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ABSTRACT

This study examined social communication behavior during play time among eight kindergarten (5- to 7-year-old) children with profound hearing loss in integrational situations (with normal children ages between 4-6) in Ankara, Turkey. Observations were made of children's preferences for different play centers, types of social play, social communicative behavior during play, number of children in play groups, and the teacher's role in play. Among the work stations and options available for students to choose during free time, a gradual decline was noted in the preference rates for observation and for solitary and parallel play, while associate and cooperative play increased. An increase was noted in the numbers of children with hearing impairments who joined play groups consisting of one to three children, and an increase in verbal and nonverbal communication was noted as well. Specifically, positive nonverbal communication increased, while negative nonverbal communication decreased until it disappeared altogether. The level of the teacher's involvement in children's play also declined in the last month of the study, with a small rise in the teacher's function as "play initiator." (Contains 11 references.) (PB)

A STUDY ON SOCIAL COMMUNICATION BEHAVIOR of 5 to 7-YEARS-OLD KINDERGARTEN CHILDREN WITH PROFOUND HEARING LOSS IN INTEGRATIONAL SITUATIONS

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This study was designed to examine social communication behavior in 5 to 7-year-old kindergarten children with profound hearing loss in integrational situations (with normal children ages between 4-6). The subjects consisted of eight children, three boys and five girls, with profound hearing loss attending a kindergarten affiliated with the Department of Child Health and Education, Hacettepe University, Ankara. 'Timed observation code 'was used for data collection for the purpose of finding out the play behavior of hearing impaired children. The results of this study; The preference rate for the 'Dramatization', 'Block', 'Science and Nature', Book', 'Music' and 'Sport' corners was higher in the last month of this study than in the first month. By contrast, that for the 'Manipulative Play', 'Academic Education', and 'Art Corners' was lower. There was a gradual decline in the preference rate for observation, solitary and parallel play while there was a gradual rise in the preference rate for associate and cooperative play from the first month onwards until the end of this study. There was a gradual rise in the rate of hearing impaired children who joined a play group consisting of 1-3 children from the first month onwards. When we consider the communication behavior of children from June till August, we will see that there was an increase in the rate of both verbal and non-verbal forms of communication. During the course of integration there was an increase in the rate of positive non-verbal forms of communication while negative non-verbal forms of communication decreased to nil. In the last month of this study, there was a decline in the rate of the teacher's active involvement in children's play. However, there was a rise only in this function as 'a play initiator'.

Hearing impaired children can be included in a great variety of educational models to assist their development. One of the most effective models available to help such children acquire and develop communicative skills is integration. As far as hearing impaired children are concerned, integration involves regularly and systematically mingling with hearing children under the supervision of a normal and special educational expert (Miller,1989).

In an integrational environment, hearing impaired children who have an opportunity to play with hearing children will have a chance of making observations during games. In addition, they will be constantly exposed to aural stimulations and models of verbal expression. Furthermore, they will be involved in situations that require interaction.

Interaction between play and language symbols will contribute to the development of Communicative skills among children. Play behavior forms a non-verbal basis for the development of verbal communicative skills. Play is the most significant means by which hearing impaired children can initiate relations with the outside world. It also offers them a significant opportunity to express themselves, discover their abilities, and put their creative potentials in use. In short, it is an opportunity that will positively contribute not only to the development of their linguistic, mental and social skills, but also to their emotional and motor skills.

AIM

This study was designed to examine the social communicative behavior of 5 to 7-year-old kindergarten children with profound hearing loss in an integrational situation (with normal children ages between 4-6).

It was examined whether in an integrational environment the following varied according to the months in which this study was conducted:

a. The play corners, and types of social play preferred by hearing impaired children,
b. the number of children in the play groups to which such children were assigned,
c. types of communication established by such children during play,
d. the psychological aspects of non-verbal communication established by such children during play, and
e. the manner in which teachers participated in games.

MEANS AND METHOD

Subjects

The subjects included in this study consisted of eight 5 to 7-year-old children, five girls and three boys, with profound hearing loss. They were all attending a kindergarten affiliated with the Department of Child Health and Education, Hacettepe University, Ankara.

The characteristics of the children included in the study

The following were the qualities shared by all the subjects included in this study.

1. Their age ranged from 5 to 7 years. They all had a serious bilateral sensorineural hearing impairment. Otherwise, they were normal.
2. They were all wearing a hearing aid.
3. Their parents (or whoever was responsible for their education) were at least literate.
4. Their parents were both living and married.

5. They all had been subjected to individual, groups and integrated education at the Child Health and Education Department's kindergarten 2 1/2 days per week for a period of 1-2 years.
6. The Denver Development Screening test results revealed that exhibited similar developmental characteristics, and that they were ready for integrated education.

The Manner of Data Collection

The data concerning social communicative behavior of hearing impaired children was collected by a method known as 'timed observation coding' (Bilir, Atik, Güven, 1986). The observations made were recorded on observation forms. The following were the kinds of information recorded during observations :

1. Play corners preferred by hearing impaired children,
2. Types of social play (Parten, M.B.,1932),
3. Social communicative behavior during play :
   a. type of communication
   b. the psychological aspects of non-verbal communication.
4. The number of children in the play groups to which hearing impaired children were assigned.
5. The manner in which teachers participated in games.

The Places Where Observations Were Made

The observations were made in four playrooms allotted to 4 to 6-year-old normal children. Two hearing impaired children were integrated into each playroom. The average number of hearing children in each playroom was 25.

The Period of Time During Which Observations Were Made

The data concerning the social communicative behavior of hearing impaired children was collected during June, July and August, 1990.

Arrangement of the Environment

Care was taken to make sure the same play corners and play materials were maintained in each playroom so that equal observation conditions existed during the course of the study. The following were the play corners : dramatization (house, hospital, puppet); manipulative; block; academic education; art; science and nature; book; music and sport. Each corner had materials suitable for it.

Observation Calender

The order in which children would be observed was determined in advance in a hierarchical manner.

For instance, a hearing impaired child observed first in an observation period one day was observed second the next day, and third the day after, and so on. As children's behavior might be different at the beginning, in the middle and towards the end of the play period, it was thought it might prove useful to observe each child at different time slices (Bilir, Atik, Güven, 1986; Metin, 1989).

Duration of Observation

Observations were made during the scheduled free play period between 9-10 a.m. everyday during weekdays. During the five-minute observation period assigned to each child, six 30-second observations were made, with each followed by 20-second intermissions. During the course of the study, each child was observed 36 times in June,

36 times in July and 36 times in August. Thus, each child was observed for a total period of 180 minutes (=three hours) a month for three months, and the observation data was recorded.

The data obtained was evaluated in terms of percent values and graphics.

FINDINGS AND DISCUSSION

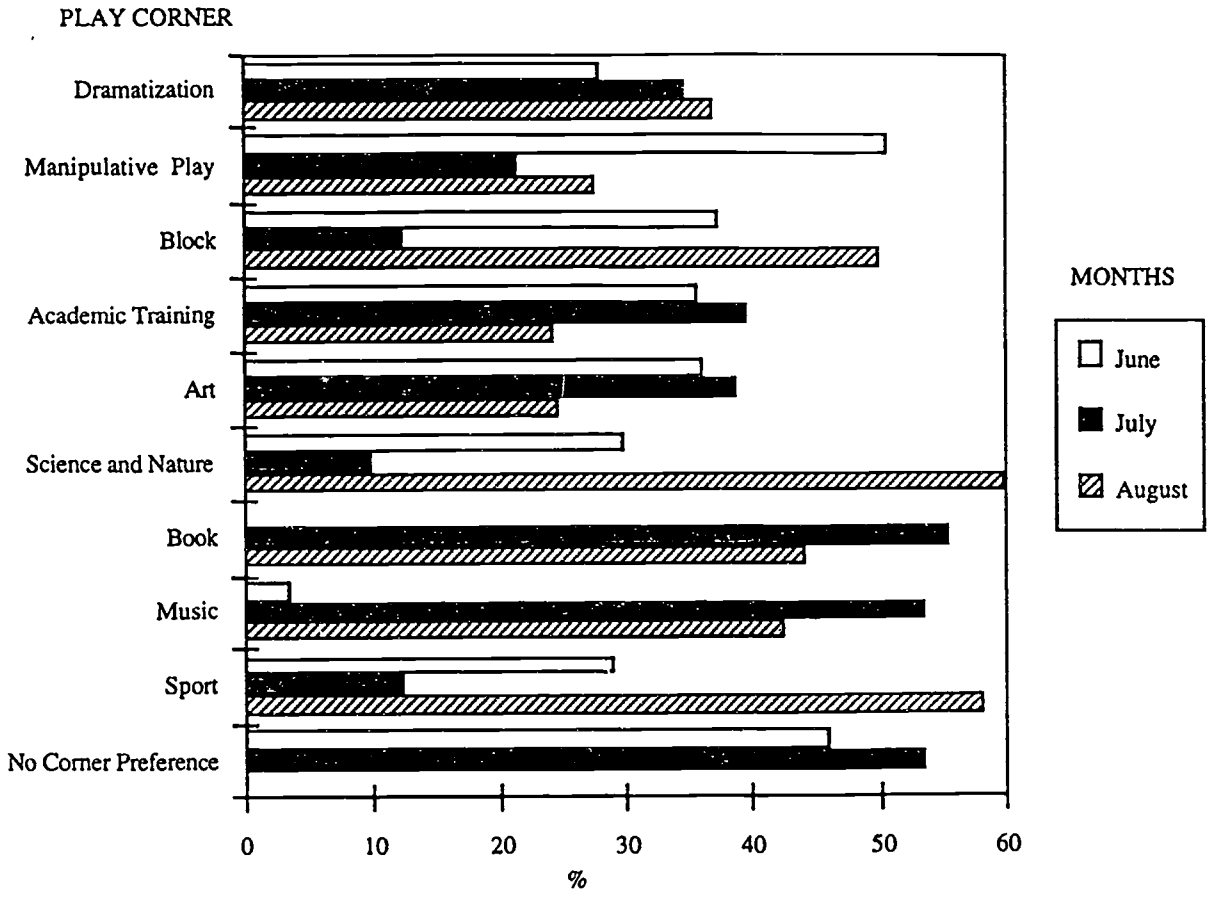
Table 1 and Figure 1 show the distribution of play corners preferred by 5 to 7-year-old hearing impaired kindergarten children during the period of integration in the months in which this study was conducted.

Table 1 : The Distribution Of Play Corners Preferred By 5 To 7-Year-Old Hearing Impaired Kindergarten Children During The Period Of Integration In The Months In Which This Study Was Conducted (Ankara, 1990).

Play Corner	1st MONTH (JUNE)		2nd MONTH (JULY)		3rd MONTH (AUGUST)		TOTAL	
	No.B	Line %	No.B	Line %	No.B	Line %	No.B	Line%
Dramatization	78	28.1	97	34.9	103	37.0	278	100.0
Manipulative Play	64	50.8	27	21.4	35	27.8	126	100.0
Block	15	37.5	5	12.5	20	50.0	40	100.0
Academic Training	44	35.8	49	39.8	30	24.4	123	100.0
Art	53	36.3	57	39.0	36	24.7	146	100.0
Science and Nature	6	30.0	2	10.0	12	60.0	20	100.0
Book	0	0.0	15	55.6	12	44.4	27	100.0
Music	1	3.6	15	53.6	12	42.8	28	100.0
Sport	14	29.2	6	12.5	28	58.3	48	100.0
No Corner Preference	13	46.4	15	53.6	0	0.0	28	100.0

No.B. : Number of Behaviors

Figure 1 : The Distribution Of Play Corners Preferred By 5 To 7-Year-Old Hearing Impaired Kindergarten Children During The Period Of Integration In The Months In Which This Study Was Conducted.



The results of this study show that the preference rate for the "Dramatization', 'Block', 'Science and Nature', 'Book', 'Music' and 'Sport' corners was higher in August than in June. By contrast, that for the 'Manipulative play', 'Academic Training' and 'Art' corners was lower in August than in June.

It was quite excepted that hearing impaired children, who had difficulty establishing communication with the people in their immediate environment, and who had limited self-expression skills in the first month of this study, would prefer:

a. the "Manipulative Play' corner, where there were toys like lego or nopper, which required fitting parts together or taking them apart,
b. the 'Academic Training' corner, which had cards designed for children to identify or match opposing concepts, and the concepts of number, color and shape, and
c. the 'art' corner, which had water colors, crayons, ceramic dough, colored and crepe paper as well as scissors and adhesives.

The possibility of language use was lower in the above-mentioned corners than in the 'Dramatization' and 'Block' corners. The preference of these corners by hearing impaired children may be regarded as a consequence of their characteristic development since they were at a disadvantage in establishing verbal communication. The decline in the preference rate for these corners in the last month of this study, that is, in August, suggests that the process of integration had a positive effect on the social communicative behavior of hearing impaired children.

Another point that proves the positive effect of integration on the children included in this study was that the rate of making no corner preference was nil (0.0%) in the last month of this study whereas it was 46.4% in June, when the study began.

Increased preference rate for dramatization and block corners, where communication is the most intensive and observation of cooperative behavior is more frequent, may be regarded as proof of development made by hearing impaired children in an integrational environment..

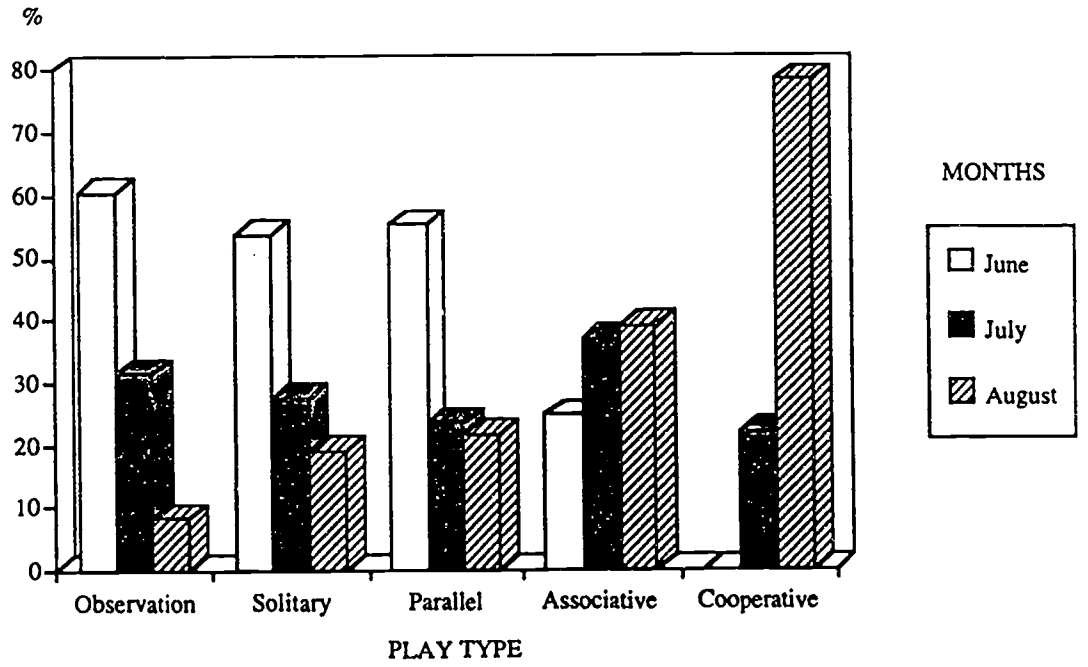
Table 2 and Figure 2 show the distribution of social play types preferred by 5 to 7-year-old hearing impaired kindergarten children during the period of integration in the months in which this study was conducted.

Table 2 : The Distribution Of Social Play Types Preferred By 5 To 7-Year-Old Hearing Impaired Kindergarten Children During The Period Of Integration In The Months In Which This Study Was Conducted (Ankara, 1990).

Social Play	1st MONTH (JUNE)		2nd MONTH (JULY)		3rd MONTH (AUGUST)		TOTAL	
Type (Parten, 1932)	No.B	Line %	No.B	Line %	No.B	Line %	No.B	Line%
Observation	44	60.3	23	31.5	6	8.2	73	100.0
Solitary	45	53.6	23	27.4	16	19.0	84	100.0
Parallel	54	55.1	23	23.5	21	21.4	98	100.0
Associative	145	24.7	214	36.6	227	38.7	586	100.0
Cooperative	0	0.0	5	21.7	18	78.3	23	100.0

No.B. : Number of Behaviors

Figure 2 : The Distribution Of Social Play Types Preferred by 5 to 7-Years-Old Hearing İmpaired Kindergarten Children During The Period of Integration In The Months In Which This Study Was Conducted.



Starting from the first month of this study to the end, there was a progressive decline in the preference rate for 'observation' and 'solitary' and 'paralel' play. However, the preference rate progressively rose for associative and cooperative play in which one can observe such communicative behavior as cooperation, sharing and helping each other. The preference rate for 'associative play', which was 24.7 % in June, rose to 38.7% in August. Likewise, the preference rate for cooperative play was nil (0.0%) in June while it rose to as high as 78.3% in August. These results show the favorable impact of the process of integration on the play behavior of hearing impaired children.

The rate of 'observation', described as a passive state in wich children have no play preferences, declined from 60.3% to 8.2% during the course of this study at the beginning of integration, the hearing-impaired children displayed the behaviors of 'adapting themselves to the existing situation', and 'observing the environment and other children'.

The occurence of a decline in the preference rate for solitary as well as parallel play in the last month of integration just as for observation is an indication of the fact that integration had achieved its aims.

These are favorable results reflecting the acceptance of hearing impaired children by hearing ones. They are also an indication of a feeling of greater security in the group and the great social and mental effort at self expression on the part of hearing impaired children.

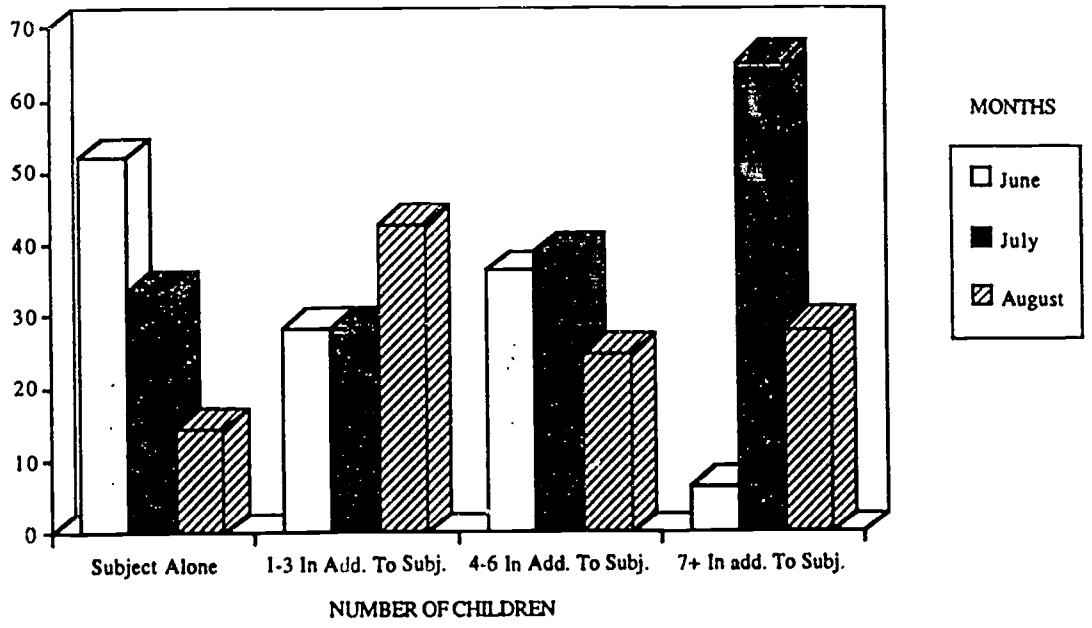
Table 3 and Figure 3 show the distribution of the number of children in the play groups to which 5 to 7-year-old hearing impaired children were assigned during the period of integration in the months in which this study was conducted.

Table 3 : The Distribution Of The Number Of Children In The Play Groups To Which 5 To 7-Year-Old Hearing Impaired Children Were Assigned During the Period Of Integration In The Months In Which This Study Was Conducted (Ankara, 1990).

No. of children	1st MONTH (JUNE)		2nd MONTH (JULY)		3rd MONTH (AUGUST)		TOTAL	
in the group	No.B	Line %	No.B	Line %	No.B	Line %	No.B	Line%
The subject observed alone	87	52.1	56	33.5	24	14.4	167	100.0
1-3 children in addition to the subject observed	142	28.6	142	28.6	213	42.8	497	100.0
4-6 children in addition to the subject observed	56	36.4	60	38.9	38	24.7	154	100.0
7 or more children in addition to the subject observed	3	6.5	30	65.2	13	28.3	46	100.0

No.B: Number of Behaviors

Figure 3 : The Distribution Of The Number Of Children In The Play Groups To Which 5 To 7-Year-Old Hearing Impaired Children Were Assigned During The Period Of Integration In The Months In Which This Study Was Conducted.



The findings of this study suggest that the hearing impaired children progressed from a solitary state to one in which they increasingly mingled with the group. The rate of hearing impaired children in solitary state was 52.1 % in June whereas it was 14.4% in August. This is an important finding regarding children's social development.

The progressive rise in the percentage of children joining the play groups consisting of 1-3 children every month during the study is an indication of the fact that they could communicate more comfortably in small groups. Since the hearing impaired children felt increasingly secure in small groups, this was an expected outcome. As the number of children in the play groups increased, there was a decline in the rate of interpersonal communication, and the nature of communication, whether it was positive or negative, was influenced by it. Undesirable behavior is more likely to occur in larger groups.

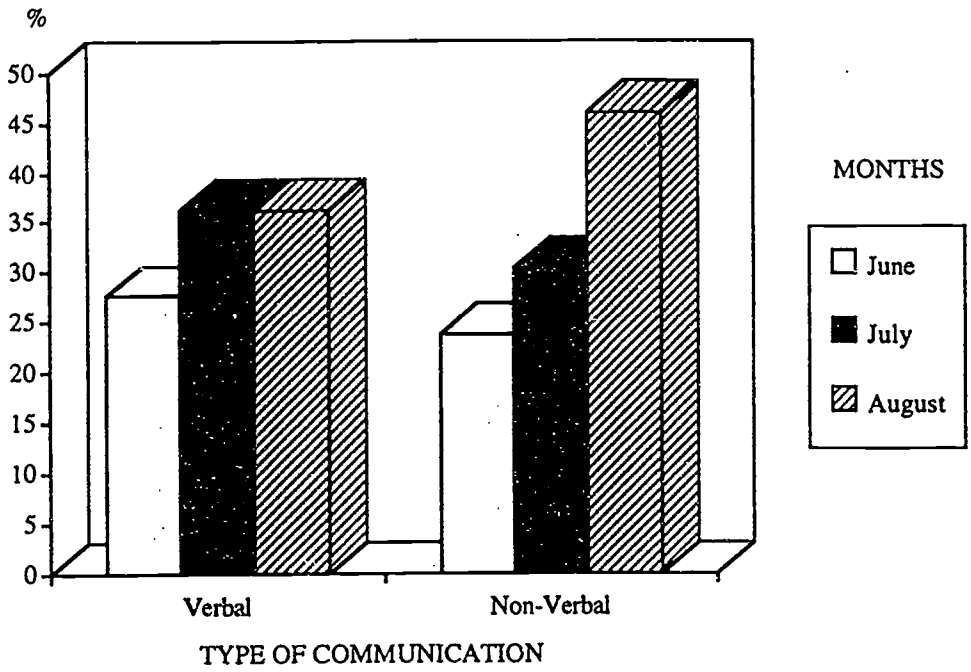
Tablo 4 and Figure 4 show the distribution of the type of communication established by 5 to 7-year-old hearing impaired kindergarten children during the period of integration in the months in which this study was conducted.

Table 4 : The Distribution Of The Type Of Communication Established By 5 To 7-Year-Old Hearing Impaired Kindergarten Children During The Period Of Integration In The Months In Which This Study Was Conducted (Ankara, 1990).

Type of	1st MONTH (JUNE)		2nd MONTH (JULY)		3rd MONTH (AUGUST)		TOTAL	
Communication	No.B	Line %	No.B	Line %	No.B	Line %	No.B	Line%
Verbal	26	27.6	34	36.2	34	36.2	94	100.0
Non-Verbal	172	23.8	219	30.3	332	45.9	723	100.0

No.B. : Number of Behaviors

Figure 4: The Distribution Of The Type Of Communication Established By 5 To 7-Year-Old Hearing Impaired Kindergarten Children During The Period Of Integration In The Months In Which This Study Was Conducted.



When we consider the communication behavior of the hearing impaired children included in this study from June until August, we will see that there was some increase in the rate of both verbal and non-verbal types of communication. This rate rose from 27.6% to 36.2% in verbal communication, and from 23.8% to 45.9 in non-verbal communication.

Hearing impaired children's ability to use verbal language for communication is limited, the degree of limitation depending on the extent of the impairment. Besides, hearing impaired children cannot be expected to improve their use of verbal language for communication in such a short time as three months. In addition, integration should not be viewed as aiming to develop only verbal communicative behavior. Non-verbal communication is also important in social behavior.

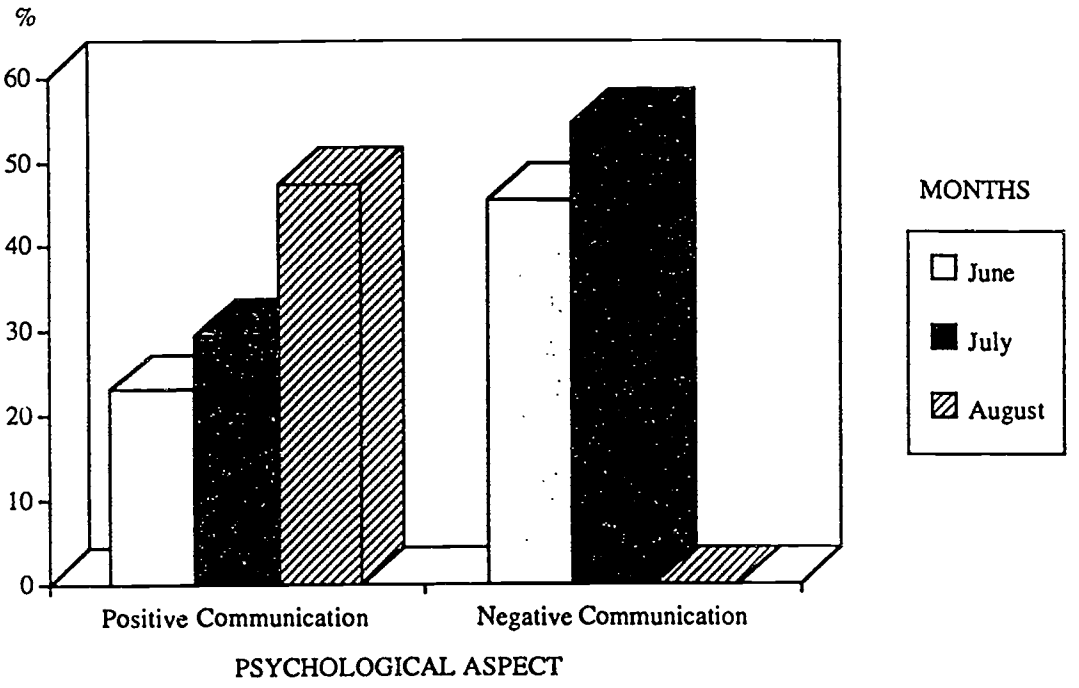
Table 5 and Figure 5 show the distribution of the psychological aspects of non-verbal communication established by 5 to 7-year-old hearing impaired children during the period of integration in the months in which this study was conducted.

Table 5 : The Distribution Of The Psychological Aspects Of Non-Verbal Communication Established By 5 To 7-Year-Old Hearing Impaired Children During The Period Of Integration In The Months In Which This Study Was Conducted (Ankara, 1990).

The Psychological Aspect of Non-Verbal Communication	1st MONTH (JUNE)		2nd MONTH (JULY)		3rd MONTH (AUGUST)		TOTAL	
	No.B	Line %	No.B	Line %	No.B	Line %	No.B	Line%
Positive Communication	162	23.1	207	29.5	332	47.4	701	100.0
Negative Communication	10	45.5	12	54.5	0	0.0	22	100.0

No.B. : Number of Behaviors

Figure 5 : The Distribution Of The Psychological Aspects Of Non-Verbal Communication Established By 5 To 7-Year-Old Hearing Impaired Children During The Period Of Integration In The Months In Which This Study Was Conducted.



The results in Table 5 show that in the course of integration the rate of non-verbal positive communication behavior (such as looking, similing, physical contact, giving play objects, and sharing play materials equally) rose (from 23.1 % to 47.4 %) while the non-verbal negative communication behavior (such as forcibly obtaining the play object, hitting throwing the play object, exhibiting angry, nervous behavior) decreased to nil (0.0%).

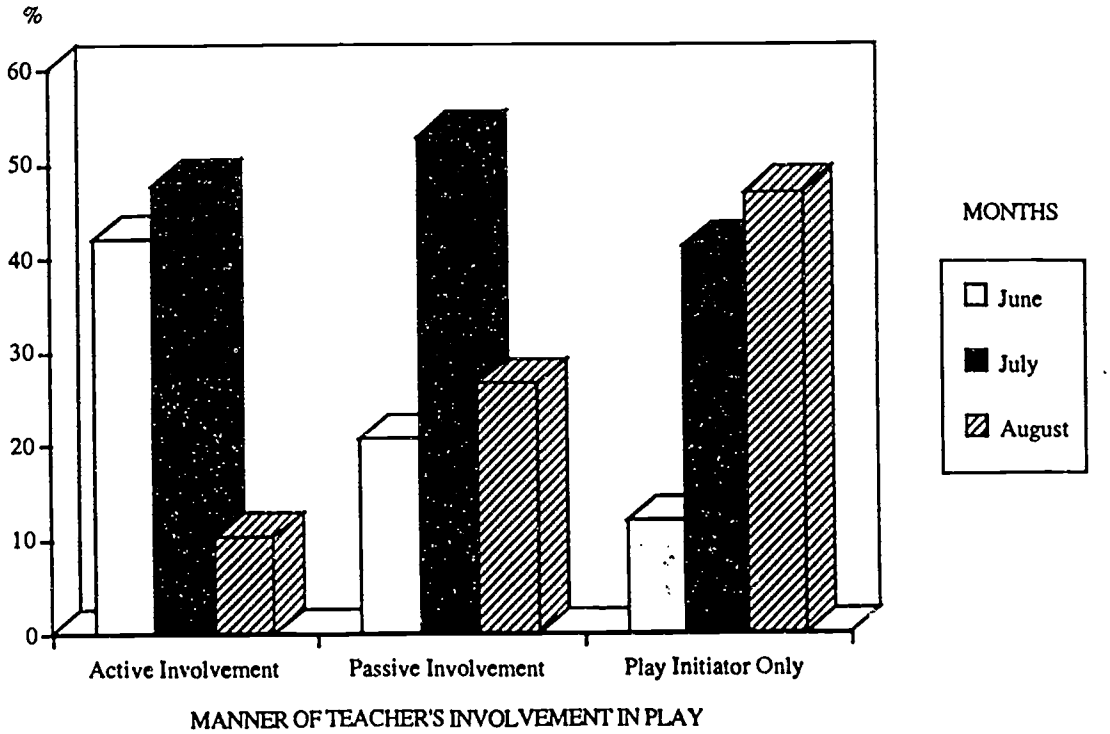
Table 6 and Figure 6 show the distribution of the manner in which teachers participated in games during the period of integration of 5 to 7-year-old hearing impaired children with 4 to 6 year-old hearing children in the months in which this study was conducted.

Table 6 : The Distribution Of The Manner In Which Teachers Participated In Games During The Period Of Integration Of 5 To 7-Year-Old Hearing Impaired Children With 3 To 6-Year-Old Hearing Children In The Months In Which This Study Was Conducted (Ankara, 1990).

Manner of Teacher's	1st MONTH (JUNE)		2nd MONTH (JULY)		3rd MONTH (AUGUST)		TOTAL	
Involvement in Play	No.B	Line %	No.B	Line %	No.B	Line %	No.B	Line%
Active Involvement	66	42.0	75	47.8	16	10.2	157	100.0
Passive Involvement	7	20.6	18	52.9	9	26.5	34	100.0
As Play Initiator Only	2	11.8	7	41.2	8	47.0	17	100.0

No.B: Number of Behaviors

Figure 6: The Distribution Of The Manner In Which Teachers Participated In Games During The Period Of Integration Of 5 To 7-Year-Old Hearing Impaired Children With 4 To 6-Year-Old Hearing Children In The Months In Which This Study Was Conducted.



Active involvement of the teacher in the play during the early months of the study was dictated by the hearing impaired children's adjustment needs. The great decline in the rate of the teacher's involvement in children's play (from 42.0% to 10.2%) and the rise only in the rate of the teacher's role as the game initiator from 11.8 % to 47.0% suggests that the hearing impaired children adapted to the play situation during the process of integration, and they were able to maintain the play behavior even without the teacher involvement.

CONCLUSION

It can be said that the integration program implemented during this study helped hearing impaired children become more sociable, and positively controlled the development of skills that enabled them to establish social communication with hearing children.

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