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# Knowledge and Attitudes of Speech Language Pathologists on Social Story Based Intervention: A Preliminary Study from South India

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#### **Abstract**

Social stories are recognized as an intervention strategy for individuals with communication disorders and typically developing children. The proficiency of a professional is determined by three key factors: knowledge, attitude, and practice towards current trends and available resources. The success of any intervention relies on the knowledge and attitude of the professional administering the protocol. Therefore, it is crucial to investigate the knowledge and attitude of speech-language pathologists (SLPs) in utilizing social stories. In India, there are over 3160 registered practicing speech-language pathologists; however, authorized statistics regarding the use of social stories by SLPs are not readily available. The present study aimed to understand the knowledge and attitude of SLPs towards social story-based intervention.

A total of 124 SLPs who are practicing in the field of speech language pathology served as the participants for the study. The study was conducted in three phases: phase I involved the development and validation of a questionnaire to explore the knowledge and attitude of speech language pathologists on social story-based intervention. The items were framed based on a Likert rating scale, yes-no-maybe format and open-ended format. Phase II involved data collection, while phase III involved data analysis. Descriptive statistics were done to derive the frequency and percentage for discrete variables across domains of knowledge and attitude. The present study is an initial attempt to touch upon the fabric of social stories-based intervention delivered by SLPs of India.

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The findings of the study revealed that though the attitude of SLPs towards social stories is positive, and yet their knowledge has to be improved. Further, the current study highlights the need to improve the knowledge of SLPs and scope of future research on the practice of social story-based intervention by SLPs.

Keywords: Social story, South India, Autism spectrum disorder, Knowledge, Attitude

## Introduction

Stories are fascinating to all generations of listeners, be it a child, grown up adolescent or even elderly population. It takes us to the world of wide imagination and fantasy with an ingrained excitement. With the advent of reformation in information and communication technology, the same leisure activity has risen to the platform of multimedia learning from the very old traditional way of listening to stories around grandmother chairs. Now, the researchers are keener to analyze the story listening activity to understand the benefits of it. This ranges from improving listening comprehension, word knowledge, imitations and inherent happiness of sharing the stories etc. It is a platform for promoting various learning approaches such as incidental learning, gestalt learning, and of course with the assistance of technology, multimedia learning also. Further, rehabilitative professionals, specifically Speech-Language pathologists, are using storytelling as a language building activity on their intervention of children with various communication disorders. From their perspective, shared book reading leans on the stories to improve the language abilities of children. Another practice of using stories to improve social skills of children is called social reading approaches, where the stories are labeled as social stories.

Social Stories are individualized short stories used to assist children and adolescents with autism spectrum disorders in understanding social situations by describing and explaining appropriate behavior and providing examples of appropriate responses. Social stories accurately describe a context, skill, achievement, or concept according to 10 defining criteria. These criteria guide Story research, development, and implementation to ensure an overall patient and supportive quality, and a format, "voice", content, and learning experience that is descriptive, meaningful, and physically, socially, and emotionally, safe for the child, adolescent, or adult with autism. Social Stories were first developed, introduced, and trademarked in 1991 by Carol Gray (Gray 2010). Autism is a complex neurological disability that is diagnosed in increasingly large numbers of

children. Social Stories were developed so that students with autism spectrum disorders (ASD) could learn social skills. Social Stories are individualized short stories used to assist children and adolescents with autism spectrum disorders in understanding social situations by describing and explaining appropriate behavior and providing examples of appropriate responses. Children with autism spectrum disorders (ASDs) are less able to learn social rules, conventions and behaviors by intuition compared with their typically developing peers. This may impact upon social interaction, social integration, learning and mental health and on occasions may lead to high levels of anxiety and or challenging behaviours (Wright et al., 2016). Social stories are short stories which explain cues and appropriate responses to significant situations in a social context and they may be prepared in written or visual form (Gray et al., 2002). They are generally regarded as a positive intervention strategy with some components of priming. It presents social behaviors in the form of concrete, visual cues that make the information more digestible for kids who aren't able to conceptualize an image when someone verbally explains what to do or what to express (Wright & McCathren, 2012).

The social stories used under Gray's approach contain the following types of sentences:

- **1. Descriptive:** This part answers the wh- questions relevant to the situation. Where it is, who it's occurring with, and why it's happening. These sentences appear at the beginning of social stories. They describe situations and the people involved in them, what is going to happen, and the causes of events. They also address the following questions: Where? Who? What is going to happen?
- 2. **Perspective**: This part includes opinions, feelings, ideas related to the situation. These sentences describe internal feelings like the sensations, wishes, emotions, attitudes, thoughts, and beliefs of people in the situations depicted. These sentences are very important because they contain information that is not available to children with ASD.
- 3. **Directive:** This part includes a range of responses for a particular situation. It's important that they have a positive focus and refrain from using "I have to" or "I must" in them. These sentences present social cues within situations and indicate the expected responses of individuals. Such responses may begin with "I will try" or "I will attempt".

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- 4. **Affirmative:** This part includes statements that enhance the importance of the message to reassure the person. These sentences emphasize the importance of directive sentences; they begin with "It is good that . . ."
- 5. **Co-operative:** This part includes statements to provide meaning to a situation. These sentences describe others' actions and show who these actions can help and how.
- 6.**Control sentences:** These sentences are added to the story by the storyteller and describe more general observations and thoughts to reinforce the information presented in the story (Gray, 2010).

The aforementioned way of intervention has been in practice in the field of rehabilitation science for 10 years but the proper utilization of available resources by our professionals in the field is a matter of question. There are three main factors which decide the skills of a professional: knowledge, attitude and practice towards current trends and available resources. Covid 19 pandemic situations forced children to spend their time in isolation, being away from social engagements which resulted in significant problems in developing appropriate social skills. The proper management of available resources like social stories can help to alleviate the deficits and can enhance the social skills within the home environment.

Ozdemir (2008) examined the effectiveness of multimedia social stories on the duration of appropriate social engagement in 3 young children with autism. The multimedia social stories were implemented, and observations were noted for the play sessions which were conducted three times per week. The participants showed an increase in the duration of appropriate social engagement during time of intervention where two participants showed generalization to a classroom setting. The study had shown that the implementation of multimedia social stories without focussing more on behavioral management techniques for increasing social engagement in children with autism is more effective.

Studies by Scattone, et al in 2006 and Thiemann and Goldstein in 2001 emphasized the point that many of the practitioners experience apprehensions regarding the impact of the sources of social stories on their effectiveness. The ready-made social stories which are widely available from public sources such as bookshops, internet are intended for general use only, and are created

to deal with typical social situations. They may not fulfill the precise needs of a particular individual who has autism. Thus, it is recommended that practitioners working with individuals with autism should try to devise their own social stories tailored to each individual's specific social needs.

Faihan Alotaibi (2017) conducted a study which explores the perceptions of fifteen teachers working in two different special schools in Riyadh who were dealing predominantly with children having autism. They used social stories among the children for developing social skills. The teachers were interviewed using semi-structured interviews. The findings thus indicate that the teachers were much aware regarding what is the concept of Social Stories and of where they could be obtained in Saudi Arabia. They also recognised the different barriers and factors which contribute to the effective use of social stories. According to them, culture was considered as a significant potential barrier to the use of social stories for the intervention.

# **Need of the Study**

The global pandemic has instigated upheaval across various aspects of individuals' lives. Notably, its impact has been particularly pronounced among the younger generation due to constrained social opportunities. This surge has adversely affected all facets of a child's development. Many children lacked exposure to models of reciprocal social interaction in their learning environments, given the diverse work cultures of their parents. These factors heightened the risk of inadequate social skills in children. Additionally, children with Autism Spectrum Disorder (ASD), who already faced challenges with impaired social interaction skills, were especially impacted.

Social stories are designed for children with ASD to comprehend social situations. The use of social stories present a practical and promising solution for social skill targeted intervention programs. The efficacy of any intervention, including social stories, relies on the attitudes and knowledge of professionals toward its implementation. More than 3160 registered practicing speech language pathologists are available in India but authorized statistics regarding the Speech language pathologist using social stories is not available. To the best of the authors' knowledge,

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there is a paucity of published literature on the effectiveness of social stories in intervention, and there are no published studies on the knowledge, attitude, and practice of speech language pathologists toward social stories in Indian contexts. Considering these factors, there is a clear need to investigate the knowledge and attitudes of speech-language pathologists regarding the utilization of social stories in their clinical practice. This study aims to contribute valuable insights into the current scenario, shedding light on the knowledge and attitudes of SLPs and their potential impact on intervention outcomes.

# **Purpose and Objectives of the Study**

The main purpose of the study was to explore the Knowledge and attitude of Speech language pathologists on the use of social story as an intervention strategy in clinical practice. *Objectives:* 

- To understand the Knowledge of SLP in using social stories as an intervention strategy
- To explore the Attitude of SLP in using social stories as an intervention strategy

## Method

### **Participants**

A total of 124 participants who are practicing in the field of speech language pathology were selected for the study.

*Inclusion criteria*: The participants of the study should be a

(a) qualified Speech Language Pathologists who successfully completed their bachelor's program and possess more than one year of work experience after graduation & (b) SLPs who were actively engaged in working primarily with children with various communication disorders were considered for the study

*Exclusion criteria*: Speech language pathologists with less than 1 year of working experience were excluded from the study.

# Procedure

The current study was carried out in three phases,

**Phase 1** focused on the development and validation of the questionnaire addressing the knowledge & attitude of SLPs on the use of Social stories;

Phase 2 dealt with circulating this self-reported questionnaire & collecting the responses from participants

**Phase 3** targeted on the analysis of responses from the participants

# Phase 1: Development and Validation of Questionnaire

A questionnaire to evaluate the knowledge and attitude of Speech Language Pathologists regarding social stories was developed through a comprehensive review of literature, personal experiences, and clinical insights. The questionnaire's content areas were determined by analyzing scientific literature and engaging in potential discussions with experts. Two Subject Experts, both Speech Language Pathologists with over 6 years of clinical experience working with children with Autism Spectrum Disorder (ASD), provided valuable input. Additionally, the questionnaire underwent revision and modification through collaborative discussions between the investigators and subject experts.

The knowledge section consisted of 5 questions, while the attitude section consisted of 14 questions. To ensure content validity, the questionnaire was rated by 5 speech language pathologists with over 5 years of combined clinical and research experience. Each item on the questionnaire was rated on content, grammar, comprehensibility, and question relevance using a Likert scale, ranging from "very appropriate" to "very inappropriate." Feedback from the experts was incorporated, resulting in a final questionnaire consisting of 19 questions in English. The responses from participants were collected using a 5 point Likert rating scale as strongly agree, agree, neutral, disagree, and strongly disagree yes-no-maybe format, open-ended questions, and multiple-choice questions. The target items in the domain of Knowledge were rated using Yes/No /Maybe format & Multiple-choice format. On the other hand for rating the target items in the domain of Attitude, a 5 point rating scale (strongly agree, agree, neutral, disagree, and strongly disagree),) was used in addition to the other response formats.

# Phase 2: Administration of Questionnaire

The developed questionnaire was transformed into a google form. The responses were collected by circulating google form on WhatsApp mail and by administering the questionnaire through phone call. An initial phone contact was made to determine their willingness to participate in the study .On receiving their confirmation to participate, a consent form was collected from all the participants. The questionnaire was shared as two forms. The first form collects demographic details of participants along with the question "Are you familiar with the term social stories?" The participants who responded "yes" to that question were shared with the second form to analyze their "Knowledge and Attitude on social stories".

## Phase 3: Analysis of the Responses

Descriptive statistics were done to derive the frequency and percentage for discrete variables. The initial part of the questionnaire included demographic data, followed by questions regarding knowledge and attitude towards the use of social story among SLPs. There were open ended questions to extract the in-depth information and perspectives .The responses were analyzed by calculating the frequency and percentage value for each question on the basis of the two domains.

#### **Results**

## **Participant Profile**

Table 1 given below outlines the demographic characteristics of 124 participants. The majority of respondents, comprising 79.80%, were female, while 20.20% were male. Among the participants, 72% hold a bachelor's degree & 28% hold a master's degree in audiology & speech -language pathology. Approximately, 78% of total participants were practicing in Hospitals, Private clinics & Rehabilitation institutes. However, out of 124 participants, only 58 participants responded yes to the question "Are you familiar with the term social stories" while the term social story was new for 66 participants. Notably, a significant proportion of the participants primarily worked with individuals on the Autism spectrum disorder, followed by those with language disorders. The number of clients seen in a week range from a minimum of 3 to a maximum of 30 as reported by the participants.

Table 1

Demographic characteristics of participants

Questions	Data I	Frequency	Percentage
No. of Participants	N	124	100%
Are you familiar with the term	Yes	58	46.80%
social stories?	No	66	53.20%
Gender	Male	25	20.20%
	Female	99	79.80%
Qualification	BASLP	89	71.80%
	MASLP	35	28.20%
	PHD	0	0%
	POST DOC	0	0%
Years of experience	0-2. years	77	61.30%
	3-6. years	39	31.30%
	6-10 years	6	4.80%
	above 10 years	2	1.60%
Work setting	Hospital	47	37.40%
	private clinics	37	30.10%
	rehabilitation institution	on 14	11.40%
	educational institution	18	14.60%
	Others	8	6.50%
Clients usually seen	ASD	77	
	Language disorder	60	

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	Specific learning disability	59
	Cerebral palsy	38
	Global developmental delay	40
	Fluency disorder	39
	Adult neurological disorder	32
	Multiple disability	13
Number of clients seen in a week	Maximum	30
	Minimum	3

## **Knowledge Domain**

The below given Table 2 describes participant's knowledge on social stories, assessed through five questions. A predominant 46.60% of participants acquired knowledge about social stories through their academic programs (BASLP/MASLP), followed by training, research articles, and their commencement of work as Speech-Language Pathologists (SLPs). Participants commonly referred to sources such as twinkl.com, ABA educational resources, story weaver, LessonPix.com, Teachers Pay Teachers, among others, for social stories. Some participants also consulted related books and articles, YouTube videos, and customized social stories based on their clients' needs. Notably 9% of total participants were aware of the specific training on social stories but only 5 % had attended the special training program on social stories. Interestingly, 59% of participants believed that social skills were the primary focus of social story training, followed by behavioral skills. Unanimously, all participants agreed that motor skills were not emphasized in social story training.

Table 2 Performance of participants on the domain of Knowledge towards social stories

Questions		Number of counts.	(%)
1.How did you come to know about Social	Research article	9	15.50%
stories?	Academic progr	am 27	46.60%
	Training	15	25.90%
	Other	7	12.10%
2.Have you attended any special training in	Yes	3	5.20%
social stories?	No	52	89.70%
	May be	3	5.20%
3.Name 2 sources commonly referred for social stories.	<ul> <li>Relayed on websites for Social stories like twinkl.com., ABA educational resources, storyweaver, LessonPix.com, Teachers Pay Teachers,pinterest, table2learn, kidmunicate, thomas's daily life(redmon kids) for younger kids</li> <li>Customized stories based on the client's needs using microsoft powerpoint and youtube videos</li> <li>Referred Books like Big book of social stories and some purchased social stories through online platforms.</li> </ul>		
4.Are you aware of any specific training with	Yes	5	8.60%
social stories?	No	52	89.70%
	Maybe	1	1.70%

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5.Name the target skills for intervention using	Motor skills	0	0%
social stories.	Language skills	8	13.80%
	Behavioral skills	15	25.90%
	social skills	34	58.60%
	speech skills	1	1.70 <b>%</b>

## **Attitude Domain**

Table 3 details participant's attitudes towards social stories. There were 14 questions related to the attitude of speech language pathologists towards social stories. Approximately 88% of participants expressed a positive attitude towards the use of social stories in children with communication disorders as well as typically developing children. However, 2% of total participants did not agree that social stories are beneficial for children with anxiety. Around 93 % of participants opined that social stories as an intervention strategy improve the social skills of the children, Further, 73 % of participants agreed that social stories are beneficial for children with autism spectrum disorders followed by language disorders (14%). All the participants were ready to recommend social stories to parents & 91% believe social stories were cost effective. Though 97 % of participants recommend social stories to other professionals, only 57% prefer social stories over other strategies during intervention. Further 54% of participants also believe social stories were difficult to practice in daily clinical activities. Moreover, only 56% of participants agreed social stories can be used in varied contexts such as Home, School and clinics.

Table 3 Performance of participants on the domain of Attitude towards social stories

Questions		Frequency	Percentage
1. Social Story may benefit a child with	strongly agree	22	37.90%
communication disorder.	Agree	29	50.00%
	Neutral	7	12.10%
	Disagree	0	0 %
	Strongly Disagree	0	0%
2. Social stories can be used for typically	strongly agree	24	41.40%
developing child	agree	28	48.30%
	Neutral	6	10.30%
	Disagree	0	0 %
	strongly Disagree	0	0%
3. Social stories can be used for adults with	strongly agree	12	20.80%
communication disorders.	Agree	31	53.40%
	Neutral	13	22.40%
	Disagree	2	3.4%
	Strongly Disagree	0	0%
4. Social stories may help children with	Strongly agree	9	15.30%
anxiety.	Agree	25	44.00%
	Neutral	22	37.30%
	Disagree	2	3.40%
	Strongly Disagree	0	0%

5. Social stories are easily accessible to	Strongly Agree	12	20.70%
everyone as it is cheap and cost effective.	Agree	19	32.80%
	Neutral	22	37.90%
	Disagree	1	1.70%
	Strongly Disagree	4	6.90%
6. Social stories help in social skill	Strongly Agree	26	44.90%
development.	Agree	22	37.90%
	Neutral	6	10.30%
	Disagree	1	1.70%
	Strongly Disagree	3	5.20%
7. Do you prefer social stories over other	Yes	33	56.90%
strategies during intervention.	No	25	43.10%
8. Would you recommend the use of social	Yes	44	75.90%
stories for students without disabilities?	No	1	1.70%
	Maybe	13	22.40%
9. Which clinical populations benefit from	Child language disorder	8	13.80%
social stories?	Autism spectrum disorder	42	72.50%
	Adult Language disorder	2	3.40%
	Typically developing children	n 1	1.70%
	Children with Anxiety	5	8.60%
10. Do you think intervention using Social	Yes	31	53.40%
story is cost effective?	No	9	15.50%
	Maybe	18	31.10%
11. Do you recommend social stories to	Yes	54	93.10%
parents to improve social skills to the child	No	0	0%

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	Maybe	4	6.90%
12. Do you recommend social stories to	Yes	54	96.60%
professionals to improve social skills to child	No	2	3.40%
13. Do you think social stories can be used in	Home	15	26.30%
different contexts?	School	8	14.00%
	Clinics	2	3.50%
	All of the above	33	56.20%
14. Do you think social stories are difficult to	Yes	2	3.40%
practice in daily clinical activities?	No	31	53.50%
	Maybe	20	34.50%
	Don't Know	5	8.60%

#### **Discussion**

The current study was an initial attempt to investigate knowledge and attitude of SLPs on social stories in India. The participants represented professionals from all types of work settings (private clinics, hospitals, educational institutes, and rehabilitation centers). When considering the gender distribution regarding the use of social stories, a total of 79.80% of the participants were females when compared to males (20.20%) indicating a profound inclination towards the female gender, which is well established in the field of speech and language sciences.

# **Knowledge of SLPs on social stories**

Overall, the results suggested that there is a need for enhanced knowledge on social stories among Speech-Language Pathologists (SLPs). Out of 124 participants 58 participants (46.77%) responded "yes" to the question " Are you familiar with the term social stories", where 66 participants (53.23%) were new to the term. However, the depth of understanding of participants on social story was not ascertained in the present study. Further, the results of the study indicate a pressing need for enhancing knowledge among SLP.

Among 58 participants, 8.60% was aware about special training related with social stories and in it only 5.20% has attended the available training programs, even though there are many workshops and webinars are available. Most of the relayed on websites, articles, books for the preparation of social stories. Majority of participants believed on improving social skills through social story based intervention. This is in agreement with the findings conducted by Bernard-Ripoll, (2007); Crozier and Tinconi, (2007) suggesting social story based interventions are effective to teach social skills for children with ASD.

#### **Attitude of SLPs on Social Stories**

In general, participants had a positive attitude towards social stories. The majority of participants strongly agreed to the statements that social stories may work for children with communication disorder, typically developing children and adults with communication disorder. Early research findings on social story based intervention indicated that social story has been found effective to help children with special needs to increase their social skill. However, there is still limited research in examining the effectiveness of social stories in promoting social skills of typically developing children. Approximately half of the participants had a positive attitude on the effectiveness of social story based intervention on children with anxiety. This is in support to the findings of the study carried out by Kokina and Kern (2010) where authors identified four promising areas of behavioural changes as a result of social based intervention, consisting of reducing negative behavior, increasing positive behavior, managing transitions/novel situations/anxiety, and teaching new skills (academic/functional).

Around 44.90% of participants of the present study was with the opinion that social stories are helpful in social skill development. This is in concordance with the findings of studies conducted by Amin et al (2013); Leaf et al (2012), Quirmbach, et al (2009), Karkhaneh, et al (2010) and Mason (2017). The study identified children with autism spectrum disorder as the clinical population that derives the greatest benefit from social stories, followed by those with language disorders. This observation is consistent with the results reported by Kokina and Kern (2010) and Pane et al. (2015). In the current study, nearly 53.40% agreed that intervention using social stories is cost effective, but only 20% stated that it is easily accessible. Previous studies

conducted by Derguy et al. (2015) and Wahman et al (2022) also opined that social stories based intervention were of low cost, accessible, and address parents' support needs, such as managing challenging behavior.

# **Limitations of the Study**

- Most of the participants had the experience of 2 years.
- The questionnaire was lengthy, which resulted in more time consumption.
- The majority of the participants' qualification was limited to bachelor's degree.

#### **Future directions**

Based on the findings of the current study, while speech-language pathologists (SLPs) generally hold a positive attitude towards social stories, only half of the participants express a preference for this intervention strategy over other approaches. Additionally, an equal proportion of participants reported facing challenges in integrating social stories into their daily clinical practice. Consequently, there is a need for future research to delve into the clinical implementation of social story-based interventions. Additional research is necessary to investigate the potential advantages of interventions based on social stories. This can be achieved through large-scale studies. Expanding the scope of the study by specifically targeting individuals with more extensive clinical experience and higher qualifications would enhance its comprehensiveness. Future research efforts should be aimed at examining the operational and implementation challenges associated with social story-based intervention services, particularly in the context of communication disabilities.

# **Implications**

The current study highlights the importance of raising awareness among both aspiring and practicing speech-language pathologists (SLPs) regarding social stories. It advocates for the incorporation of social story-based intervention approaches and practices into the academic curriculum. The study's results indicate a relatively poorer knowledge about social story-based intervention when considering participants' attitudes. To substantiate these findings, future

research should focus on investigating the clinical implementation of social story-based interventions.

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