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Social Stories for Sexuality Education for Persons with Autism/Pervasive Developmental Disorder

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Abstract Lack of social skills for individuals having autism can be particularly significant in the area of intimate relationships and of sexuality. However, typical sexuality education programs for persons with disabilities may lack components that address the unique social skill needs for persons having autism. In special education, Social Stories have been used to teach appropriate social skills and behaviors to children and youth having autism. Nonetheless, no research documents the use of social stories in sexuality education in this population. The present paper outlines the instructional use of Social Stories with individuals having autism, investigates components that make Social Stories a promising method of intervention, and discusses implications for the utility of Social Stories for sexuality education in particular. Information presented should assist individuals with autism and their caregivers/educators in preparing for, and managing the opportunities to engage in healthy and satisfying sexual lives.

Keywords Social Stories · Sexuality education · Autism · Pervasive developmental disorder · Social skills

Social skills deficits represent an essential part of the diagnostic picture of autism/pervasive developmental disorder (PDD). The DSM-IV [1] defines autism as an impairment in reciprocal social interaction with a severely limited behavior, interest, and activity repertoire. In fact, several specific characteristics of social interaction and of communication are outlined in the DSM-IV, of which multiple ones have to be displayed by an individual to be assigned the diagnostic label of PDD and specifically, of autism. Individuals who have autism frequently show impairments of social interaction in areas such as the ability to initiate social relationships or to maintain close, reciprocal relationships [2] and they may have difficulties with taking the perspective of others and understanding viewpoints other than their own [3].

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Lack of social skills for individuals having autism can be particularly marked in the area of intimate relationships and of sexuality [4]. Understanding issues of sexuality and developing mutual and satisfying relationships can be difficult for individuals with autism without some intervention. However, typical sexuality education programs for persons with disabilities may lack components [5] that address the unique social skill needs for persons having autism. Wolfe and Tarnai [4] have suggested the use of Social Stories to teach individuals with autism about issues of sexuality. The present paper outlines the instructional use of Social Stories with individuals having autism, investigates components that make Social Stories a promising method of intervention for this population, and discusses implications for the utility of Social Stories for sexuality education in particular. Information presented should assist individuals with autism and their caregivers/educators in preparing for, and managing the opportunities to engage in healthy and satisfying sexual lives.

What are Social Stories?

It is a popular trend in special education to use Social Stories or scripts to teach appropriate social skills and behaviors to children and youth having autism or related disorders on the spectrum [6]. A Social Story is a short story with specific characteristics that describes a social situation, concept, or social skill using a format that is meaningful for persons with autism spectrum disorders [7]. Social Stories™ were originally developed by Gray [8] to teach children with autism how to play games with peers, with the aim to increase their ability to interact socially with others.

Gray [9] has outlined some specific formal aspects and guidelines for constructing Social Stories to use with individuals having autism. According to these guidelines, the perspective of the child for whom the story is written should always be adopted and maintained. Stories are typically written in the first person singular. Behavioral responses should be stated in positive terms (e.g., ‘I am going to use my low voice’ vs. ‘I am *not* going to yell out’). Words and/or images may be used to supply the student with a permanent product to which he or she can refer back when practicing the actual social skill being trained. Reynhout and Carter [7] point out that the application of graphics and photographs in Social Stories used to be discouraged. However, currently, the general understanding in the field is that visual cues appropriately complement the relative visual processing strength of persons having autism/PDD.

Social Stories are constructed of phrases belonging to one of six basic sentence types. Reynhout and Carter [7] define these as descriptive, directive, perspective, affirmative, control, and cooperative sentences. Table 1 gives an overview and contains a brief definition of each basic sentence type. Gray [9] has proposed a ratio of basic sentence types to be used in Social Stories, consisting of two to five descriptive, perspective, and/or affirmative sentences for every directive sentence. However, these recommendations for story construction are merely suggested, *not* based on theoretical or empirical rationale, and some of the research literature actually yields higher efficacy for some ‘inappropriately modified’ Social Stories that violate Gray’s ratio in using less descriptive and more directive sentences, and also for some other sentence ratio modifications [7]. The question of linguistic component analysis of Social Stories regarding their efficacy is currently being empirically investigated by the author. Nevertheless, there is an emerging literature base in support of Social Stories interventions [10–12, 6, 7] for teaching pro-social behaviors to individuals having disorders on the autism spectrum.

Table 1 Basic sentence types used in Social Stories

Sentence type	Definition
Descriptive	Describes the social situation in terms of relevant social cues
Directive	Describes an appropriate behavioral response
Perspective	Describes the feelings and/or responses of the student or of others in the situation
Affirmative	Expresses a commonly shared value or opinion within a given culture or community
Control	Written from the perspective of a person having autism/PDD, cueing how and when to identify personal strategies to recall and to use
Cooperative	Describes what others will do to assist the student

Note. Based on the literature review by Reynhout and Carter [7]

Why do Social Stories Represent a Promising Instructional Strategy?

There are potential benefits of Social Stories interventions described in the literature, yet with caution that there is little empirically demonstrated evidence. This is primarily related to the high variation in research designs and rigor of scientific investigation [7, 13, 14] that makes it difficult to draw general conclusions. In spite of the failure up to this point to provide a sound empirical literature base in support of Social Stories interventions, research on effective instructional strategies can be linked to intuitive potential for efficacy of the construct.

The components of Social Stories incorporate instructional tools that are empirically established good practices in special education, and specifically, in interventions for autism [6]. In fact, most components of Social Stories interventions (i.e., story construction and skill practice routines) that are suggested for implementation by experts [6, 8, 9, 15] are well known from the literature on explicit teaching. The use of strategies such as task analysis, presentation and practice of small explicit steps, visual aids and graphic organizers, modeling, review and guided practice, corrective feedback, independently accessible reminders or procedural facilitators, or numerous opportunities to practice in both training and general environments for skill maintenance and generalization, is not only recommended by advocates of Social Stories interventions [6, 7, 15], but also shown to be effective practices by researchers of effective instructional and/or applied behavior analytical methods [16–22].

Table 2 provides a parallel overview of instructional strategies known to be effective from research, and of corresponding instructional components of Social Stories. The methodological overlap has not been overlooked by evaluators of Social Stories interventions [7, 13, 14], however, because of the frequent use of additional strategies (e.g., reinforcement, modeling, shaping) besides the text of the Social Story itself in practical implementations, it has been questioned [7] if Social Stories were a necessary addition to those other, evidence based practices in behavioral skill training. We argue that Social Stories should not be looked at as *additional* (and therefore, made questionable) strategies to other established instructional practices, but as a complete, practical realization of evidence-based instructional tools, as a specific form of implementation of explicit teaching methodologies in its own right. In addition to intuitive promises, future research will have to empirically validate the construct with rigor for confident and reliable implementation.

Table 2 Instructional components of Social Stories

Evidence-based good instructional practices	Corresponding components of Social Stories interventions ^a
Explicit teaching [20–22] Demonstration [17]	Task analysis; modeling; cueing; comprehension check; feedback
Explicit instruction and drill-practice of basic skills [17]	Task analysis Repetition/review
Extensive active practice [18, 19]	Practice with corrective feedback
Opportunities to learn/practice [16]	Fading of tangible cues
Guided practice with feedback [17]	Maintenance/generalization training (general case programming)
Systematic feedback [18]	
Small steps, and practice of each step [18, 19, 21]	Task analysis as basis for a Social Story and its visual aids/schedules; systematic practice
Organizing questions for review [20]	Review questions for checking comprehension
Graphic organizers [18]	Visual aids (words and images, schedules)
Independently useable/accessible strategies [20]	Social Story as a permanent product, and its additional/embedded pictorial cues/schedules
“Plan of action” (procedural facilitators) [21]	

Note. ^aBased on the analyses by Barry and Burrell [6] and Reynhout and Carter [7]

According to published studies [6, 7, 10–12], Social Stories have been successfully applied in various situations to teach children with varying degrees of severity of autism or asperger syndrome the cues and behaviors they need to know to interact with others in a socially appropriate manner; including aims to decrease disruptive or challenging behaviors, and to increase social interaction, communicative behaviors, or on-task behavior. A field where no published research could be identified from our review of the literature is the use of Social Stories in sexuality education. In a paper prepared for conference presentation [4], it has been proposed that Social Stories be used to teach individuals having disorders on the autism spectrum about issues of sexuality. Anecdotal reports from parents and service providers in response indicated that there were indeed practitioner initiatives with such objectives, and we suggest that similar initiatives be taken up by research for investigation as promising practice.

Social Stories and Sexuality Education

Sexuality education in some form is important for everyone, living with or without a specific disability, in order to acquire sufficient and appropriate knowledge and skills required for developing into a healthy adult with a positive sexual identity and satisfying relationships [23, 24]. Besides this social-developmental and mental hygienic aspect, there are additional reasons that make planned and systematic sexuality education necessary for populations both with or without disabilities, to ensure a self-determined and satisfying quality of life; including the prevention of sexual abuse [5, 24], of sexually transmitted diseases and/or HIV infection [23], and of unwanted pregnancies [5].

Table 3 Social skills components targeted in sexuality education curricula

Skill area	Social skills components
Health and hygiene	Gender differences, maturation Everyday and sexual hygiene Health and wellness Masturbation Body and disease STD and HIV prevention Birth control
Relationships	Friendships and intimacy Responsibility to (sexual) partner Family types and roles Feelings and expression Dating and marriage Parenting Sexual orientation
Self-protection/self-advocacy	Protection against abuse Sexual feelings Sexuality as a positive aspect of self Sexual behaviors other than intercourse Appropriate/inappropriate touching Appropriate/inappropriate public/private behaviors Decision making Use of condoms Reduction of fear and myths Personal rights Sexual discrimination Say “no” to nonconsensual sex and high-risk behaviors

Note. Based on a review of curricula by Wolfe and Blanchett [5]

Surveys of parents and professionals on sexual behaviors of persons having cognitive disabilities, from the 1970s through the 2000s alike, have pointed to a main concern area of the acceptability of displaying auto-erotic behaviors which often are appropriate in private, but inappropriate or even illegal in public situations [25]. Thus, the social-behavioral aspects of sexuality seem to represent a priority target area of skill training in special education, which would especially hold for individuals having a disability that poses likely difficulties especially in dealing with social-interpersonal behaviors, such as the autism/PDD spectrum. Potential social skills for targeting in sexuality education (e.g., with Social Stories as proposed herein) are manifold and may be more self-centered for promoting social acceptability, or focused explicitly on the interpersonal aspects of behavior. A possible categorization of focus, based on the work of Wolfe and Blanchett [5], as well as a wide range of potential target skills are presented in Table 3.

Social Stories may be used in a general way to prepare students for changes and unusual situations as a part of going through future stages of sexual development, or they can be written in reaction to evolved problematic situations to offer the student a solution. An example of general socio-sexual usage of Social Stories may include statements such as:

My name is James. Sometimes I think about sex and private areas. It's okay to think about sex and private areas. I will try to keep my thoughts to myself. This is very important. I may ask mom or dad a question if I'm confused.

My name is Amanda. I am 13. My body is growing and changing. My mom knows about growing up. Sometimes, girls get breasts when they are 13. Soon, I will have breast too. Most women wear bras to hold and cover their breasts. This is a good thing to do. I will wear a bra. If I forget to wear a bra, my mom may remind me before I go to school. Wearing a bra is part of growing up.

An example of a Social Story that is situation specific may include such statements as:

It is OK to have an erection or hard-on while at school. When this happens I will ask the teacher to be excused to go to the bathroom. I will not talk to others about my erection. I know that this is a private thing and it is natural. Erections happen to all boys at some time.

My body belongs to me and some areas are not to be exposed in public. These areas are called private parts and include my genitals and my breasts. It is OK to take off all my clothes when I am on my own at home and not seen by anyone, for example when preparing to take a bath. It is also OK to show my private parts to a doctor in the doctor's office for an examination. If I am getting intimate with my boyfriend and we both feel like we would like to feel each other's bodies, it is OK to agree to take off our clothes and to hug and touch each other in a way that feels nice: but we have to make sure nobody else can see us when we do this. We should be in a separate room by ourselves. But when I go to swim or sunbathing in a public pool facility, I will wear a swimming suit that covers my private areas all the time. I will get undressed and changed only in the designated dressing room or cabin of the pool facility. Everybody does so.

Gray [9] emphasizes that the student's comprehension of the story should be checked before proceeding to skill practice with the story. This can be done either in a written or spoken questions and answers format, with a comprehension checklist, or by letting the person fill in a version of the story that has blanks. The target social skill can then be practiced in relevant real-life contexts and situations. Gray suggests that the Social Story first be read in close proximity to a situation where the person is likely to need to use the target skill. Then, depending on progress made, the reading of the story becomes less frequent, and parts of it can be faded out, leaving the student with an increasingly simpler procedural facilitator until the target behavior becomes a routine part of the person's repertoire.

Table 4 summarizes methodological suggestions for the creation of Social Stories for students having autism, involving the students themselves as much as possible both in the writing of the story, as well as in refining it based on feedback from actual skill performance during initial practice. It is important that Social Stories be individualized and adapted for each individual, and that stories be revised during skill training in reaction to performance and also in course of fading out the intervention for maintenance and generalization. Even though more research is needed to maximize the efficacy of Social Stories interventions, especially in the under-researched area of sexuality education, the suggestions in Table 4 offer a springboard for practical implementations with some well-established good instructional practices.

Table 4 Guidelines to implementation of Social Stories for students having Autism/PDD

Task	Strategies
Identifying behavior in need of intervention	Improvements in that behavior should likely lead to increased functional/adaptive behaviors, social functioning, or safety
Identifying target social skill for instruction	The social skill (replacement alternative behavior) chosen for instruction should be likely to increase social competence
Baseline data collection	On the occurrence of non-desirable behaviors and/or desired (alternative) behaviors as a basis for evaluation
Creating a Social Story	The student, or the teacher (with as much student input as possible) writes the story in the first person, in present or future tense at the comprehension level of the student (check comprehension after initial reading)
Choosing additional supportive materials	Additional visual cues (for practice and for fading out the Social Story) such as photos, drawings, icons, graphic/bulleted schedules
Rehearsing target social skill	The Social Story should be read prior to the real-world situation in which the social skill should be used. Rehearsal of the skill should be linked to the Social Story, and systematic fading should be introduced
Intervention data collection	On the desired target behavior, after the introduction of the Social Story intervention
Adaptation of intervention based on performance	According to the changes in the targeted behavior shown by the intervention data, changes in the implementation procedure may be necessary; additional intervention data give us feedback on those changes
Maintenance and generalization training	If stable social skill improvements are reached in the given practice situation, the utility of the Social Story can be expanded for variations of that situation (general case programming) or other situations where the same skill would again be helpful; and the intervention should be gradually faded out

Note. Based on recommendations by Scott, Clark and Brady [15]

Summary

The authors propose the use of Social Stories for sexuality education for persons having disorders on the autism spectrum. Discussed topics include typical social-interpersonal skill deficits of individuals having autism/PDD and the manifestation of these in the area of sexual behaviors; research-based direct and intuitive promises in support of Social Skills interventions with this student population; and suggestions for implementing such interventions to teach social skills related to sexuality. In spite of some evidence supporting the efficacy of Social Stories interventions, a limitation to the validity of methodological suggestions is generated by the lack of methodologically solid empirical research on practical implementations. Among documented studies, no research could be identified on the use of Social Stories specifically targeting socio-sexual skills for this population. Future research should empirically validate Social Stories interventions with rigor for confident and reliable implementation with individuals having autism/PDD in sexuality education. Information presented in this paper, as well as further research findings in this area, should better prepare individuals with autism and their caregivers and educators for managing the opportunities to engage in healthy and satisfying sexual lives.

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