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AWARENESS AND KNOWLEDGE OF PARENT CHILD INTERACTION THERAPY AMONG SPEECH LANGUAGE PATHOLOGISTS IN PAKISTAN

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ABSTRACT

Background and Objective: It is commonly observed that speech language pathologists conduct sessions with children having speech, language and communication difficulties in the absence of parents in Pakistan. The objective of the research was to determine awareness and knowledge of Parent Child Interaction Therapy among Speech Language Pathologists in Pakistan.
Methods: The study was a descriptive cross-sectional study. The study included 134 speech and language pathologists according to 95% Confidence Interval. The study was conducted through a self-developed questionnaire regarding Parent Child Interaction Therapy based on literature review and expert's opinion. Speech language pathologists having at least 1 years' experience of dealing with children having speech and language disorders were included from all over Pakistan through online google form shared in multiple Facebook and WhatsApp groups of SLPs. The data was analyzed by descriptive statistical techniques i.e. frequency, percentages and cross tabulation through SPSS 27.
Results: The data analysis revealed that 44% of the speech language pathologists strongly agreed and 44% agreed regarding having awareness about Parent child interaction therapy. However, 78.4% of the participants scored low, 14.9% scored moderate and only 6.7% scored high on the knowledge scale of PCIT.
Conclusion: A huge disconnect was visible between the awareness of parent child interaction therapy claimed by the majority of participants while the majority of them lack adequate knowledge for it.

Keywords: Awareness, Knowledge, Parent Child Interaction Therapy, Speech Language Pathologists

INTRODUCTION

Parent child interaction therapy enables parents to provide appropriate indirect language stimulation, enhances parent child interactions, improves child behavior, and facilitates spoken language abilities (1). Parent-child interaction therapy is a scientific theory grounded, parent-training intervention initially developed to deal with behavioral issues for children aged 2-7 years. It incorporates the

concepts of attachment theory and social learning theory to guide parents to adopt an authoritative parenting approach. The main emphasis is a balance of nurturing, effective communication, and consistency of discipline (2). This is a unique approach as it involves in vivo coaching sessions for parents while interacting with their child. In vivo coaching is done by a skilled therapist in a special setting i.e. a room with a one-way mirror that enables the therapist to witness the interaction between parent and child and provide real-time feedback to the parents through an earpiece (3). In PCIT, during these facilitative play sessions, the therapists offer instantaneous feedback to the parent via microphone ensuring that the child cannot hear the guidance. Facilitative play is an approach used by speech language pathologists in which activities are arranged for children providing an opportunity to exhibit the target behavior during natural play (4).

The skills are discussed with the caregivers via educational sessions but the majority of sessions are practical based providing instructions and feedback to the caregiver as he or she interacts with the child. These sessions are based on the collaborative process that helps to identify the barriers in the home and find the solutions utilizing the skills that are learned in the sessions. According to the literature, in vivo coaching can lead to more effective parenting skills as compared to feedback provided after a session, and compared to in room coaching remote coaching through an earpiece is considered better (5).

Parent-child interaction therapy comprises two phases. First is child-directed interaction (CDI) and the second is parent-directed interaction (PDI). The fundamental objective of the CDI phases is to nurture a warm and secure relationship between the child and his caregiver. The fundamental skills that are used in this process incorporate praise, verbal reflection, imitation, description of behavior, and enjoyment together called the PRIDE skills. In addition to these skills, parents are trained to avoid a few behaviors which include issuing commands, refraining from asking questions and avoiding criticism as these behaviors can upset the child’s play behavior (5).

In the second PDI phase, the objective shifts to enhancing child compliance and reducing disruptive behaviors. Once caregivers have achieved mastery in the CDI phase, they can then progress to the PDI phase. In the PDI phase, the primary emphasis is on educating parents about giving discrete commands and the appropriate utilization of time-outs when necessary (6). In other words, PCIT can modify the home environment of the child for better language facilitation (7).

Speech therapists adapted the features of PCIT according to their practice and used the term PCIT for all interventions delivered by speech-language Pathologists to teach parents modified styles of interaction and their language input. Through PCIT, parents receive training in specific language and conversational techniques to improve their child’s linguistic environment and aid in language acquisition (8, 9). Interactive input from parents is crucial for children’s language development, alongside verbal and conceptual input. Interactive input refers to the back and forth nature of parent child interaction, characterized by responsiveness and sensitivity from parents. (10).

A study investigated whether the quality of parent-child interaction is associated with linguistic ability up to preschool age in children with DLD. In 3 to 6 year olds, positive engagement, supportive parental guidance and fluent dyadic behavior at baseline were linked to improved expressive and receptive language skills at follow-up in 6 to 7 year olds (11). Speech language pathologists in PCIT also help parents with guidance regarding language-rich interaction and to use appropriate communication strategies and incorporating speech and language activities in daily life (12). Speech therapists can add language-enhancing activities and exercises increasing the effectiveness of the therapy process. Storytelling, role-playing, and structured language interaction are some of the activities that are designed to target specific communication goals (13).

A study looked at the efficacy of parent-child interaction therapy (PCIT) as a behavioral and language intervention for children with hearing loss which indicated significant improvement in their receptive and expressive vocabulary along with decreased behavioral issues(1).Parent-child interaction treatments have proven to be efficacious early intervention for children with Down syndrome since they facilitate parent coaching along with addressing the children's special communication needs (14). Parents reported increased self confidence in their parenting skills after treatment and core areas of symptoms of Autism were significantly improved. After participating in PCIT parents reported a

significant progress in parent-child relationships (15).
Parent engagement is considered most difficult by speech therapists (16). Considering the context both Parents and Speech therapists are crucial for the implementation of PCIT (13). If parents are trained to implement interventions the children show significant gains in terms of generalization by showing gains in multiple contexts (4).
Despite the broad endorsement of this parent-child intervention, the approach is still underutilized in the community setting. One of the reasons is the challenge that a variety of service providers lack sufficient level of preparation. According to the literature, most therapists use less than 30% of their time in teaching parents to use specific strategies (17). Despite this evidence, a report of community-based implementation in Pakistan has not been found. A need was felt to conduct a national cross-sectional survey to identify whether speech therapists have knowledge and awareness about Parent-implemented intervention, PCIT.

MATERIALS AND METHODS

The cross sectional survey design was used for this research. The sample size was 134 SLPs (18). The study duration was 6 months after the approval of the research board (Riphah/RCRAHS-ISB/REC/MS-SLP/01767, Dated 13-11-2023). Convenient sampling technique was used to approach speech and language pathologists working in different work settings. SLPs having diploma, BS, MS or Ph.D. in speech language Pathology/Therapy as their educational qualification were included. SLPs working with children having speech, language, and communication disorders having a minimum experience of one year were included.

The study was conducted in the following two phases.

Phase 1: Development of the questionnaire

The first phase included the development of the first draft of close-ended survey items for awareness and knowledge of Parent-Child Interaction Therapy from the literature review. The questionnaire stood valid by the rating of the experts with S-CVI /Ave value 0.868. The reliability of the questionnaire was ensured through pilot testing. The Cronbach's alpha for awareness scale was 0.867 and for Knowledge scale was 0.848 respectively which are a good index of reliability.

Data Collection Tool

The self-developed questionnaire had two sections. Section A consisted of 10 statements related to awareness of Parent child interaction therapy. Responses were taken on a 5-point Likert scale i.e. strongly agree (5), agree (4), neutral (3), disagree (2), and strongly Disagree (1). Section B consisted of 14 multiple choice questions related to factual knowledge of Parent Child Interaction Therapy in which the participant had to select one best answer.

Phase 2: Administration of the survey questionnaire

It was administered on 134 speech language pathologists according to the inclusion criteria from all over Pakistan. The rating of awareness items was interpreted in terms of frequency and percentages. To determine knowledge of participants regarding Parent Child Interaction Therapy, total score ranging from 0-14. Every correct response was scored 1, whereas wrong answer and Do not know was scored as 0. Then the sum of score and percentage of obtained score, in the knowledge section, was calculated for every participant. Then the percentage was determined for each participant. Score of 8 or less (<60%) was categorized as a low level of knowledge. Score of 9-11(60-79 %) was categorized as moderate level and a score of 12-14 (80-100%) was categorized as having a high level of knowledge (19). The data was analyzed by implementing simple descriptive statistical techniques i.e. frequencies, percentages and cross tabulations using SPSS version 27.

RESULTS

Analysis of demographics showed that 64.9% of the SLPs have Masters in Speech Language

Pathology as their academic qualification. 38.8% of the SLPs are working in special schools or centres.50.7% of the Participants have 1-5 years of experience of dealing with children who have speech and language impairments.

Table 1. shows results of the participant's awareness about Parent child interaction Therapy. In response to statement1 of awareness 44% showed strong agreement and 44% showed agreement of having awareness of PCIT. 6% gave neutral response and 5.2% disagreed while 0.7% strongly disagreed with the statement. In response to statement 2 about parental coaching as SLT scope of practice 41.8% strongly agreed and 47.8% agreed whereas 6.7 % gave neutral,3% disagreed and 0.7% strongly disagreed with the statement. The trend of responses was similar on the rest of the questions related to awareness of PCIT among participants as shown in table 1.

Table 1. Awareness of Parent Child Interaction Therapy

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.I am aware of Parent Child Interaction therapy.	59 (44.0%)	59 (44.0%)	8 (6.0%)	7 (5.2%)	1 (0.7%)
2.I am aware that coaching parents for interaction with their child is within my scope of practice.	56 (41.8%)	64 (47.8%)	9 (6.7%)	4 (3.0%)	1 (0.7%)
3. I am aware of the importance of parental involvement in speech therapy sessions	84 (62.7%)	43 (32.1%)	4 (3.0%)	1 (0.7%)	2 (1.5%)
4.I am aware that I can involve parents in speech therapy sessions.	78 (58.2%)	50 (37.3%)	3 (2.2%)	3 (2.2%)	0 (0%)
5. I am aware that parents can effectively implement speech therapy strategies.	54 (40.3%)	62 (46.3%)	10 (7.5%)	8 (6.0%)	0 (0%)
6.I am aware that Parent child interaction therapy can be beneficial for early intervention.	82 (61.2%)	49 (36.6%)	2 (1.5%)	1 (0.7%)	0 (0%)
7. I am aware of Parents need ongoing support to change their thinking patterns and behaviors in order to assist their child's communication skills.	68 (50.7%)	60 (44.8%)	6 (4.5%)	0 (0%)	0 (0%)
8.I am aware that acknowledging parental efforts for improving their child's communication skills is important to give appropriate feedback.	69 (51.5%)	58 (43.3%)	6 (4.5%)	0 (0%)	1 (0.7%)
9.I am aware that collaboration between speech therapists and parents is essential for positive outcomes.	91 (67.9%)	37 (27.6%)	5 (3.7%)	0 (0%)	1 (0.7%)
10.I am aware that it is important to consider the cultural context to understand and modify parental practices that assist their child's communication.	78 (58.2%)	54 (40.3%)	2 (1.5%)	0 (0%)	0 (0%)

Table 2. shows results of Knowledge of PCIT among 134 participants of the study through 14 MCQ based questions in terms of frequency and percentages of correct and incorrect responses. Most of the SLPs failed to reach the correct answers when asked about knowledge specific questions relevant to PCIT. As for Question 1 94% participants had knowledge of the definition of PCIT. For Question 4 about phases of PCIT majority 70.1% gave incorrect responses. In response to question 6 and question 7 which ask for PCIT relevant skills, the majority 56% and 79.1 % gave incorrect responses respectively. For question 9 which asked about in vivo coaching and question 14 which asked about specific settings for PCIT during in vivo coaching 63.4% and 62.7% SLPs gave incorrect answers respectively.

Table 2. Knowledge of PCIT among Participants.

Question	Correct	Incorrect
1.Does PCIT refer to a parent training program to improve child's behavior, facilitate language development and enhance the quality of parent child relationship?	126 (94%)	8 (6%)
2.Which of the following theories make the foundation of Parent Child interaction Therapy?	46 (34.3%)	88 (65.7%)
3. Which of the following parenting styles is utilized in Parent Child interaction Therapy?	27 (20.1%)	107 (79.9%)
4. How many Phases are there in Parent child interaction Therapy?	40 (29.9%)	94 (70.1%)

5. Are PRIDE skills part of the child directed interaction phase in PCIT?	85 (63.4%)	49 (36.6%)
6. What does the Acronym of PRIDE stand for?	59 (44%)	75 (56%)
7. What does "Don't" skills consist of in the child directed interaction phase?	28 (20.9%)	106 (79.1%)
8. What is the focus of the second phase of Parent Child Interaction Therapy?	47 (35.1%)	87 (64.9%)
9. When is feedback provided by the therapist during in vivo coaching?	49 (36.6%)	85 (63.4%)
10.What is the suitable age range of a child for implementing Parent child interaction therapy?	75 (56%)	59 (44%)
11.Which of the following coding systems is used during Parent Child interaction Therapy?	43 (32.1%)	91 (67.8%)
12. Is "Good Job" an example of unlabeled praise?	64 (47.8%)	70 (52.2%)
13.Why is labeled praise preferred over unlabeled praise?	76 (56.7%)	58 (43.3%)
14. The therapist sits behind a one-way mirror to coach the parent with an earphone and microphone while the parent is involved playing with the child. Which of the following approaches utilizes this scheme?	50 (37.3%)	84 (62.7%)

Table 3. shows the results of SLPs on the knowledge section for PCIT according to cut off criteria. Majority 105 (78.4%) SLPs scored less than 60% which indicates that they lack knowledge of PCIT.20(14.9%) had moderate level of knowledge and only 9(6.7%) had scored high on the knowledge of PCIT.

Table 3. Percentage of Knowledge of Parent child interaction therapy among 134 participants

Percentage of Score on knowledge of PCIT scale	**Level of knowledge**	**Frequency (n)**	**Percentage (%)**
80-100%	High	9	6.7
60-79%	Moderate	20	14.9
Less than 60%	low	105	78.4
	Total	134	100

Table 4. shows a crosstab between workplace setting and level of knowledge among SLPs regarding PCIT. Among participants working in different workplace settings, a greater number of speech language pathologists working in rehab centers /private clinics 43(40.9%) were represented in the low level of knowledge of PCIT score category.

Table 4. Cross tab between workplace setting and level of Knowledge of PCIT

		Level of Knowledge of PCIT			
		Low level <60%	Moderate level 60%to 79%	High level 80%to 100%	Total
Workplace setting	Govt. Hospital	11(10.5%)	2(10%)	1(11.1%)	14
	Rehab Centre / Private Clinic	43(40.9%)	6(30%)	0 (0%)	49
	Special education school/ Centre	38(36.2%)	9(45%)	5(55.6%)	52
	Academic Setting	9(8.6%)	2(10%)	1(11.1%)	12
	Others	4(3.8%)	1(5%)	2(22.2%)	7
Total		105	20	9	134

DISCUSSION

44% of speech language pathologists strongly agreed and 44% of participants agreed claiming awareness of Parents Child Interaction Therapy. 41.8% of the participants strongly agreed and 47.8% agreed to the awareness of coaching parents as their scope of practice in SLP. These findings are

supporting the previous evidence where it was reported that speech therapists involve parents in provision of intervention for their children by either engaging them as co implementer of speech therapy strategies or providing homework assignments (20).
It was probed in current study by analyzing the cross tabs between work setting and knowledge of parent child interaction therapy. Among those 105 speech therapists, 43(40.9%) were from rehab centres and 38 (36.2%) of the speech therapists working in special schools lacked thorough understanding of parent's involvement and coaching. These findings are different from a previous study where it was reported that speech therapists working in schools were less prospective to engage parents or keep a follow up of the homework assigned to the parents relevant to their communication goals as compared to speech therapists working in other settings (21).
Most of the literature reviewed about Parent Child Interaction were qualitative in nature however the present study was planned to be quantitative with an intent to fill the gap in evidence related to awareness and knowledge of Parent child interaction therapy among Speech language pathologists in Pakistan. A qualitative study conducted in Turkey used inductive thematic analysis with 16 SLPs indicated that although it is a well-established guideline to involve parents in speech therapy sessions there is a difference in what is considered ideal and the actual practice which sometimes is contrary. Themes indicated examples where parents were not actively involved or even excluded from the session. It was recommended in the study to increase awareness of parental involvement and redefine the parent's role in the therapies (22). In the present study, 63.4% of the Speech language pathologist gave incorrect answer about in vivo coaching and 84(62.7%) gave wrong answer to the question related to setting of the Parent Child interaction therapy for training and coaching parents which indicates that Pakistani Speech Therapists are not knowledgeable of the ideal setting required for parent implemented interventions.
The current study also indicated that 41.8% of speech language Pathologists in Pakistan strongly agreed to having awareness of parent coaching as their scope of practice and 47.8% agreed of having awareness of parent coaching as their scope of practice in response to the statement 2 of awareness section in Table 1. However, when knowledge was assessed 85(63.4%) gave incorrect answers about in vivo coaching and 84(62.7%) gave wrong answers to question 14 related to setting of the Parent Child interaction therapy for training and coaching parents. As in another article it is specified that to eliminate misperceptions and inaccuracies of what coaching is and what it's not, a solid knowledge base of coaching is crucial. Without having knowledge of parental coaching speech language pathologists may misconceive that they are using coaching effectively while using only partial components of coaching or rejecting coaching being part of their practice and responsibilities. In speech therapist's academic curricula and practical content related to working with parents, their training and coaching is limited in their graduate programs. After entering the practical field as a professional the content, nature and quality of knowledge and expertise related to parents coaching might be uneven (23).
This study indicates lack of adequate baseline knowledge about the strategies taught during Parent Child Interaction Therapy among speech therapists in Pakistan. It is recommended that to understand the rare inclusion of parents to act in accordance with the evidence based practice in speech therapy, it is important to give baseline knowledge regarding the phases of parent based language intervention (24). In this study 70.1% speech therapists had no knowledge related to phases and particular skills taught to parents which first focus on responsive interaction and then instruction focused interaction by parents towards their child. Moreover, it indicated that 62.7% Pakistani Speech Language pathologists don't have knowledge about in vivo coaching, provided in specific settings required for it which is the core element of Parent Child interaction Therapy. As in research it is indicated that although clinicians acknowledge the significance of coaching but seldom use it. It is reported that comparatively better parent outcomes in terms of use are observed when in vivo coaching than instructing the parent without coaching (25).

Limitations

There was no manual or guidebook available to refer to for developing questionnaires related to

awareness and knowledge of Parent child interaction therapy. The questionnaire was developed after thorough literature review to determine core features of Parent Child Interaction Therapy. Convenient sampling technique was used and study was only limited within Pakistan which may impact generalizability of the results.

CONCLUSION

Based on the above findings it is concluded that speech language pathologists working in Pakistan agree about having awareness of PCIT. While the majority of them lack adequate knowledge of Parent child interaction Therapy which indicates a huge disconnect between claims for awareness and actual knowledge score. Different levels of awareness and knowledge of Parent child interaction therapy revealed in the current study which delineates the need to raise awareness and knowledge among speech and language therapists working in Pakistan. It can be achieved by adding relevant content in the courses of speech therapy graduate programs, offering continued professional education hours to already practicing speech and language pathologists in Pakistan.

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