Effectiveness of group therapy versus individual therapy in acquisition of pre-linguistic skills in children with expressive language disorders

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ABSTRACT

Background: Children with expressive language difficulties may find it difficult to communicate effectively. To encourage the development of prelinguistic skills and improve overall language development, early intervention is essential.

Objective: To determine the effectiveness of group therapy as compared to individual therapy in the acquisition of pre-linguistic skills in children with expressive language disorders.

Methods: A experimental study was conducted at special education centers of Rawalpindi & Islamabad, from August 2015 to January 2016. A total of n=17 children with expressive language disorders of either gender with ages between 4-7 years were recruited through a nonprobability convenient sampling technique, with Group A (Individual Therapy) including n=7 kids and Group B (Group therapy) n=10 kids. The outcome measures were Eye contact, attention span, turn-taking, and imitation skills, noted before therapy and after completing 20 sessions post-therapy (after 7 weeks). Statistical analysis was done using SPSS 20. An Independent t-test was utilized to see any difference between groups.

Results: The study included 10(58.82%) males and 7(41.18%) females with most 9(52.94%) being 6 to 7 years of age. Post therapy results revealed significantly better results for group therapy versus individual therapy (11.0±1.24 vs 8.28±1.11) for eye contact (p=0.000); (11.0±0.94 vs 7.8±1.34) attention span (p=0.000); (11.4±0.69 vs 8.0±0.81) turn taking (p=0.000); and (10.6±1.34 vs 8.4±0.97) for imitation skills (p=002).

Conclusion: The study concludes that group therapy is significantly more effective than individual therapy for improving pre-linguistic skills including eye contact, attention span, turn-taking, and imitation skills in 4 to 7 years old kids with expressive language disorders.

Keywords: Expressive language disorder; language; pre-linguistic skills; group therapy; individual therapy.
INTRODUCTION

Children who suffer from expressive language disorders have trouble using and producing language. The ability to communicate effectively verbally or in writing is referred to as expressive language. While in expressive language disorders child find difficulty in using words in conversation and child may not be able to join words into sentences. This might cause difficulty following spoken directions resulting in learning difficulties [1, 2].

Prevalence of language delay varies widely and a prevalence of 2.3 -19% has been reported for 2-7 years old kids [3-7].

The aetiology of an expressive language disorder in a child is often unknown, but, Down syndrome, hearing loss, familial, and autism may result in expressive language disorder while acquired expressive language disorder may result from brain damage, seizures, stroke and injury to head etc [8].

Learning of Pre-linguistic skills is essential for children with expressive language disorder. Pre-linguistic Skills are ways to communicate without using words and these comprise imitation, eye contact, gestures, face expressions, vocalizing etc [9]. These skills are essentially required for children to be prepared to talk and communicate. Children with expressive language disorders have difficulty in appropriately using these pre-linguistics skills while communicating their needs to others [10].

A broad range of interventions are available aimed at treating Expressive Language Disorders with varying results including expressive syntax interventions, phonological interventions, narrative based interventions, use of digital media and videos for intervention, enhanced milieu teaching by trained parents, fast forward-language and so many others with early intervention being more effective. Treatments are either applied through parents, educators, or professionals themselves with option of individual and group sessions [11].

Pre-Linguistic skills can be learned by children with expressive language disorder either through individual therapy or group therapy. Pre-linguistic skills are learnt in group sessions. In group therapy a therapist deals with more than one clients who deal with their problems collectively, by observing their peers and those in authority [12, 13]. On the other hand in Individual therapy or psychotherapy client works one-to-one with a qualified and skilled therapist in a secure, caring, classified and private environment [14].

Several studies have examined the importance of group therapy compared to individual therapy in various conditions such as speech disorders in Parkinson’s disease, autism spectrum disorder, aphasia, and language disorders [15, 16].

Some literature highlighted the value of group therapy in counselling, emphasizing the healing potential of interpersonal interactions within a social environment and may have a beneficial setting for clients to share experiences and advice after completing individual therapy. On the other hand, patients with emotional difficulties may demonstrate improved peer relationships and prosocial behavior after individual therapy [17].

Hence there is knowledge gap in existing evidence on language interventions in kids with language disorders with limited evidence base and need of further research [18]. So, keeping in view the research gap and high prevalence of language impairments, current study was conducted with the objective to determine the effectiveness of group therapy as compared to individual therapy in acquisition of pre-linguistic skills in children with expressive language disorders. It was hypothesized that there were significant improvements in group therapy in acquisition of pre-linguistic skills as compared to individual therapy in children with expressive language disorder.

METHODOLOGY

The experimental study was conducted following ethical approval from Research Ethical Committee (RIPHAH/RCRS/REC/Letter-0058) of Riphah College of Rehabilitation Sciences, Riphah International University, Islamabad Pakistan from August 2015 to January 2016. A total of n=17 children between 4-7 years, diagnosed with expressive language disorder were recruited through non-probability convenient sampling technique after obtaining permission from principals of special education centres of Rawalpindi & Islamabad and consent of the parents. Children with acquired neurological conditions, syndromes, hearing impairment and intellectual disability were excluded from the study.

The sample was then divided into Group-A (n=7) who received individual therapy and Group-B received group therapy. (n=10).
Four pre-linguistic skills were assessed including Eye contact, attention span, turn taking and imitation skills at the baseline and after 2 months of intervention.

Each participant received 20 sessions in 2 months and time duration for each session was 30 minutes. Each session comprised of 8 activities in total, 2 activities each of 4 pre-linguistic skills selected from the list of therapeutic activities manual used as a research tool for the study. Every activity was assessed on 3 given choices a, b and c which were scored 1, 2 and 3 respectively.

For eye contact four activities were used. The first activity was “looking into child’s eyes and asking how you are?” and choices given were a) child turns his face down b) child seldom looks at the therapist c) child looks at the therapist and answers. Second activity was “putting a sticker of eyes on the therapist’s forehead and asking the child to look at that” & choices given were a) looks at forehead b) looks at therapist’s face c) looks at therapist’s eyes.

Third activity was “therapist putting child’s finger on her nose and count 1-10” & choices were a) the child sometimes looks at the therapist and sometimes does not b) child looks at the therapist while counting 1-5 c) the child looks at the therapist while counting 1-10. Fourth activity was “Asking the child to look into therapist’s eyes when he/she asks for the toy” & choices were a) the child looks at the toy b) child seldom looks at the therapist c) the child looks at the therapist and asks for the toy.

For assessment of Attention Span, the first activity was “therapist blowing bubbles and also asking the child to blow bubbles” & choices given were a) the child drags the bubbles away b) the child holds the bubbles but does not blow c) the child blows or tries to blow bubbles. Second activity was “joining dots to draw a triangle” & choices given were a) the child scribbles on the page b) the child draws triangle using irregular patterns c) the child joins dots to draw a triangle. The third activity was “clap your hands thrice” & choices given were a) the child joins both hands with therapist’s help b) child
joins hands but does not clap c) the child claps. Forth activity was “putting beads into the string” & choices given were a) child opens his/her mouth.d) child does not wait for his/her turn c) child catches the ball on his/her turn but does not say ‘ball’ c) child catches the ball on his/her turn and says ‘ball’. The Forth activity was “asking the child to hold the object ‘cat’ and say meow meow” & choices were a) the child throws the cat b) the child holds the cat on his/her turn but does not say meow meow c) the child holds the cat on his/her turn and says meow meow.

The difference between pre and post test results at completion of 20 sessions of both groups was analyzed using SPSS Version 20. Descriptive statistics of score of items in both group and individual therapy was calculated in terms of mean and standard deviation of score 1,2,3 for a, b, and c respectively. Independent sample t-test was used to compare individual and group therapy of all the four variables i.e. eye contact, attention span, turn taking and imitation skills.

RESULTS

Study population of n=17 participants included n=10 (58.82%) males and n=7 (41.18%) females with mean age of 5.5±1.5 years and most 9 (52.94%) being 6 to 7 years of age.

Both groups in pre-post analysis revealed significant improvement (p<0.001) in all variables including eye contact, attention span, turn taking and imitation skills. While comparing the groups regarding all dependent variables, participants receiving group therapy showed more significant improvement then individual therapy after 2 months intervention. (Table 1)

Table 1: within and between group analysis for eye contact, attention span, turn taking and imitation skills.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timing</th>
<th>Group Therapy (n=10)</th>
<th>Individual Therapy (n=7)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Therapy</td>
<td>4.8±0.63</td>
<td>5.0±0.20</td>
<td>0.5</td>
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</tr>
<tr>
<td>post-Therapy</td>
<td>11.0±1.24</td>
<td>8.28±1.11</td>
<td>0.00***</td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>0.00***</td>
<td>0.00***</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Attention Span</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Therapy</td>
<td>5.1±0.99</td>
<td>4.8±0.69</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>post-Therapy</td>
<td>11.0±0.94</td>
<td>8.2±1.34</td>
<td>0.00***</td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>0.00***</td>
<td>0.00***</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Turn Taking</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pre-Therapy</td>
<td>5.5±1.26</td>
<td>4.9±1.39</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>post-Therapy</td>
<td>11.4±0.69</td>
<td>8.0±0.81</td>
<td>0.00***</td>
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</tr>
<tr>
<td>p-value</td>
<td>0.00***</td>
<td>0.00***</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Imitation Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Therapy</td>
<td>5.7±1.33</td>
<td>5.4±1.61</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Post-Therapy</td>
<td>10.6±1.34</td>
<td>8.4±0.97</td>
<td>0.00***</td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>0.00***</td>
<td>0.00***</td>
<td>-</td>
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</tbody>
</table>

Level of significance: p<0.05 *, p<0.01** & p<0.001***

DISCUSSION

The current study was conducted to determine the effectiveness of group therapy as compared to individual therapy in acquisition of pre-linguistic skills in children with expressive language disorders The results reveal that intervention significantly improve the expressive language disorders, but group therapy showed more significantly improve the symptoms.

The literature suggests that speech language therapy is useful for kids with expressive language disorders[19]. However, since speech language therapy can be instituted by group as well as individual therapy sessions, hence current study determined the effectiveness of group therapy compared to individual therapy in acquisition of pre-linguistic skills in children. This is also important since, available literature has highlighted that both direct and indirect group therapy can enhance early
literacy in preschoolers with developmental language disorders[19]. In contrast current study revealed that group therapy is significantly more effective than individual therapy in terms of improving eye contact, attention span, turn taking and imitation skills. In agreement with our study, another study involving 6-11 years aged children showed significant improvement after group therapy in expressive language impairment [20].

Similar results have been noted in some other speech language issues like stuttering with a randomized control trial by Arnott S et al. which focused on Lidcombe Program by contrasting individual and group therapy of 54 preschoolers who stutter, reported that children working in group format showed progress more than those in individual therapy group [21]. Also a study by Sheridan MC reported results of therapy for language impairments both receptive and expressive in 6 to 12 year-old child in the community setting with group therapy revealing better progress in terms of pragmatics and social skills and individual therapy revealed improvement with semantics and syntax [21]. In a review Layfield CA et al. noted that group therapy resulted in improvement in Language domains including linguistic, pragmatic as well as discourse based results whereas in contrast individual therapy resulted in varying degree of process across studies [22]. This might be due to the fact that in group therapy, patients/children initiate more communication, vocalize more use more expressive modalities during communication resulting in more social closeness [23]. The possible reason could be that, Throughout the sessions, children's interests and enjoyment varied, and each kid reacted differently to the various tasks. When engaging in a group activity with others, children tend to be more at ease, self-assured, and expressive than when taking turns, yet as turn-taking activities become more routine to kids, their self-assurance and pleasure of them increase [24]. Hence, the increased chance of social communication and vocalization might be the cause of better results noted in our study for group therapy.

However, in contrast a systematic review by Watt & White revealed that Speech therapy delivered in small groups and individual sessions was equally effective for children 6 to 12 years of age. Similarly, a meta-analysis by Law J et al. involving 25 studies suggests little evidence that SLP therapy was effective for receptive issues with no difference between individual and group therapy [25]. The group and one-on-one sessions may have been led by certified and experienced speech therapists who are familiar with the unique requirements of kids in this age range and how to successfully address their speech difficulties [26].

Limitations: Study has limitation of having a low sample size and the fact that it was non-randomized study

CONCLUSIONS

Study concludes that group therapy is better than individual therapy for improving the pre-linguistic skills including eye-contact, attention span, turn taking and imitation skills in 4 to 7 years old kids with expressive language disorders. Keeping in view the limitation and contrasts in studies, which might be due to differences in age groups, gender, origin, language etc., further larger RCTs are recommended.

DECLARATIONS & STATEMENTS

Author’s Contribution

HSK: substantial contributions to the conception and design of the study.
RFA: acquisition of data for the study.
RFA: interpretation of data for the study.
GS: analysis of the data for the study.

Ethical Statement

A study was conducted following ethical approval from Research Ethical Committee (RIPHAH/RCRS/REC/Letter-0058) of Riphah College of Rehabilitation Sciences, Riphah International University Islamabad, Pakistan from August 2015 to January 2016.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

Acknowledgments

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Funding Sources

None to declare.

Conflicts of Interest

None to declare.

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