The differences between hearing impaired and normal children's pictures and their colour use

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Abstract: The pictures that children draw reflect their inner worlds. When we have a look at the human history, we can easily notice how pictures being such an important means from the very beginning. The pictures giving lots of information about past are very important evaluation instrument for experts working with children. For most people, the important thing about the pictures is their aesthetic value on the other hand we focus on other vast amount of important factors for child evaluation. For example; the undrawn parts in the Picture, with how much pressure the pencil is used, bigness and smallness, the ratio between the body parts, the way paper is used and the way individuals positioned, the colours used etc. What kind of development properties and mood, each of these factors indicating, were determined by the researches. In this search only a general information will be given because by the ones who don't study on child mental health field, the pictures might be misinterpreted in terms of all dimensions about the meaning of pictures because this information only will be meaningful when it is combined with the information in the child psychology field findings or else sometimes mislabelling might happen by word of mouth information for example a child drawing a Picture with no mouth might be labelled as shy which we all agree negative outcomes of these labelling on children. In this article, two groups of children's pictures were compared, the first group is the hearing impaired children and the second group is the normal children and we studied the differences of pictures and colour use among these groups. In this study two different schools were visited and formed the groups and they were asked to draw four different types of pictures and all these information gathered and interpreted.

Keywords: Hearing, Impair, Pictures, Colour

1. Introduction

Picture and child which defines each other are constantly changing and developing dynamic phenomenon. And they are the most efficient and important elements of communication. In the general art education none of the art fields has been as efficient as the Picture art in terms of people describing and proving themselves and, perception of the entities in nature and portraits of them, the personal and social needs of children are very closely related with comprehension of the artistic symbols. In the world of child, stains, imperceptible scratches and figures formed as a result of drawing and colouring are the signs of communication and honouring. The child slants into various activities and findings through image without relying on any logical and analytical rules. Therefore the child reflects himself with the activities he makes and puts into words his feelings, thoughts, and point of view about events as the way he comprehends and senses.

He reaches the idea of comprehending the events and entities that surrounds him and personal satisfaction only if when he discovers himself and without any adult interruption. The children can be deprived of ability to express themselves explicitly in the case of adult interruption and guidance because of wanting to teach things in a very short time to children despite not knowing about child development process.

In this study, the child reflects his mental livings (or experiences) in pictures that are one of the most liked activities of him. He unconsciously conveys his feelings and thoughts in them. If you want to understand child's livings, you need to examine his drawings as being one of the easiest projective method and what we did in this search.

The importance of this study, pictorial representation within the psycho-pedagogic process is a data base to

identify children as well as it is a capital of importance as an expression means that provides us opportunity to understand child's intelligence, personality, immediate environment qualities and inner world. At the same time picture is a projective technique used in psychology to determine the family, communication, and emotional problems of child. (Serin, 2003: 17).

The sections of paper are also important in the interpretation of child drawings. The top part of the paper purports radiance, optimism and dreaminess. The bottom of the paper represents memory. Positioning the figures on the left shows ego-centred personality on the other hand positioning them on the right shows environment-centred personality. The middle symbolizes the present. It reflects the current state of mind (or mood) which the child is in. The small figures drawn at the bottom of the page are outpouring of inadequacy, insecurity and depression. Positioning figures away from the middle line to the left is seen among children who seek emotional satisfaction and are gutsy.

Family pictures have been used to identify children since 1930's. For the first time in 1931 Appel and in 1942 Wolf propounded that family pictures are serve the purpose very much to understand the personality of children (Malchiodi, 2005: 219). In 1952 Hulse examined comparative family pictures of normal children and the ones having emotional problems. He observed that children had reflected their feelings about their mother, father, and siblings and interrelation of individuals within the family in their pictures (Malchiodi, 2005: 219). Yavuzer (1993: 5) had examined 1500 child pictures and approached these pictures as a reflection means of psycho pedagogic and social. He had examined the family pictures of children. Their family were interviewed and information about their past was gathered and some children were applied intelligence and personality tests.

In a study carried out by Weber, Cooper, Hesser, (1996: 114-117) children were asked to draw a picture of an old person and to describe the properties of pictures that they made. Their pictures reflected their perception of grandfather and grandmother that they learnt the concept of old people and their findings about their about old people's abilities and behaviours. Serin (2003: 17) examined that the expression in child pictures: a means as a data base to understand him as well as his intelligence, personality, immediate- surrounding and inner world. Children pictures are being different than adult art, and requiring plain and net evaluation, and having a meaning and content on their own. Children see the world as it is perceived, and reflect it the way it is seen by them. Collado (1999) in his research, the role of spontaneous drawing in children's development during early childhood period,   emphasized the importance of letting children use their intuition to draw picture so that they can develop their imagination and ability. He studied why the children draw, how teachers can motivate child's creativity, what kind of activities need to be applied and how the child development can be evaluated.

Wilson (2004: 6), to evaluate the emotional elements on child stammer, made a search in order to determine the effects of projective drawing as a technique and in the research he concluded that stuttering children didn't contribute any extra (additional) or special information into other projective techniques used as a sense indicators Burkitt, et al. (2003: 445) designed a study to determine whether children systematically choose certain colours or not while completing the drawings concerning emotional matters. 230 students aged between 4-11 years ranked and marked ten colours they prefer at first session. At the other session, children were given 3 figures to be coloured as a task; the first figure is normal, the second one is unpleasant and the third one is pleasant. At the end of this study, it was determined that children in all age groups preferred to use the colour they like the most for the figures they find pleasant and the colour they don't like for the figure they find ugly and for average figures, they preferred to use the colours they like middle level(or moderately).

Dogru-Yıldırım, made a search on children drawing according to sex in Germany and Turkey, observed that girls were more successful than the boys in drawing pictures and knowing family cases in both countries and the knowing family level increased by age, and the knowing family points differed depending on the numbers of siblings. It was remarked that the students having high success at school got high grades from Hariss Test. Fisek in his search in 1989, examined kinetic family drawings in terms of closeness and hierarchy and he couldn't find a relation between the togetherness and coherence points he got from family togetherness and closeness determination scale III and the results he got from kinetic family drawings and hierarchy. Moreover he couldn't find a significant relation between the coherence and togetherness points measured by Fisek's family coherence and togetherness determination scale III and problem points he got from children behaviour scanning list. The data got from the research show that children draw the real cases in their pictures. In this search it was stated that clinically diagnosed children and their siblings' family togetherness points increased as their behaviour problems increased (_lkbahar-Yahya, 1992: 112-113, 219).

2. The Colour in Child Picture

A child begins to recognize the main 3 colours when he turns to 4-5 years old during preschool period. At the beginning of early stages the children use colours in his picture without any colour discrimination and decision. After 4-5 years old he begins to use the colours gradually (Yavuzer, 1993: 48). The colours that are used by children before preschool period have no connection with realism (Kehnemuyi, 1977: 15). He enthusiastically uses the colours he likes. For example he can make a blue dog or a green man. When a child wants to make a picture of someone he likes a lot he chooses the colours that he likes the most. The colours that children use have a

psychological meaning. This meaning can change from child to child for that reason it is very difficult to reach certain judgement and trying to understand the meaning of colours (Yavuzer, 1993: 48).The child needs to be set free while using the colours as he uses them enthusiastically from his inside. He can make a tree with brown trunk and green branches while making a blue dog. This choice is completely unconscious. As it can be seen from this example, they use both decorative and realistic colouring in their pictures (Yavuzer, 1993: 51). Female children give more importance to colour choice than male children. Some children prefer warm colours such as yellow, red, orange and some prefer cold colours such as blue and green. Experts state that the children choosing hot colours display affectionate, compliant, cooperative behaviours while the children choosing cold colours are displaying obstinate, grumpy, and discordant behaviours. The preschool children constantly choosing cold colours are seen to show a tendency to suppress and hide their emotions. According to researches it was observed that the children using red colour very much display aggressive and stubborn behaviours (Yavuzer, 1993: 52). In natural development period, it is seen that the colour choice of children changes from cold colours to warm colours for example it was seen that the children having oppression during nappy training used brown and blue colour a lot in their pictures and after the removal of oppression it was seen that they started to use other colours (Yavuzer, 1993: 53). There is a connection between the colour that children use and their emotional reaction. Burkitt, et al. (2003: 445-455) in his search specified that children use the colour they prefer the most for pleasant and nice figures and for bad and ugly ones they prefer the colours that they prefer the least and the medium level colours for the figures that they are neutral and the most used colour for bad characters was black. (www.therapeuticchild.ca)

The colour that children use in their pictures can also reflect their physical properties. Perkins determined in his search between healthy and ill children that the children having terminal illness used different colours in their pictures indicating that they are aware of their illness. The most used colour among the ill children is black. (Malchioldi, 2005: 259). Red colour was used by both healthy and ill children however; the ill children used it more than healthy ones and it was found that red colour was associated with blood. (Malchioldi, 2005: 259). For Bach there is a certain meaning of colour that children use in their pictures but the density of colour is also important. Density represents brightness and vividness of colour. Although Green colour in child picture generally represents growth and development, it is also important whether it is light green or dark green. That is each colour may represent diverse meaning depending on the way children use them in their picture. (Malchioldi, 2005: 262). Red may represent aggression and rage. In addition you can see sharp and solid lines in child picture. (www.therapeuticchild.ca) Red may mean different meaning: energy, hatred, sign of a

problem, danger, physical illness, love etc. Red colour may indicate a vital subject or problem, explosion of emotions or signs of a danger or reflect a very severe illness. (Furth, 2002: 98). Pink, as a more effective hue than red, may evoke the solution of a problem or illness that happened in the past (Furth, 2002: 98).

3. The Place of Child Picture in Clinic Evaluation

The interest in child pictures came forward between the late 1800's and early 1900's with increase in the concern of mentally handicapped people's pictures and earning reputation of Freud and Jung studies. The first studies on child pictures began with the use at intelligence level. In 1921 Burt included drawing human picture as an intelligence test among a couple of IQ tests. In 1926 Goodenough, in 1963 Haris searched the norms regarding age at drawing human figure (Malchiodi, 1998: 26). Interest on the child pictures' emotional and physiologic properties increases particularly in psychology, psychiatry and picture therapy fields day after day. Most therapists have accepted that picture is an efficient remedial method because it might help children to express themselves when verbal explanation is insufficient for them. (Malchiodi, 1998: 26). Therefore, some of the benefits of using art as an evaluation means for children are those: Art evaluations reveals table of uncensored thoughts and emotions of children. For children whose language ability has not developed yet or who don't want to express themselves verbally, it is a wordless evaluation method and an unthreatening evaluation means that children want to join readily. (White, et al. 2004: 210). Picture gives us important information about children's inner world. Therefore if we analyze well enough the picture made per se by them, we can obtain very detailed information about their development. Personal reports, observations and projective techniques can be benefitted to determine their personality, perception, interpersonal relations, group values and manners (Yavuzer, 1992: 13).

4. Findings

It is a planned descriptive research in order to evaluate differences of the pictures and colour choice of two groups of children who are respectively hearing impaired and normal children aged between 8 and 12 and the subject of the pictures are "cartoon characters" "picnic", "park toys" and "family". In this search body details of figures and their relevance according to their sex, the details of houses and their surroundings, and the toys and equipments at the park, and feature of roof, colour details in the pictures, storey feature of the house , family members and number of siblings, social interaction between the family members, the positioning of family members with respect to house and each other , the use of paper while drawing family

members and their alignment , arrangement of family members, dimensions of figures, line properties, whether the use of paper differs depending on sex, education and income level, problem behaviours and social skills and whether there is a significant relation among these were examined.

4.1. As you can see from the Table 1, Only 1 Hearing Impaired Children out of 16,

Table 1. *Disabled and normal children pictures about their family*

Gender	female		Male		Total	Total
Factor	Disabled	normal	Disabled	normal	disabled	normal
F	1	7	0	9	1	10
%	25	18.42	0	18.75	6.25	11.62
Total	5	38	11	48	16	86

That is 6.25%, drawn family pictures. This figure may mean their poor relation with the family and for normal children it is 11.62% which shows more family relation with respect to disabled children.

4.2. Second Table Evaluates the Activities of Children at Park

According to data, hearing impaired female children seems to enjoy from picnic more with respect to other groups and activities of hearing impaired male children at park are the east.

Table 2. *Disabled and normal children pictures about picnic*

Gender	female		Male		Total	Total
Factor	disabled	normal	Disabled	normal	disabled	normal
F	4	18	1	25	5	43
%	80	47	9.09	52	31.25	50
total	5	38	11	48	16	86

4.3. Accoarding to Third Table Data, Hearing Impaired Male Children Seem to Enjoy More from Park and Hearing Impaired Female Children Seem to Enjoy Less

Table 3. *Disabled and normal children pictures about park*

gender	female		Male		Total	Total
factor	disabled	normal	disabled	normal	disabled	normal
f	0	3	5	4	5	7
%	0	7.8	45.45	8.33	31.25	8.13
total	5	38	11	48	16	86

4.4. Forth Table Shows that Hearing Impaired Children Get Affected More from Cartoon Characters than the Normal Ones and in General Hearing Impaired Children get Affected More from Emotional Incidences

Table 4. *Disabled and normal children pictures about cartoon characters*

gender	female		Male		Total	Total
factor	disabled	normal	disabled	normal	disabled	normal
F	0	10	5	10	5	20
%	0	26.31	45.45	20.83	31.25	23.25
total	5	38	11	48	16	86

5. Interpretations of Pictures

Children can reflect us their emotions, and express their feelings and thoughts through pictures. The pictures made by children are accepted to be a mirror of their inner worlds.

Relying on this view, Lots of researches were made about child picture. In this search, 104 pictures were drawn about four subjects by children and among them 16 pictures are belong to hearing impaired children and 86 pictures are belong to normal children and it is tried to evaluate the concepts such as "cartoon characters", "picnic", "toys at park", and "family".

5.1. The Pictures of Hearing Impaired and Normal Children about "Family"

12 pictures were drawn about this subject by children and among them 1 picture is belong to hearing impaired and 11 pictures are belong to normal children.

Picture 1. *Hearing impaired child picture about family*

Picture 2. *Normal child picture about family*

Table 5. *Hearing Impaired and Normal Children about "Family"*

Theme	Picture number	Disabled child value	Normal child value
1.Richness of schemas	20*21	4	4
2.Elaborateness in drawing		2	4
3. Including their feelings in pictures		5	5
4. The case of transferring objects as they are		2	4
5. The case of colouring objects as their original		1	4
6.The case of children colouring objects arbitrarily		1	4
7.Reflection of space(place) perception into pictures		2	4
8. Reflection of subject into picture		3	5
9.Reflection of technology into picture		0	0
10. Level of originality		4	2

In children lives, humans, houses and trees occupy a huge place. While drawing them, children tell of themselves more than while drawing about themselves. To please themselves, children draw humans, houses, trees, greenery and sun. The house represents the place where compassion and security as basic needs are sought for. By looking at two pictures we can see the differences. In normal child picture, a decent house and father and mother being together, tells of happiness of the child and being in a safe family and basically he seems to be happy about his life. However, in hearing impaired child picture, we can hear his unhappiness about his family because the house is not decent and there is no father or mother in the picture. The colours used by them are also different. Normal child is telling us about having a friendly family and a good life by using warm and pretty colours on the other hand by using cold and dark colours hearing impaired child tell us of his being in an unhappy family.

5.2. Hearing Impaired and Normal Children Pictures about Picnic

Picture 3. *Normal child picture about picnic*

Picture 4. *Hearing impaired child picture about picnic*

Table 6. *Hearing Impaired and Normal Children Pictures about Picnic*

Theme	Picture number	Disabled child value	Normal child value
1.Richness of schemas	22*23	4	4
2. Elaborateness in drawing		4	2
3. Including their feelings in pictures		4	3
4. The case of transferring objects as they are		4	3
5. The case of colouring objects as their original		4	4
6. The case of children colouring objects arbitrarily		3	4
7. Reflection of space(place) perception into pictures		4	4
8 Reflection of subject into picture		1	1
9. Reflection of technology into picture		0	0
10. Level of originality		3	3

Picnic pictures shows that hearing impaired female child demonstrates nature more simply. Normal child by using warm colours to demonstrate flowers and fruit indicates he savours nature more.

5.3. Hearing Impaired and Normal Children Pictures about Park

Picture 5. *Hearing impaired picture about park*

Picture 6. Normal child picture about park

Table 7. Hearing Impaired and Normal Children Pictures about Park

Theme	Picture number	Disabled child value	Normal child value
1.Richness of schemas	24*25	4	5
2. Elaborateness in drawing		1	5
3. Including their feelings in pictures		3	3
4. The case of transferring objects as they are		4	3
5. The case of colouring objects as their original		4	3
6. The case of children colouring objects arbitrarily		5	4
7. Reflection of space(place) perception into pictures		4	4
8 Reflection of subject into picture		4	4
9. Reflection of technology into picture		0	0
10. Level of originality		5	3

It is seen more simplicity in hearing impaired children's pictures. They are making very fast and naive work.

5.4. Hearing Impaired and Normal Children Pictures about Cartoon Characters

Picture 7. Normal child picture about cartoon

Picture 8. Hearing impaired child picture about cartoon character character
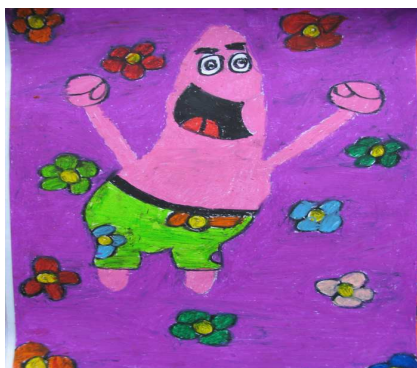
Table 8. Hearing Impaired and Normal Children Pictures about Cartoon Characters

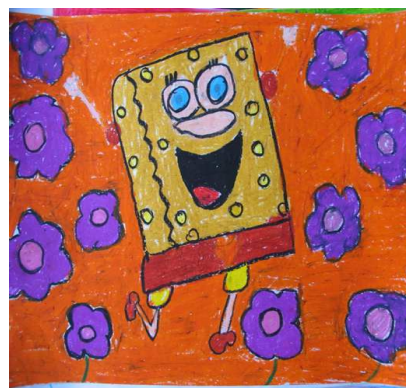| Theme	Picture number	Disabled child value	Normal child value
1.Richness of schemas	26*27	4	5
2. Elaborateness in drawing		3	5
3. Including their feelings in pictures		5	4
4. The case of transferring objects as they are		3	3
5. The case of colouring objects as their original		1	3
6. The case of children colouring objects arbitrarily		5	3
7. Reflection of space perception into pictures		4	4
8 Reflection of subject into picture		3	5
9. Reflection of technology into picture		4	4
10. Level of originality		5	2

The different effects of cartoon characters on hearing impaired and normal children while drawing pictures can be seen from above pictures. The picture, on the right, drawn by normal child is seen being more colourful and lively. Whereas hearing impaired children's possibilities of colour use are sharper and plainer and lack of some effects.

Picture 9. Hearing impaired child picture about cartoon character

Picture 10. Normal child picture about cartoon character

Table 10. Hearing Impaired and Normal Children Pictures about Cartoon Characters

Theme	Picture number	Disabled child value	Normal child value
1.Richness of schemas	28*29	5	5
2. Elaborateness in drawing		5	3
3. Including their feelings in pictures		5	3
4. The case of transferring objects as they are		5	4
5. The case of colouring objects as their original		3	3
6. The case of children colouring objects arbitrarily		3	3
7. Reflection of space(place) perception into pictures		5	2
8 Reflection of subject into picture		5	5
9. Reflection of technology into picture		5	5
10. Level of originality		5	3

In these two pictures aforementioned two groups' inner world reflection to physical outer world is emphasized. The character is aggressive and whose body lines is very sharp in hearing impaired child's picture and expressions are older and the character is so to speak in show of strength. This means his inner world's pessimism outpouring. On the other hand, non-hearing impaired child's picture outpours the childish world and joy of character.

Picture 11. Hearing impaired child picture about cartoon character

Picture 12. Normal child picture about cartoon character

Table 11. Hearing Impaired and Normal Children Pictures about Cartoon Characters

Theme	Picture number	Disabled child value	Normal child value
1.Richness of schemas	30*31	4	5
2. Elaborateness in drawing		3	3
3. Including their feelings in pictures		4	4
4. The case of transferring objects as they are		3	3
5. The case of colouring objects as their original		3	3
6. The case of children colouring objects arbitrarily		4	4
7. Reflection of space(place) perception into pictures		2	2
8 Reflection of subject into picture		5	5
9. Reflection of technology into picture		5	5
1.Richness of schemas		5	1

It is seen a significant difference between the two female children above having hearing handicap and not having hearing handicap. In the picture of Non-hearing impaired child on the right the joy and liveliness of character is the reflection of his inner world's reflection besides it is obviously seen that the child having hearing handicap outpours his pessimist inner world prominently.

6. Results

In general, According to these two groups of pictures:
1. There is a kind of deafness and simplicity in hearing impaired children pictures and this points their inner worlds' simplicity and pureness.
2. Hearing impaired children use cold and dead colours compared to normal children and this points outer world's influence on them.
3. "Drawing picture" is as important as "playing games" in order children to improve their mental developments and especially for very little children who cannot express their livings(or experiences) and desires properly because of having limited vocabulary knowledge and it is exactly a communication device(means) and of course this

might mean even more for hearing impaired children . What a child is living in his inner world is revealed through pictures and information can be get from these about how parents need to behave.

4. Child painterly activities are the free doings as feeling like and without needing anyone's assistance. He puts to the tests while doing these; he expresses the emergent in a new telling according to himself during these activities. There lays a childish creativity on the cornerstone of his efforts. By this means parents can understand their expectations from family and psychological needs by examining their pictures.

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