Use of Art/Art Work and Cognitive Skill for the Rehabilitation of Special Children of 4-9 Years of Age

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Abstract

Art work/art therapy enhances cognitive skill because it helps to increase learning difficulties, social and perceptional skills; memory development and also helps special children to gain self-awareness. This research is focused on the artwork and cognitive skill used for the rehabilitation through different art activities. Mild category of special children was selected. Statistics was collected from eight schools and schools were chosen on convenient basis. Ten children were selected from each school. Thus the total sample was 80.Different exercise sheets and flash cards were prepared for different activities. Data was analyzed on cognitive levels and these levels were designed on the basis of performance. It was found by the research that rehabilitation through art activities improves cognitive function, conceptual and perceptual skills, moving patients towards self-preoccupation; and, literacy skills. Conclusion of the study is that the art therapy increases the possibilities of long-term success in life of a special child.

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Art contributed to the personal and spiritual development of the mainstream as well as special children. It is the “soul” of both the child and the art form (Makhdoom2009) Art works, in special children, promotes socio vocational habits (such as consideration for others and thoroughness), and academic skills (such as perceptual-motor skills and number concepts), and also provides unique experiences with concrete materials. In addition to reinforcing the school's general goals, arts can be a diversionary activity for the child (Rynders, 1997).

This research assesses the art / art work and cognitive skills used for the rehabilitation of special children of 4-9 years old. Pakistan came into being in 1947 and there were a number of problems to be resolved at that time. Special education did not exist in this new state and there was little awareness about new trends in special education, the environment in which these children should be educated. (Khatoon, 2003)

This research focuses the development of the functions of brain including perception, memory, imagination, and use of language with the help of different activities through

artwork. Recent research has explored some cognitive components hypothesized to be strongly related to pretense, such as mental representation ability (i.e., theory of mind), problem solving and other cognitive strategies, social and linguistic competence, and academic skill development. (Bergen, 2002). According to researcher, (Dicowden, 1990), the child is constantly growing intellectually, physically and emotionally so rehabilitation through art is special need. Data also make it clear that consecutively deliberate cognitive abilities involved in creative arts therapy, is a technique that can be readily adapted to accommodate children with disabilities provides opportunities for children to gain self-confidence. Artwork, in general, has a tendency to be abstract and complex. Artists who create these artworks have to have a sense of focused behavior and individual creativity.

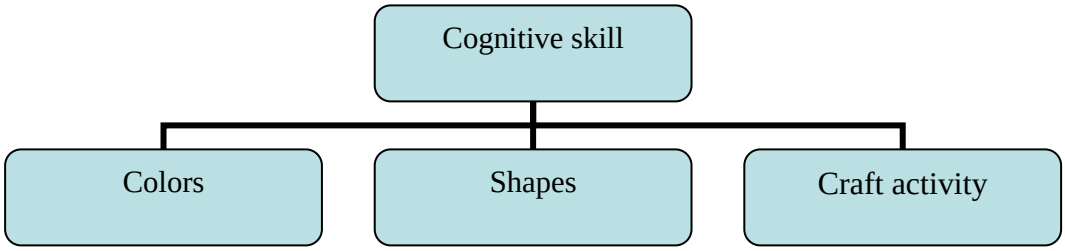
Art therapy's purpose, regardless of the circumstance, is to encourage children and adolescents to express their feelings, participate in new tasks, such as those involving focused attention, and to learn creativity (Henley, 1998; Hume & Hiti, 1988; Sundaram, 1995; Zamierowski, 1980. Most theorists also agree that the creative process involves imaginative activity, the ability to generate a variety of ideas (productivity), problem solving (application of knowledge and imagination to a given situation), and the ability to produce an outcome of value and worth. Some would go further, arguing that the product must be correct, practical, useful, and/or of artistic quality (Mar'l, quoted in Dust, 1999). It has been found that art work done by children under art therapy increases cognition, an abstract property of advanced living organisms and direct property of a brain (or of an abstract mind), on at the factual and symbolic levels. It is hoped that this study will be useful to measure art therapy which can increase the possibilities of long-term success in life and develop the sense of communication skills, self awareness and balance the emotions of children.

Methodology

The design of this study was descriptive. The rationale of study was to assess the use of art and artwork in cognitive skill for the rehabilitation of special children of 4-9 years old. This study was conducted in Karachi. Karachi is the capital of the Province of Sindh, and the most populated city in Pakistan. There is a huge number of children's population in Karachi, which has many problems. Mental retardation cognitive disability is markedly below average level and an inability to respond to one's environment is present in about 2 to 3 percent of the population. Mental retardation comprises five general categories: borderline, mild, moderate, severe and profound .The category focused in this research was mild category of special children from 4-9years of age.

In Karachi there are 40 schools of special children. List for these schools was obtained by Internet. Convenient sampling was done and eight schools were selected which teach to the mild category of special children. Out of each school 10 children were selected randomly. Thus the total sample contained 80 special children (4-9 years old) from mild category. Before data collection visits were made to the schools to explain the objective of the research and to seek permission for data collection. Observation, checklist method

was used for the collection of data. Flash card and exercise sheets were prepared for the children and the cards and sheets were associated to cognitive skills in



Activities related to colors, shapes, and crafts were conducted among children to see that how much art is helpful to improve cognitive skills. For color activity, in relation to size (taller/short) bigger/smaller), exercise sheets were made by the children. For mathematics, questions were asked about counting (1st, 3rd and 2nd, 4th). Identification of different objects (such as apple, banana, leaf) was done and then children were asked to color these objects. In color matching, identification was done through flash cards .For activity related to shapes; students were asked to match the shapes (triangle, circle, square). Flash cards were made in order to do the activity regarding the selection of correct size (big and small). Children were also asked to sort out different shapes (triangle, circle, square), which were made in different colors. For craft activity, children were provided with all material for card making and beads work. Finally, they were asked to do free hand painting.

Data was first, entered in Epi data and then was transferred to SPSS (Statistical package for social sciences) version 11.5. This SPSS (Statistical package for social sciences) was used for the statistical analysis of the data. All variable were categorical variables so statistically descriptive statistics option was used to analyze the data. Cognitive levels were designed on the basis of performance.

0 level	No response
1st level	Work independently following verbal direction
2nd level	Work with gesture prompting
3rd level	Work with partial physical prompting

Results

Table 1 illustrates performance of special children, some criterion and uniqueness in it and it is important to considered that how a child create his abilities toward the development. In color activity 100% children responded to the inference question in exercise sheets according to performance. Majority of the children allowed to cognitive level 1.Some verbal direction were given before starting color activity and the children simply recognize or assume the objects which shows that art modify cognitive development and develop high level literacy skill. Some children allied to level 2 for the reason that they could not identify and categorized the objects only through verbal direction. Thus, each activity was explained and instructions were given before exercises. 2%-6% children fell into level 3, they work with physical prompting, although, in color activity (like matching color and identifying the different objects and sizes), they reached to level 1 but, they faced major problem in Maths and counting. So over all artwork/color activities are significant sources for special children it enhances academic skills, problem solving skills, concept understanding, and information processing.

Table 1 Percentages of color activity according to performance levels

S.no	Color activity	Levels %			
		0	1	2	3
1	Color the taller object	0	91.2	8.7	0
2	Color the bigger object	0	88.7	11.2	0
3	Color the different objects	0	86.2	13.7	0
4	Color the first and third object	0	62.5	32.5	5
5	Color the second and forth object	0	47.5	46.2	6.2
6	Color the same objects	0	62.5	35	2.5
7	Matching the colors	0	93.7	6.2	0

Key 0 = no response, 1= responded independently with the help of verbal direction, 2=gesture prompting, 3= physical prompting.

Table 2 demonstrates performance level and percentages during the shape activities. Majority of the children allied to level 1. During all activities of shape, children easily match and identified the shapes, chose the accurate size and sorted out the exact shape and placed them at the correct position with the help of some verbal direction. Some children fell into level 2 as they faced complication in some exercises, therefore instructions were given to them. 5% children were placed in level 3 because they faced difficulty in the completion of few activities of shape. However, they finished the exercise when some physical directions were given to them. Accordingly to the result, activity of artwork/shape refers to a child performance, thinking, and gains understanding of the learning factors or interaction.

Table 2 Percentages of shape activity according to performance levels

S.no	Shape activity	Levels %			
		0	1	2	3
1	Matching of the shapes	0	93.7	6.2	0
2	Choosing the right shape and placing it at the right place.	0	83.7	15	1.2
3	Sorting of the shape	0	72.5	22.5	5

Key 0 = no response, 1=responded independently with the help of verbal direction, 2=gesture prompting, 3= physical prompting

Table 3 explains the percentages according to performance level in craft activity. 100% of the children got level 1in craft activity. Children express the inferential thinking emotions, knowledge with the help of drawing and painting. With the help of crafts activities rehabilitation of cognitive skill is significantly develop because in the form of imagination and creativity social and academic developments get better. 11.2 / 3.7% children faced some trouble hence they allied to level 2and 3.They faced difficulty in card making, cutting, and pasting for the reason they could not simply handle but with a slight help they finished craft activity and took pleasure in it.

Table 3 percentages of craft activity according to performance levels

S.no	Craft activity	Levels %			
		0	1	2	3
1	Beads work	0	100	0	0
2	Card making	0	85	11.2	3.7
3	Painting	0	100	0	0

Key 0 = no response, 1=responded independently with the help of verbal direction, 2=gesture prompting, 3= physical prompting

Discussion

Art therapy has been known to be an effective tool to incorporate with rehabilitation of cognitive skill. Art therapy can be seen as a tool that could relieve some of those feelings within a child (Prager, 1993). Creative-expressive approach, such as art therapy, can aid the necessary attention needed for the right hemisphere (Zamierowski, 1980). In this research different ways of examining cognitive skill were used by engaging special children in art activities, which prevent deterioration of existing skills and concerned to thinking, emotions, and response. Thus data was analyzed on cognitive level and echelons were designed according to performance. This study revealed impact of arts activities on special children, which influenced attitudes in rehabilitation of cognitive skills. Majority of the children identiified size relationships (big versus small) and the

geometrical shapes and colors. But rehabilitation through artwork was highly examined by two activities matching the color and drawing /painting. Children paid attention in matching of primary color and it improved their cognitive function, behavior and mood. Current research suggests that there is a link between color sensitivity and mood disorders (Barrick, Taylor & Correa, 2002). This research also examined drawing, which is a natural mode of communication. It was observed that children expressed their feelings and thoughts and cognition and perceptions and they were cheerful after drawing. Researcher also explored that children's drawings reveal their thoughts, feelings, and psychological well - being. Drawings are useful in understanding and evaluating a child's development (Gardner, 1980; Golumb, 1990; Kellogg, 1969; Lowenfeld & Brittain, 1987). Drawing tasks have also been developed and applied to the evaluation of cognitive abilities in children (Silver, 1996; 2001). It was also observed that children faced difficulties in the area of counting. In the growing and fast developing age of children there are many connections between cognitive skill and art activities. They develop understanding; build communication skills, learning process, intellectual functioning, problem solving skill, and social cognition, as well as to academic areas such as literacy and mathematics. It is hoped that this research study will be helpful to assess relationship between the great potentials of art therapy and rehabilitation of brain development with pretend play and development of specific academic skills. According to Malchiodi (2006) "Art making is seen as an opportunity to express oneself imaginatively, authentically, and spontaneously, an experience that, over time, can lead to personal fulfillment, emotionally reparation, and transformation. This view also holds that the creative process, in and of itself, can be a health-enhancing and growth-producing experience."

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