



THE EFFECT OF FLOOR TIME APPROACH IN IMPROVING EMOTIONAL SKILLS AMONG CHILDREN WITH ASD

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Introduction

Occupational therapy is a complex broadly based profession blending medical and social science merging the artistic and technical aspects of practice.

Occupational therapy is the use of purposeful activity or interventions to achieve functional outcomes. Achieving functional outcomes means to develop or restore the highest possible level of independence of an individual who is limited by physical injury or illness, a dysfunctional condition, a cognitive impairment, a psychosocial dysfunction, a mental illness, a developmental or learning disability or an environmental condition.

The development, individual difference, relationship-based (Floor time) model is a framework that help clinicians, parents and educators conduct a comprehensive assessment and develop an intervention program tailored to the unique challenges and strengths of children with Autism spectrum disorders and other developmental challenges.

Relationships are critical to a child's development. By engaging with a child in ways that capitalize on his emotions, you can help him want to learn how to attend to you, you can help him want to learn how to engage in a dialogue; you can inspire him to take initiative, to learn causality and logic, to act to solve problems even before he speaks and moves into world of ideas. As together you open and close many circles of communication in a row you can help him connect his emotions, his intent with his behaviours and eventually with his words and ideas. In helping him link his emotions to his behaviour and his words in a purposeful way, instead of learning by rote, you enable your child to begin to relate to you and the world more meaningfully, spontaneously, flexibly and warmly. He gains a firmer foundation for advanced cognitive skills.

Autism is a complex neurobiological disorder which impairs a person's ability to communicate and relate to others. If the child is diagnosed with autism, early intervention is critical to gain maximum benefit from existing therapies.

Treatment for these young children with Autism or who are at risk of ASD needs to be tailored to where their core deficits exist i.e. their social interaction and communication patterns.

The study was started with a motive to find out the effectiveness of floor time approach in improving emotional skills among autistic children.

Review of Literature

Serena Wieder, PH.D., and Stanley Greenspan.M.D., (2005) done a study on "can children with autism master the core deficits and become empathetic, creative and reflective?" A follow up study of 16 children diagnosed with an autism spectrum disorder revealed that with the DIR / floor time approach, a



subgroup of children with ASD can become empathetic, creative and reflective with healthy peer relationships and solid academic skills. This suggests that some children with ASD can master the core deficits and reach levels of development formerly thought unattainable with a family oriented approach that focuses on the building blocks of relating, communicating and thinking.

Richard Solomon, Jonathan Necheles, Courtney Ferch, David Bruckman (2007) had done a “Pilot study of a DIR training program for young children with autism”. The play project home consultation program trains parents and caregivers of children with Autistic spectrum disorders using DIR/floor time model. Sixty-eight children completed 8-12 month program. Pre / Post rating of video tapes by blind raters using the functional emotional assessment scale showed significant increases ($P = 0.0001$) in child subscale scores, i.e. 45.5 percent of children made good to very good functional developmental progress

Aim of the Study: To study the effectiveness of Floor Time Approach in improving emotional skills among children with ASD.

Objectives

1. To determine the level of emotional skills among autistic children using functional emotional assessment scale.
2. To evaluate the effectiveness of Floor time approach in improving emotional skills.

Hypothesis

Alternate Hypothesis: There will be significant improvement in emotional skills of the autistic children through floor time approach.

Null Hypothesis: There will be no significant improvement in emotional skills of the autistic children through floor time approach.

Methodology

Research Design: The present study was Randomized control trial design

Sampling Technique: Randomized sampling

Setting and Duration Study Place: NIEPMD **Duration** of intervention: 3 months

Inclusion Criteria: Both male and female Age group 3 to 4 years Only autism (Mild to moderate)

Exclusion Criteria

1. Age group > 4 years.
2. Other associated disorders.
3. Downs Syndrome.
4. Genetic Disorders.
5. ADHD;ADD; LD, MR.

Sample Size: 30 subjects, 15 subjects – Experimental group , 15 Subjects – Control group

Measurement Tools

1. CARS – Childhood Autism Rating Scale (**Eric Schopler, PhD, Mary E. Van Bourgondien, PhD**).
2. FEAS – Functional Emotional Assessment Scale.



Functional Emotional Assessment Scale

The scale was developed by Stanley I Greenspan. This is a criterion referenced instrument for children ranging in age 7 months through 4 years. It provides framework for observing and assessing a child's emotional functioning. The FEAS assess the child on six levels of social and emotional development. The reliability of the study 3 (0.65 for inter rater reliability). Validity 2 (0.5 for concurrent)

Method of Administration

1. Initially the researcher selected 30 children depending upon the inclusion criteria by convenient sampling procedure.
2. Then the FEAS is administered to the samples to evaluate the emotional skills and dividing them into two groups 15 samples in experimental group and 15 samples into control group.
3. Both groups underwent routine occupational therapy intervention using sensory integration principles. Floor time treatment was given as an adjunct to experimental group alone.
4. The experimental group underwent treatment for 3 sessions per week for 12 weeks.
5. After the intervening period is over, the FEAS is once again administered to both control and experimental groups.
6. Results have been compared with statistical techniques “t” test have been calculated for the obtained results.

Intervention Procedure: The Floor time intervention technique for emotional functioning is based on six developmental levels. The floor time intervention is given for 12 weeks, 2 weeks for each stage of emotional development.

Stage 1: Shared Attention and Regulation

Procedure: In these 2 weeks of intervention, the child is allowed to interact without distraction for short stretches of time several times per day and enjoyable ways are found to involve the child's senses and movement. The child should not be stimulated with exciting toys and not allowed to gaze at the world on his own for very long stretches of time.

Games

Look and listen game: Lean in close to your child and talk about his or her sparkly eyes, round cheeks, or big smile. Keep your face animated and your voice lively as you slowly move to the right or left, trying to capture your child's attention for a few seconds.

The “soothe-me” game: Soothingly touch your child, stroking her arms, legs, tummy, back, feet, and hands to help the child relax. The back and forth rhythm of the rocking chair can be especially soothing. Try to gently wiggle his or her little fingers and toes in a “This Little Piggy” type of game. This game can also be played during diaper changing time.

Stage 2: Engagement and relating

Procedure

1. During the period of intervention the child is observed for response to the therapist smile, for making sounds and movement of the mouth, arm, legs and body in rhythm with the therapist.
2. Relaxing or acting comfort when the child is hold or rocked.
3. Cooing when the child is held, touched, looked at or spoken to
4. Excitement of the child with the reappearance of the face and voice.
5. Uneasiness or sad when the child is withdrawn in the midst of playing with her.



Games

1. **Smiling Game:** Enjoy using words and / or funny faces to entice your child into breaking in to a big smile or producing other pleased facial expression such as sparkling or widened eyes. You can chatter about the spoon you've stuck in your mouth, or the rattle you've placed on your head, or simply about how "bee-you-ti-ful" her hair is!.
2. **The "Dance With Me" Sound And Movement Game:** Try to inspire your child to make sounds and / or move his arms, legs, or torso in rhythm with your voice and head movements. You might say, "Are you going to dance with me, sweetheart?" Oh, I bet you can – I know you can!" while looking for a gleam of delight in his eyes.

Stage 3: Purposeful communication

Procedure

While interaction the child is observed for simultaneously exercise as many of the sensing, smelling, hearing, touching and moving elements. The child's lead is followed and helping him to use his interests to give direction and organization to the new abilities. The child is allowed to play lots of emotionally pleasurable games for longer times. The more play times you share, the more fun you'll have.

Games

The funny sound, face and feeling game: Notice the sounds and facial expressions your child naturally uses when he's expressing joy, annoyance, surprise, or any other feeling, and mirror these sounds and facial expression back to him in a playful way. See if you can get a back-and-forth going.

The circle of communication game: Try to see how many back-and-forth you can get going each time your child touches a tiny red ball or pats your nose and you make a funny squeal or squawk in response. Or see how many times he will try to open your hand when you've hidden an intriguing object inside. Each time your child follows his interests and takes you bait, he is closing a circle of communication.

Stage 4: Complex Communication and Problems Solving

Procedure

In these 2 weeks of intervention the child is engaged in long chains of interaction around his interests, child is explored in a range of feelings like pleasure, excitement, curiosity, closeness, anger, defiance.

The child is challenged to experience different feelings in the same play session and to solve more and more complex problems like finding you in hide-and seek game. The child is allowed to use expressive facial expressions, body postures and vocal tones. Using gestures to show what she wants. During the 2 weeks of intervention the child should not be labeled good or bad, child is not focused to play with blocks, puzzles or cause – effect toys.

Games

The Working Together Game: Note your child's natural interests in various toys, such as dolls, stuffed animals, trucks, balls, etc., and create a problem involving a favorite toy that she needs your help to solve. For example, you might have a favorite teddy bear "run away" and "climb" to a high shelf. Your child will have to raise her arms to reach, and gesture for you to pick her up to extend her reach and you will gladly comply. Such a simple game will involve opening and closing many circles of communication while solving a problem at the same time.



Copycat Game: Copy your child’s sounds and gestures, and see if you can entice her to mirror all of your funny faces, sounds, movements and dance steps. Eventually, add words to the game and then use the words in a purposeful manner to help her meet a need, for example, by saying “Juice” or “Open!”

Stage 5: Creating Emotional Ideas

Procedure

In this session pretend type of game is intervened. I pretend to be a puppy and child is asked for a hug or kiss. Open up conversations is used to know about his desires and wishes. A long conversation about anything that interests the child is carried on. T.V., games and videos are used as a basis for long back forth conversation.

Games

Let’s Chitchat: Using your child’s natural interests, see how many back-and-forth circles of communication you can get going using words, phrases, or short sentences. You can even turn your child’s single-word response into a long chat. For instance, when your child points to the door and says, “Open,” you might reply, “Who should open it?” He is likely to say “Mommy does it,” and you could shake your head from side to side and say, “Mommy can’t now. Who else?” He’ll probably turn his head to his father and ask, “Daddy do it?” Daddy might reply, “Do what?” When your child once again points to the door and says “Open, open!” Daddy can walk toward him saying, “Okay, can you help me push the door open? With his eager head nod, your little boy will be closing this long sequence of back-and-forth words and gestures.

Let’s Pretend: Become a dog or cat or superhero in a drama of your child’s own choosing. Ham it up and see how long you can keep it going!

Stage 6: Emotional and Logical Thinking

Procedure

In this session the child is helped to learn to think by holding long conversation with her rather than simply trade pieces of information. Elaborated pretend dramas are created that have logical plots. Enjoyable debates about everything from food and clothes choices to sharing toys are carried out. The pros and cons are discussed; the child is given plenty of time to argue their view point. Reflective discussions are carried out, foundation for abstract thinking. Pure activities are encourages. Allowing the child to solve problem with needed encouragement. Engaging the child to create experiences involving quantity, time, and space concepts. The child is exposed to rich range of activities and natural interests and abilities are encouraged. Stories, reading, puzzles are included. Different feelings of life from anger to closeness is been discussed.

Games

The Director Game: See how many plot shifts or new story lines your child can initiate as the two of you lay make-believe games together. After the tea party play become a little repetitive or lacks direction, you can subtly challenge your child to thicken the plot by announcing something like “I’m so full of tea my tummy’s sloshing! What can we do next?”

“Why should I?” Game: When you child wants you to do things for her, gently tease her with a response of “Why should I?” and see how many reasons she can give you. Then, offer a compromise,



such as ‘let’s do it together,’ when she wants you to get her riding toy out of the garage, or pick out a new outfit tow ear, etc.

Data Analysis and Interpretation Comparison of Emotional Skills in Control Group Pre Test Vs Post Test Values

Using Paired T Test

Table – I

S.No.	Control Group	Mean	SD	“t” value	LOS
1.	Pre Test	6.00	1.25	1.8708	P > 0.05
2.	Post Test	6.20	1.37		

NS = Not Significant

Comparison of Emotional Skills In Experimental Group Pre Vs. Post Test Values

Using Paired T Test

Table – II

S.No.	Experimental Group	Mean	SD	“t” value	LOS
1.	Pre Test	6.20	1.61	3.7682	P < 0.05
2.	Post Test	9.67	3.09		

S = Significant

Comparison of Emotional Skills between Control and Experimental Group Post Intervention Value

Using Un- Paired T Test

Table – III

S.No.	Group	Mean	SD	“t” value	LOS
1.	Control	6.20	1.37	3.9749	P < 0.05
2.	Experimental	9.67	3.09		

S = Significant

Discussion

The aim of the study was to determine the effectiveness of floor time approach in improving emotional skills among autistic children.

The present study was done with two groups’ experimental group and control group. 30 children of age group 3-4 years, both male and female were selected by convenient sampling procedure. Then FEAS was administered to the samples to evaluate the emotional skills and dividing into two groups 15 samples in experimental group and 15 in control group.

The experimental group underwent treatment for 3 sessions per week for 12 weeks.



The Floor time intervention techniques for emotional functioning is based on six developmental level 1) Shared Attention and regulation, 2) Engagement and relating, 3) Purposeful communication, 4) Complex communication and problem solving, 5) Creating emotional ideas, 6) Emotional thinking. After the intervening period is over, the FEAS is once again administered to both control and experimental groups. Results have been compared with statistical techniques “t” test

Table 1 and Graph 1 shows the comparison of emotional skills in control group pre test vs. post test values with “t” value of 1.8708 and $P > 0.05$, which shows no significant difference between pre and post test values of the emotional skills in control group.

Table 2 and Graph 2 shows the comparison of emotional skills in experimental group pre test VS post test values with “t” value 3.7682 ($P < 0.05$) which shows significant difference between pre and post test values in experimental group.

Table 3 and Graph 3 shows the comparison of emotional skills between control & experimental group post test values with “t” value 3.9749 ($P < 0.05$), which shows a significant difference between post test values of control and experimental group.

These results are supported by the study done by Richard Solomon, David Bruckman. This study shows the pre / post between control and experimental using functional emotional assessment scale showed significant increases ($P = 0.001$) & 45% of children made good to very good functional developmental progress.

Another study done by Serena Wieder, Ph.D., and Stanley Greenspan.M.D., (2005). The results showed sub group of children with Autism with floor time approach using FEAS scale can become empathetic, creative and reflective.

Another study that supports my study is done by Gerald Mahoney, Ph.D., Fride Perales, M.Ed.,. This study shows the effect of Floor time intervention on toddlers and pre-school age children who showed significant improvement in emotional functioning using Floor time model.

Alternate hypothesis of the study is proved and null hypothesis is rejected, which shows there will be significant improvement in emotional skills for the autistic children through Floor time approach.

Conclusion

The Floor time approach is based on the idea that EMOTION is critical to the growth of the mind and brain. Floor time is at the heart of the model, a comprehensive program to promote healthy development and to help children with variety of developmental challenges.

The Floor time model provides the frame work for implementing such a focus through daily floor time sessions and most intensive interventions were provided.

Six developmental milestones lay a foundation for all our learning and development.

This study is done on the motive in understanding these skills and the factors that influence them by working direction on them. Appropriate emotional experiences during each of the six developmental phases help develop critical cognitive, social, emotional, language, motor skills as well as sense of self.



These six basic steps form a developmental ladder, each layers new abilities on to those of prior stages. We call these steps six milestones because each one marks a major turning point in the life of a child.

Limitations

1. This study is confined only to the age group of 3-4 years.
2. Only autistic children are included in the study other associated disorders are not included in the study.
3. Parent / caregiver session is not included in the study.
4. Male and female comparison is not included in the study.

Recommendations

1. Further study can be done with the age group > 4 years.
2. Other associated disorders can be taken for the study.
3. Parent training can be included in the study.
4. Comparative study between autism and other developmental disabilities can be included in the study.
5. Male and female comparison can be included in the study.
6. Further follow up study can be done.

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