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Research Paper

Development and Application of Social Skill Training Module for Children with Autism Spectrum Disorder: Pilot Study

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ABSTRACT

Introduction: Verbal and nonverbal communication, social interaction, as well as repeated behaviours, are all significantly impaired in children with autism spectrum disorder (ASD), causing numerous challenges for their parents. **Aim:** To develop Social Skill Training Module for children with ASD to improve their social and communication skills. **Methodology:** Focused group interview/discussion was done on parents & teachers of 10 children with ASD within age range of 6-15 years. In the pilot study the developed module was applied on 5 children & their parents (35-50 years of age) in Ranchi Institute of Neuropsychiatry and Allied Sciences (RINPAS), Kanke, Ranchi, Jharkhand. **Result:** Through focused group interview/discussion major social and communication deficits were found in the children with ASD. Based on which module was developed. The module fulfilled the needs identified during the development of the module and through feedback of parents the module was useful, practicable and understandable for the participants. **Conclusion:** Further study may prospect the applicability and sustainability of the module, which may be utilised to improve the social and communication skills of children with ASD.

Keywords: *Autism spectrum disorder, Social Skill Training, Social and communication skills, social interaction, Module*

Social deficit is a hallmark characteristic that has a substantial impact on people with autism spectrum disorder (ASD at all cognitive and language functioning levels (Carter et al., 2005). Given that children with ASD typically exhibit a lack of interest in connecting with others, including members of their own family, the most definitive trait of ASD is a substantial failure in socialization. Language is a second obvious area of weakness. Before receiving treatment, most of these kids may be silent or only mildly verbal, have delayed word acquisition, and even fails to use signs or gestures to communicate. While some of these children often echo the words or phrases of others without understanding them, they also have few significant speeches. Thirdly, a variety of behaviours, interests, and hobbies are displayed by children with ASD, but may be predominated by stereotyped routines and by toy play that is unsocial, repetitive, and unimaginative (Newsom & Hovanitz, 2006).

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Social impairment being a central feature of autism spectrum disorders (ASD) has been extensively described in the literature (Attwood, 1997; Myles et al., 2005; Rogers, 2000). People with ASD struggle with communication, how to receive and integrate environmental information, how to build and sustain social relationships, and how to participate in new circumstances. Most significantly, social isolation and withdrawal are often the outcome of poor social skills, which make it challenging to form positive social relationships. Social skills are crucial for successful development of emotional, social and cognitive abilities. Social skills impairment (Holloway et al., 2014).

In social interaction, language and communication are a very important factors, and Autism involves triad of symptoms - repetitive or stereotyped behaviour, social skills deficit and communication skills deficit (Grover, 2015). Therefore, it is also essential to discuss about communication skills, which are the foundation of social interaction, in order to identify social skill deficiencies. In the field of autism, understanding human communication is vital to both theory and clinical practice. To understand autism, milestones of language and communication play major roles at every stage of development. Due to early delays or regressions in speech development, the majority of parents with autistic children initially start to worry that something is amiss in their child's development (Short & Schopler, 1988). Autism related communication impairments are widely recognised (Kanner, 1943; Prizant, 1983). These include pronominal reversals, difficulty in speaking words, speech with echolalia (repeating words or phrases heard before), difficulty interacting with others including appearing distracted or averting one's gaze and exceptional sensitivity to external stimuli (Prizant & Duchan, 1981; Ricks & Wing, 1975).

Speech impediment has been identified as a feature of ASD, especially when it is linked to a lack of motivation to communicate and a lack of compensatory nonverbal cues like gestures. Children with mild symptoms, particularly those with typical cognitive skills, might be able to speak to some extent. As we know ASD is a heterogeneous disorder that is a chronic and lifelong condition, among the most debilitating of the developmental disabilities. The hallmark feature of ASD is social skill impairment. The prevalence rate according to a recent systematic analysis among children aged between 0-17 in South Asian countries like Bangladesh, India, Sri Lanka ranges from 0.09% to 1.07% for ASD (Hossain et al., 2017). In India up to 1.8-2 million children are thought to have ASD (Uke et al., 2024). Though there has been tremendous growth in awareness of ASD in India but still there are lags in the amount of clinical research and treatment programs for children with ASD, as compared to other countries. It becomes difficult for parents to provide the best treatment needed for their children in the lack of adequate psychologists and treatment centres. Thus, an intervention programme which makes children as well as parents less dependent on professionals and more empowered, would result in better outcomes for the children in area of social skills. Efforts to develop parent assisted module, in the context of skill training are understudied and greatly needed especially in the Indian population. Also, there are limited research in India regarding the development and enhancement of social skills in the children with autism.

METHODOLOGY

Aim of the study

The aim of this study was to develop Social Skill Training Module for children with autism spectrum disorder and to assess applicability of the module on children with autism spectrum disorder on social and communication skills.

Design of the Study

The present study is a longitudinal study which was conducted in Ranchi Institute of Neuropsychiatry and Allied Sciences (RINPAS), Kanke, Ranchi, Jharkhand. Study was done on children with autism spectrum disorder and their parents of Deepshikha Institute for Child Development & Mental Health, Namkum, Ranchi, Jharkhand and Ranchi Institute of Neuropsychiatry and Allied Sciences (RINPAS), Kanke, Ranchi, Jharkhand.

Sample & Sampling Technique:

Purposive Sampling technique was adopted in the present study. 10 parents and 10 teachers of the children with autism from Deepshikha Institute for Child Development & Mental Health, Namkum, Ranchi, Jharkhand were included for focus group discussion or interview. 5 participants of both parents and children who fulfilled the inclusion and exclusion criteria were selected for module administration, from Deepshikha Institute for Child Development & Mental Health, Namkum, Ranchi, Jharkhand.

Inclusion criteria for children

- Diagnosis of autism spectrum disorder according to DSM-5 (American Psychiatric Association, 2013).
- Age range of 6-15 years
- Children of either sex
- Children with Intelligence Quotient >35 (above moderate level)
- Children with Social Quotient >36 (above moderate level)
- Children having mild to moderate level of Autism
- Children who will be able to read and write Hindi or English language

Exclusion criteria for children

- Children with psychotic symptoms
- Children having any physical illness
- Children who will be having vision or hearing impairment
- Children who will be having locomotor impairment

Inclusion criteria for parents

- Parents of either sex
- Age range of 35-50 years
- Parents staying with children more than 2 years
- Parents who will be able to comprehend the instructions.
- Parents who will give written informed consent for participation in the study.

Exclusion criteria for Parents

- Parents having any history of major physical and psychiatric illness
- Parents having history substance dependence.
- Parents who will be unable to comprehend the instructions.
- Parents who will not give written informed consent for participation in the study

Description of Tools:

- ***Socio-Demographic and Clinical Datasheet:***

Socio-Demographic and clinical datasheet a semi-structured, self-prepared Performa was be developed for the purpose of the present study, consisting of information about socio-demographic variables (like age, sex, education, marital status, religion, occupation and

socio-economic status) of parents and information about clinical variables of child (like range of IQ, range of autism severity comorbidity).

- ***Indian Scale for Assessing Autism (ISAA):***

Indian Scale for Assessment of Autism (ISAA) was used to assess severity level of autism. It was developed by the National Institute for Mentally Handicapped (NIMH) in 2009 and it is an authorised instrument for certifying disability in persons with autism (ISAA, 2009). The ISAA is a 40 item scale divided into six domains- Social Relationship and Reciprocity; Emotional Responsiveness; Speech-Language and Communication; Behaviour Patterns; Sensory Aspects and Cognitive Component. It is rated on a 5-point Likert scale ranging from 1 (rarely) to 5 (always). Scoring is based on information from parents and observation of the child following guidelines from the Manual of the ISAA (Chakraborty et al., 2015). Test-retest and inter-rater reliability was 0.93-0.99 and 0.99, respectively (Mukherjee et al., 2015).

- ***Stanford Binet Test (SBT):***

Stanford Binet Test (SBT) was used to examine the intelligence quotient of the children. It was originally developed by Alfred Binet with the help of Simon in 1905 in France. In India its Hindi version was developed by S. K. Kulshrestha. Its 1960 revision has a range of 2 years to 22 years and 11 months of mental age scores. The single Binet L-M form is available with norms on data as recent as 1972. This form measures abilities in 7 categories: Languages, reasoning, memory, social intelligence, conceptual, numerical reasoning and visual motors. Test items are in the form of words, objects and pictures, and responses given by the participants are in the form of drawing, calculating, writing and speaking (Kumar et al., 2009).

- ***Vineland Social Maturity Scale (VSMS):***

This scale was used to assess social adaptive functioning of the children. It was originally developed by E. A. Doll in 1936, which was then adapted by Malin in the year 1965 (Roopesh, 2019). Bharat Raj in 1992 further extended/modified the VSMS and this version is more similar to the Doll's in terms of item description as well as scoring (Raj, 1992). It provides an estimate of social age (SA) and social quotient (SQ) and shows high co-relation (0.80) with intelligence. It is designed to measure social maturation in 8 social areas. The scale consists of 89 items grouped into year levels (13 age groups). It can be used for the range from 0 to 15 years. The test has very good reliability and validity, and has a good correlation with intelligence, of about 0.80 correlation with intelligence (Roopesh, 2019).

- ***General Health Questionnaire (GHQ-28):***

The GHQ-28 used to examine the current mental health of the parents of children with autism. It was developed by Goldberg in 1978 and has since been translated into 38 languages. Developed as a screening tool to detect those likely to have or to be at risk of developing psychiatric disorders, the GHQ-28 is a 28-item measure of emotional distress in medical settings. Through factor analysis, the GHQ-28 has been divided into four subscales. These are: somatic symptoms (items 1–7); anxiety/insomnia (items 8–14); social dysfunction (items 15–21), and severe depression (items 22–28). Test-retest reliability has been reported to be high (0.78 to 0 0.9) (Robinson & Price, 1982) and interrater and intra-ratter reliability have both been shown to be excellent (Cronbach's α 0.9–0.95) (Failde & Ramos, 2000). Parents who scored below 23 were selected as participants as the cut of score for GHQ-28 is below 23 (Hjelle et al., 2019).

- ***Feedback Checklist***

A feedback checklist was developed by the researcher to examine the feasibility of the module. The checklist consisted of the contents of the module to measure parental perception and opinion about understanding and practicality of the module.

Procedure

Initially, a detailed and relevant review of research was carried out, emphasising on social skill training of children and adolescent with autism spectrum disorder. Review of various published studies of various countries specially of India was done. Thereafter, according to the understanding need based assessment was conducted through focused group discussion or interview with 10 parents and 10 teachers of the children with autism from Deepshikha Institute for Child Development & Mental Health, Namkum, Ranchi, Jharkhand, which was on the basis of their understanding of social skills needed for the child with autism to facilitate the development of social skill training module. Then thematic analysis and review of the need-based assessment was done, based on which objectives of the module was developed, thereafter relevant components of intervention were identified and selected to develop the social skill training module. The developed module was then piloted on 05 children with autism and their parents who was selected according to the inclusion and exclusion criteria. Then feedback checklist was assessed on parents. After the descriptive analysis of parent's feedback, the needed modification was done in the module. Then the module was evaluated and validated by the experts including 3 mental health professionals and 3 special educators. The module was further modified based on their evaluation and comments.

Module Development

The therapist module was developed based on the social skill needs of children with ASD that was derived from the focus group interview with their parents and teachers. Through the thematic analysis and review of the need-based assessment objectives of the module was developed, thereafter relevant components of intervention were identified and selected to develop the social skill training module. The developed module content includes 11sessions for children and 6 sessions for parents. The initial 4 sessions of the training program for children focus on social & communication skills and emotion management such as introducing self, naming others, naming objects, identification and naming emotions, naming actions, recognising facial expression & emotions, greeting & farewell skills, using polite words, asking for play, joining a game, social game and reporting parents about new learned skills. The last 5 sessions of the training for children also focus on social & communication skills and emotion management such as learning to respond to inhibitory words, social skills about appropriate behaviour in social situation, asking for turn and sharing turn in social game, reporting parents about new learned skills, imitating gestures, conversational social skill, relaxing, asking and giving help, learn to be a good sport, learning to ask playmates of playing something different and initiating, maintaining & terminating conversation. 2 sessions also included booster session which includes repeating and rehearsing the practised skills, also targeting individual goals. Sessions should preferably be scheduled weekly, with approximately 20-30 minutes and 45- 50 minutes per session. The approaches for training program for children include modelling, social game, visual prompts, role play and social stories.

The initial 2 sessions for parents of training program which would be administered before the child session focus on introduction of intervention plan, psychoeducation, and parenting

strategies including prompting, reinforcement and relaxing strategies for child. The last 3 sessions for parents of training program which would be administered during the child session focus on reviewing child's session, learning how to respond towards child's reported learned skills, imitative play to facilitate joint attention and eye to eye contact, social communication including teaching child simple communication, complex communication, increasing complexity of communication, narratives and social play. 1 session at last focus on repeating and rehearsing the practised skills and terminating the session. The sessions for parents should preferably be scheduled 3 days per week, with approximately 35 to 45 minutes per session depending again on the availability of the parents.

Qualitative Analysis

For the qualitative data, thematic analysis was done. After focused group discussion or interview from the parents, all the recorded interviews were analysed carefully to generate coding of information to achieve greater accuracy in generating relevant common themes related to the child's need. Analysis occurred in three phases. First, interview transcripts were reviewed several times, searching for "recurring regularities" (Merriam, 1998). The quotes and phrases were highlighted from the interviews that were significant to the present study. Using the constant comparative method (Glaser & Strauss, 1967), went back and forth constantly among transcripts until categories emerged that were consistent, yet distinct. Then these categories were named, and transcripts were coded. Second, the coded interviews and transcripts were brought together and looked for the relationships within and across the data sources. Then a table was developed to show various categories from the coded interviews and finally, the categories were integrated and refined until themes solidified (Straus & Corbin, 1998).

Statistical Analysis:

The raw data was analysed statistically with aid of the computer program SPSS-21 version (Statistical Package for Social Sciences). Descriptive statistics was used for describing the categorical variables and to describe the practicality and acceptability of the developed module.

RESULTS

Table 1: Socio-demographic profile of Parents

Variables		**Parents Sample (N%)**	
Age range	35-40 years	1	20%
	41-45 years	2	40%
	46-50 years	2	40%
Sex	Male	2	40%
	Female	3	60%
Marital Status	Married	4	80%
	Single	1	20%
Religion	Hindu	4	80%
	Muslim	0	0%
	Christian	1	20%
	Sarna	0	0%
Education	Matric	1	20%

	Intermediate	2	40%
	Graduate	1	20%
	Post- graduate	1	20%
Occupation	Government Job	1	20%
	Private Job	2	40%
	Others	2	40%
SES	Upper	0	0%
	Middle	5	100%
	Lower	0	0%
Family Type	Nuclear	4	80%
	Joint	1	20%
Residence	Rural	0	0%
	Urban	5	100%
	Semi- Urban	0	0%

Table 1 shows the socio demographic variables of parents. Descriptive statistics was used to compare the frequencies of different categorical demographic variables. Majority of the parents were mother (60%), the age of majority of parents was within the range of 41-45 years (40%) and 46-50 years (40%), majority of them were married (80%), and most of them belonged to Hindu religion (80%). Education of parents indicated that most of them were educated up to intermediate (40%). Occupation of parents indicated that most of them were in private job (40%) and were housewives (40%). Majority of the parents had nuclear family (80%) All the parents belonged to middle socio-economic status and all of them resided from urban area (100%).

Table 2: socio-demographic profile of children with autism

Variables		**Child with autism Sample (N%)**	
Age	6-8 years	1	20%
	9-12 years	2	40%
	13-15 years	2	40%
Sex	Male	3	60%
	Female	2	40%
IQ range	35-49 (Moderate)	2	40%
	50-69 (mild)	3	60%
	70-84 (borderline)	0	0%
SQ Range	36-54 (Moderate)	1	20%
	55-69 (Mild)	3	60%
	70-84 (Borderline)	1	20%
Severity of Autism	70-106 (Mild)	1	20%
	107-153 (Moderate)	4	80%

Table 2 shows the clinical variables of children. Descriptive statistics was used to compare the frequencies of different categorical clinical variables. Majority of the children were within the age range of 9-12 years (40%) and 13-15 years (40%). Most of the participants were male (60%). Majority of the children were of mild level of intellectual functioning

(60%). Most of the children had mild level of social adaptive functioning level (60%) and majority of them were within the moderate range (107-153) of severity of autism.

Figure1: Thematic map of identified themes through thematic analysis

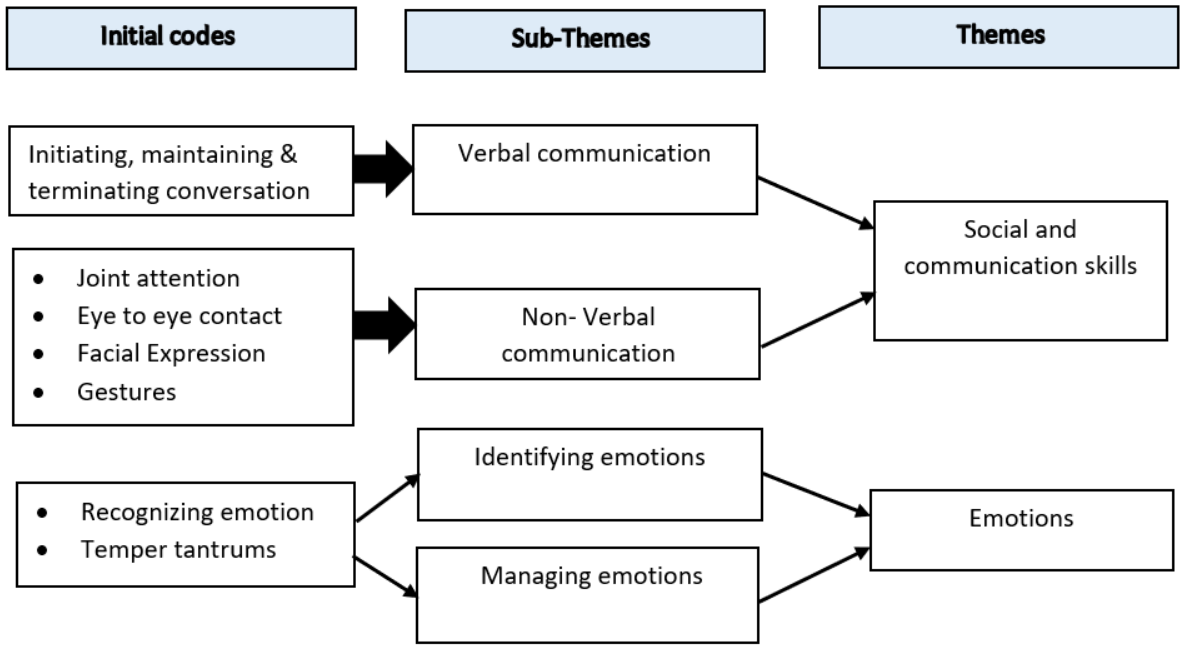

Figure 1 is a thematic map that shows the identified themes through thematic analysis from focus group interview with parents and teachers of children with autism. This map shows the summarised emergence of themes from initial codes and subthemes. Initial codes were generated from the transcription of focus group interview that discussed about the psychological needs related to social and communication skills of children with ASD. After that, four subthemes (i.e., verbal communication, non-verbal communication, identifying emotion and managing emotions) emerged. Social and communication skill and emotion were the primary theme that could include the four sub themes and portray the social and communication needs of children with ASD.

Table 3: Frequencies of emerged codes and sub themes from the transcription

Themes	**Sub-themes**	**Initial codes**	**Parents (N=10)**	**Teachers(N=10)**
Social and communication skills	Verbal communication skills	Initiating, maintaining & terminating conversation	10	10
	Non- Verbal communication	Joint attention	0 8	0 7
		Eye to eye contact	09	08
		Facial Expression	10	10
		Gestures	07	08
Emotions	Identifying emotions	Recognizing emotion	08	09
	Managing emotions	Temper tantrums	10	10

Thematic analysis:

Table 3 shows the frequencies of emerged codes and sub themes from the transcription of focused group interview. The table shows the summarised frequency of initial codes and subthemes that were discussed by the parents and teachers during the focus group interview. Through the analysis it was found that most of the parents discussed about the lack of **verbal communication skill.** All the parents (10) and teachers (10) expressed their concern about the child having lack of understanding about initiating, maintaining and terminating conversation at home as well as at school. Most of them also discussed about the absence of **non-verbal communication** in their children which cause difficulty in communicating or comprehend communication. Both parents (8) and teachers (7) revealed about the children with ASD having problem in joint attention, they also reported about the difficulty in maintaining eye to eye contact in their children (parents =9, teachers =8). All the parents (10) as well as teachers (10) reported about the lack of recognising facial expression which again contributes to their poor communication skills. Most of the parents (7) and teachers (8) discussed their concern towards the lack of comprehending gestures in the children with ASD. All these sub-themes contributed to the emergence of the theme **Social and communication skills**. Besides, the parents and teachers reported **emotions** was a serious psychological need of children with ASD that should be intervened as sometimes lack of emotional competence leads to lack of social competence. Thus, this theme consisted sub-themes of **identifying emotions** and **managing emotions.** There were (8) parents and (9) teachers who expressed their concern that the children difficulty in recognizing emotions on various social situations. All parents (10) as well teachers (10) also showed concern about the temper tantrums of the children which needs serious consideration with respect to its management.

Table 4: Parents feedback on the content of module on a pilot trial.

SN	Content of module	Understandable (N=5)	Useful (N=5)	Practicable (N=5)	Relevant (N=5)
	(For Children)				
1.	Introducing self	05	05	05	05
2.	Learning names of fellow students (“hot potato game”)	05	05	05	05
3.	Naming objects	05	02	02	02
4.	Identification and naming emotions	05	05	05	05
5.	Naming actions	05	05	05	05
6.	Recognising facial expression & emotions	05	05	05	05
7.	Greeting &farewell skills activity	05	05	05	05
8.	Learning polite words	05	05	05	05
9.	Relaxing	05	05	05	05
10.	Asking for play	05	05	05	05
11.	Joining a game	05	05	05	05
12.	Social game (“topic game”)	03	03	03	03
13.	Naming body parts	05	01	01	01

14.	Learning to respond towards inhibitory words	05	05	05	05
15.	Conversational social skills (social stories)	05	05	05	05
16.	Social game ("Roll the ball")	05	05	05	05
17.	Reporting parents about new learned skills	05	05	05	05
18.	Learning to imitate gestures	05	05	05	05
19.	Social game ("Musical chair")	05	05	05	05
20.	Learning to ask playmates of playing something different	05	05	05	05
21.	Learning to initiate, maintain & terminate conversation	05	05	05	05
	(For parents)				
22.	Psychoeducation	05	05	05	05
23.	Parenting strategies	05	05	05	05
24.	Learning to respond towards child's reporting about their new learned skills.	05	05	05	05
25.	Imitative play to facilitate joint attention and eye to eye contact	05	04	05	05
26.	Learning to enhance social communication of child	05	05	05	05
27.	Learning to engage child in social play	05	05	05	05

Table 4 shows parents' feedback on the content of module which was analysed through the feedback checklist developed by the researcher. The feedback after pilot trial suggests that majority of parents found all the contents of developed module to be understandable, useful, practicable and relevant except for the content of naming objects and naming body parts which was removed from the module. 2 parents also found content of social game including "topic game" to be little complex for the children due to which they considered this content to be incomprehensible, useless, impracticable and irrelevant. Thus, this content was modified as per the parent's feedback.

Table 5: Expert's suggestion on validation of the module

	Expert suggestion	Action taken by the researcher
Evaluator 1	Duration of the session to be flexible and not fixed to any particular time limit with respect to children's interest.	The duration for each session was tailored according to the child's interest and availability.
Evaluator 2	The approaches used in the module should also include video modelling for better learning of skills.	Video modelling was added as an approach for delivering training in the module.
Evaluator 3	Booster sessions to be done after 3 sessions' instead of doing it after 4-5 sessions for better learning.	booster sessions were planned after every 3 sessions.
Evaluator 4	More social stories related to conversation skill to be added when targeting for enhancing communication skills.	2 more social stories were added depicting conversation skills.
Evaluator 5	Adequate breaks to be provided if the child feels agitated or show disinterest during the session.	Adequate breaks would be included depending on child's mood and interest.
Evaluator 6	Reinforcements to be provided to children after every session instead of providing it after every 3 sessions to increase their motivation towards the training program.	Reinforcements were planned to be provided after every session.

Table 5 shows the suggestions given by the experts and the necessary changes made by the researcher in response to their suggestions. After the pilot phase of the study the developed module was reframed and modified based on the parent's feedback. Then the module was subjected to expert validation. Three mental health professionals and three special educators with expertise in working with ASD children and in child psychology were approached for evaluation of developed module. The experts were asked to evaluate and comment on the basis of the objectives of the module, appropriateness of the content, choice of approaches and delivery method. Although all the experts stated the module to be satisfactory, but they also provided specific suggestions related to duration of session, inclusion of video modelling as approach, modification in booster sessions, addition of social stories, adequate breaks during sessions and frequency of reinforcements.

DISCUSSION

The present study was conducted to develop and evaluate the applicability of the social skill training module that can enhance the social and communication skills of children with ASD. Findings of the study showed significant verbal communication deficits in children with ASD, in terms of difficulty in initiating, maintaining & terminating conversation with others, lacking in greeting and farewell skills despite frequent promptings at home as well as at school, difficulty in responding & performing adequately towards inhibitory words, and difficulty in turn taking. The present findings are consistent with the previous studies done on children with ASD (Jones and Schwartz 2009; Sng et al., 2018; Schmitt et al., 2018; Bone et al., 2016) and supports the findings showing similar verbal communication deficits found in children with ASD.

Findings of the study also showed non-verbal communication deficits in children with ASD which included deficit in joint attention, difficulty in maintaining eye to eye contact, lack of recognising facial expression & difficulty in processing & production of gestures, which contributes to the dysfunctional social & communicative skills. The previous studies (Elsabbagh & Johnson, 2007; Trevisan et al., 2017; Loth et al., 2018; Fourie et al., 2020) shows findings with similar non-verbal communication deficits majorly found in children with ASD. Lack of emotional competence in children with ASD was also found in the results showing difficulty in recognising emotions and difficulty in managing emotions, exhibited through temper tantrums. The findings from the previous studies (Hoyland et al.,2017 & Tureck et al., 2013) corroborates with the present findings which showed in their result that children with ASD not only struggles with identifying emotions but also with emotional dysregulation.

With reference to the obtained social and communication skills deficits social skill training module was developed and the results from the parent's feedback of pilot study of the developed module showed that because the activities were too simple for their kids and didn't really address improving social and communication skills, the module's content i.e., "naming objects" and "naming body parts" wasn't very helpful to them. Additionally, the result from the parent's feedback suggested social games, such as "topic games" was too complicated for the children of different age to comprehend. The module had significant alterations as a consequence of parent's feedback. Following validation by special educators and mental health specialists, the module underwent major modifications in the current pilot study to improve its ability to help children with ASD enhancing their social and communication skills.

Despite the modest sample size restrictions of this pilot study, other experts could have been involved even in the validation of the produced module. To determine how well the proposed module works to improve social and communication skills deficits in the children with ASD, future study should focus on both the applicability of the module and a bigger sample size.

CONCLUSION

Through the present study, a deeper understanding of significant social and communication deficits in children with ASD has been gained. Due to these challenges' children with ASD are at a considerable disadvantage in almost all aspects of socialization and emotional well-being. For parents, teachers and even for mental health professionals, addressing to these deficits poses a substantial challenge. We can conclude through this study that the developed module can further be utilized in children with ASD which can significantly improve not only the child's developmental outcomes but also their lifelong ability to connect and thrive within their communities.

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Conflict of Interest

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