. "Developmental issues in young children's learning of sexual abuse prevention concepts", Child Abuse & Neglect, 1994 Publication	<1 %
15	repositories.lib.utexas.edu Internet Source	<1 %

16	www.academia.edu Internet Source	<1 %
17	eprints.qut.edu.au Internet Source	<1 %
18	pt.scribd.com Internet Source	<1 %
19	www.karyailmiah.trisakti.ac.id Internet Source	<1 %
20	www.skprevention.ca Internet Source	<1 %
21	Azza Warraitch, Rizwana Amin, Alina Rashid. "Evaluation of a school-based sexual abuse prevention program for female children with intellectual disabilities in rural Pakistan- A feasibility study", Applied Nursing Research, 2021 Publication	<1 %
22	Suzanne J. Toren, Stans Haas, Eline Dalmijn, Hans Feenstra, Willy Berlo. "A mixed methods evaluation of Girls' Talk+: A sexuality education programme for girls with mild intellectual disabilities", Journal of Applied Research in Intellectual Disabilities, 2021 Publication	<1 %
23	dsc.duq.edu Internet Source	<1 %

24	"Curricula for Teaching Students with Autism Spectrum Disorder", Springer Science and Business Media LLC, 2017 Publication	<1 %
25	"Public Health Perspectives on Disability", Springer Science and Business Media LLC, 2021 Publication	<1 %
26	Matthew Bennett, Emma Goodall. "Sexual Behaviours and Relationships of Autistics", Springer Science and Business Media LLC, 2021 Publication	<1 %
27	Sindy Sanchez, Raymond G. Miltenberger. "Evaluating the Effectiveness of an Abduction Prevention Program for Young Adults With Intellectual Disabilities", Child & Family Behavior Therapy, 2015 Publication	<1 %
28	cris.maastrichtuniversity.nl Internet Source	<1 %
29	etd.ohiolink.edu Internet Source	<1 %
30	reproductive-health-journal.biomedcentral.com Internet Source	<1 %
31	researchsystem.canberra.edu.au	

	Internet Source	<1%
32	www.communityresearch.org.nz Internet Source	<1%
33	digitalcommons.du.edu Internet Source	<1%

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		