

# **Analysis of Families' Perceptions on Reinforcement usage for Teaching Daily Life Skills to Children with Mild Intellectual Disabilities**

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## **ABSTRACT**

In this study, it was aimed to find out if families of children with mild intellectual disability use reinforcement in teaching daily living skills, what kind of reinforcements and reinforcement schedules they use and to learn if they found it effective. This study was based on qualitative research method. The study group of this study consists of 48 families, who have children with mild intellectual disabilities. The research data were obtained from interviews with families via the interview form. To analyze the data, content analysis technique was used.

According to the results of the study, consciously or unconsciously families use reinforcements in teaching daily living skills. All types of reinforcements appeared to be used by families but only continuous, variable ratio and interval ratio reinforcement schedules have been found to be used. Reinforcement was used by the families at all age groups, and the families determine the reinforcement with regard to child's condition and needs and their material and spiritual conditions. One of the most striking results of the study was that families did not have education and elementary school graduates used reinforcements and found it quite useful.

## **1.1. Introduction**

It is needed a variety of knowledge and skills to be able to live independently in a society. Teaching these needs to individuals to live independently is one of the basic tasks of families and schools (Cavkaytar, 1999). The main aim of educational activities is to prepare the individuals for the society life and to teach them functional knowledge and skills which will enable them to use in their daily life and make their lives easier. This is because education and training activities must provide the necessary knowledge and experience to enable individuals to maintain their daily lives without the need for someone else's help. Although this applies to all individuals, it has more prescription for individuals with intellectual disabilities. Therefore, the main purpose of the education of students with intellectual disabilities is to develop their vital functions and to make them become independent in society. The basic skills required for this are the basic development skills, the necessary quantitative information in daily life, and sub-skill areas such as reading and

communication (Cavkaytar, 1999). Students with intellectual disabilities need basic academic skills as well as daily life skills such as self-care skills, communication skills, professional skills and social skills to sustain their daily lives and to live independently in the community (Sarı ve İlik, 2014).

Individuals with intellectual disabilities, such as normally developing individuals, also need to be trained to create skill areas that they can do to help their daily lives without the need for someone else's help (Sarı, 2002). Special needs children can gain the skills to independently maintain their stage in the educational process and social relations with some adaptations and adjustments. Practices such as environmental regulations for the handicapped, individualized education programs (IEP), inclusive or special education subclasses, textbooks adapted to the obstacles can be given as examples. The required adaptations have great importance for parents to participate in the implementation process. When determining special education services, it is also necessary to know and take into account not only the child's needs but also the needs of the family. As the family has a very active role in the development of the child, and the child's environment should be supported to support the child, and their needs should be taken into account as well (Landry, 2014).

According to Browder and Spooner (2011), educating and informing families about reinforcement has an effective prospect for parents to support their children's education because reinforcement is a preferred and an effective method in teaching skills. Reinforcement in the education and training environments is a process in which the behavior is strengthened. As an effect of the events following the behavior, there is an increase in the frequency, duration or severity of the behavior. Increasing the likelihood of a behavior is called reinforcement. Reinforcement is divided into the two groups as positive and negative reinforcement. The first group positive reinforcement which is defined by the effect on the behaviors of the individual. Therefore, it can be decided by considering the effects on the behavior whether the objects and events which may lead to increase the behavior are reinforcement or not. The second group is a negative reinforcement which is to increase the likelihood of behavior in the future by taking out a repulsive stimulus from the environment after the desired behavior.

In Turkey, researches focus mostly on determining family needs, educating families, educating parents on self-care skills, and providing appropriate behaviors for children, as well as applied researches such as concept and self care skills teaching to mentally retarded people. Examples of these researches were given under the heading of related researches. Using the principles of Applied Behavior Analysis (ABA) , family education programs can be organized to analyze the skills, to teach and to ensure effective participation of the families in the generalization of the learnings to different environments (Kroth and Edge, 2007).

Uysal (2001) notes that the insufficiency of teachers for reinforcement can cause the appropriate behavior of mentally handicapped students not to be reinforced in time. Teaching students with intellectual disabilities to ask for reinforcements from their teachers may have an important role in order to take advantage of learning opportunities in educational settings. Similarly, the views and needs of families need to be accurately identified in order to develop family education programs that can enable them to plan and implement skill teaching practices based on applied behavior analysis in the teaching process (from the identification of the child's educational needs to the evaluation of the

needs). The use of reinforcement in the education of children with intellectual disabilities has an important role and effectiveness. This situation reveals the importance of reinforcing. There is a need for researches determining the effect of the reinforcement usage of the families, who have children with intellectual disabilities, in teaching daily life skills, self-care and home skills suggested by family education programs. These studies will also contribute to the development of an effective family education program.

This study tries to determine the opinions of parents about the use of reinforcements in gaining daily life skills for children with mild intellectual disabilities. Opinions of families, who have children with mild intellectual disabilities, on the types of reinforcements they use in daily life skills teaching, their level of use and their level of knowledge about reinforcement schedules have been tried to put forward in terms of variables such as gender, educational status and age of disabled child.

### **1.1.1. Assumptions**

In the survey, it was assumed that the parents gave sincere and correct answers to the interviews conducted during the survey.

### **1.1.2. Limitations**

a) The research is limited to the opinions of families, who have children with mild intellectual disabilities, according to sampling from central districts within the boundaries of Konya province.

B) The research is limited to data gathered from the participating families through the developed semi-structured interview form.

## **2.1. Teaching Daily Life Skills to Children with Mild Intellectual Disabilities**

The United Nations International Children's Emergency Fund (UNICEF) is generally defines daily life skills as all the skills necessary for an individual to survive, to make healthy decisions, and to communicate effectively, without being dependent on others. A significant proportion of these skills follow a developmental sequence from childhood to adulthood, but some skills are specific to certain developmental periods. For example, vocational skills take place during youth and adulthood (UNICEF, 2012). The purpose of education for children with disabilities is to enable them to continue their lives and become self sufficient without being dependent on others in future. For this purpose, individuals need to acquire many behaviors and skills. In general, these skills are examined in four main groups. These can be listed as academic skills, adaptive skills, daily life skills and vocational skills. The daily life skills consist of self-care skills, consumer skills, in-home skills, health care and interactive communication skills (Baker and Brightman, 2004).

Behavioral approach or applied behavior analysis approach is widely used in teaching daily life skills. According to the applied behavior analysis approach, various teaching techniques are taught while teaching a behavior or a skill. They are grouped under the following six headings (Alberto and Troutman, 2016).

1. To divide and define behaviors to be taught into small sections or steps (analysis),
2. Continuous and direct measurement (measurement) of the skill that the learner can perform,
3. Opportunities to provide active participation of the student in the teaching process (activity),
4. Providing immediate and systematic feedback to student behaviors (feedback),
5. Enabling the transition to natural stimulus from cues and help in the process of stimulus control of desired behavior (stimulus control)
6. Teaching skills in order to generalize the new skills to different situation and environments (generalization).

## **2.2. Family Behavior and the Use of Reinforcement in Teaching Daily Life Skills to Children with Mild Intellectual Disabilities**

Family behavior is very influential on child behavior, and it also significantly effects the child's social development and behavior development. Operant conditioning, extended by Skinner (1965), constitutes a significant part of child behavior formation. Basically, the operant conditioning is explained as the effectiveness of the relationship between behavior and reward or punishment when learning certain behaviors. Reinforcement techniques such as positive or negative, primary or secondary reinforcement can be used for teaching behavior to the child. In operant conditioning, learning is directly related to temporal proximity. For this reason, reactions must be made immediately after the desired action to establish the relationship between the effect and the response (Kroth and Edge, 2007).

If the family wants to increase the frequency of any positive behaviors, they should reinforce that behavior. In general, positive reinforcement considered a physical or psychological reward, which increases the likelihood of recurrence of a behavior. For example, if a child cleans his / her room unintentionally one morning, and the family gives the child a reward such as candy or oral praise, the likelihood of repetition is increased. Also, parental attention can be second reinforcement which is very useful. However, families must be careful not to reinforce negative behaviors. For example, if a child is angry and her mother gives her candy to remain silent, she will unwittingly reinforce the child's negative behavior. When the child exhibits bad behavior, he will be aware that sugar will be given for his silence and will continue his behavior (Landry, 2014).

Family behavior is one of the most important environmental factors related to behavior formation in children with mild intellectual disabilities. Ineffective family behaviors such as physical discipline, inconsistency and lack of compassion, and lack of warmth are directly related to extinct behavior problems in children with mild mental retardation (Dodge and Pettit, 2003). Using physical punishment may be thought to lead to short-term desired behavior but it causes aggression and deviant behavior in the long run. As the family increases the pressure and control over the child and imposes physical punishment, more behavior disorders can be seen with the child. Positive parenting and especially at a high level affection, love and

interest can be reduced behavior problems in children with mild intellectual disabilities (Hoeve, et al., 2009).

The relationship between family behavior and child behavior may be different in families with children with mild intellectual disabilities. In the families of children with mild intellectual disabilities; other factors such as the child's disability and the failure of the family to accept the situation may also affect insufficient family behavior. It may be based on the assumption that behavioral disturbance is a consequence of the disability of a child with mild intellectual disabilities, so that the families should accept and understand this situation (Schuiringa et al., 2015).

Parents, who have a child with mild intellectual disability experience various difficulties due to the subordinate cognitive abilities of their child. For example, it may be necessary to instruct the child several times to teach the child something, which may force the parents' patience. Surprisingly, however, there are very few studies on family behaviors and the effects of changing behavior through families with mildly intellectual disabled children (Hill and Rose, 2009). In general, research has focused on the level of anxiety and stress of families with mildly intellectual disabled children and little has been addressed on child behavior. The research on the effect of family behavior on child behavior is limited. Families with children with mild mental retardation are more anxious and stressed and the situation is worse for families with children with both mild intellectual disabilities and behavior problems. For this reason, it is necessary to establish the relationship between family behavior and child behavior and to develop intervention programs (Baker et al., 2002).

All parents want children to show behaviors such as screaming and nervousness less frequent. In such situations, physical and psychological reinforcement may be effective in extinguishing certain behaviors. Negative reinforcement is a negative reaction given as a result of a child's unwanted movement or behavior. It is tempting to keep the child in the room for a certain period of time or to deprive them of the things they love. Positive and negative reinforcement are effective tools that help children perform certain behaviors more or less often. If the family is consistent, they will be effective in the end. For this reason, parents should be both confident and avoiding inconsistencies. It is also important that families with more than one child are consistent with all. It is known that people are good imitators and imitate the actions of others. If a brother observes that his brother's unacceptable behavior has not been punished by the parent, it is likely that he will exhibit the same behavior because he does not get reaction. In short, parents have a huge impact on the behavior of their children. In fact, many learning theorists emphasize the role of external factors (such as positive and negative reinforcement) in shaping personality and behavior. This is why it is extremely important for families to use reinforcements and be consistent in this area (Landry, 2014).

Positive feedbacks used for desired student behaviors in daily life skills teaching are positive reinforcements. Positive reinforcement is defined as the influence on the behaviors of the student. It can therefore be decided whether the objects and events that may lead to the increase of behavior are reinforcement or not by looking at the effects on behavior. According to this, if the behavior does not increase as a result of an object or an event, that object or event is not a reinforcer (Snell, 1983; Özyürek, 1996). Different techniques are used to determine effective reinforcers. These techniques are to ask the individual himself, to ask the

important people in the individual's life, to watch and test the individual. Similar to these techniques, it is suggested to use following steps in determining effective reinforcers:

1. Objects and events that the student likes and dislikes are asked directly.
2. Student likes and dislikes may be asked to family members in order to make a list of reinforcers.
3. The student can be observed in the natural environment at certain times of the day.
4. Student can be observed in structured environments (Flora, 2004; Snell, 1983).

In which situations which reinforcements can be used, how the reinforcement practices will be done, and what needs to be taken into consideration in reinforcement practices are important in the effective use of identified reinforcers. If you cannot immediately see the behavior you want to be strengthened, you can reinforce other behaviors between behavior and reinforcement. Thus, careful monitoring of which reinforced behaviors should be monitored carefully. Immediate reinforcement should be provided. Why students should be immediately reinforced when appropriate behavior is achieved. There are three ways to provide immediate reinforcement in instructional environments. It is possible to reinforce the reactions instantly by preparing programmatic teaching materials. Teaching is provided with small groups so that students can be immediately reinforced when necessary. It can come from the superset of delayed reinforcement using words that describe what the student is doing. Careful attention should be paid to associating the words used in the delayed oral awards with what the student does. The teacher should be sensitive to the progress that the students have shown, and students' progress must be always followed by the reinforcers. Students should be reinforced to improve their progress by paying attention to and capturing their desired behaviors. The features that should be considered when using an effective reinforcement are listed as follows (Sutton and Barto, 2012).

1. Used reinforcer should not cause saturation easily,
2. Reinforcer should be given according to an effective reinforcement schedule,
3. Reinforcer should be suitable to individuals characteristics (interests, personalities, development level),
4. Reinforcer should be accessible and feasible easily,
5. Reinforcer's quality and quantity should be suitable to the behavior reinforced,
6. To prevent monotonous reinforcers should be diversified,
7. Preliminary stimuli should be used to make the desired behavior occur.

Individuals with intellectual disabilities often draw on difficulties in recalling the new skills they learn and to generalize them to other situations. Heward (2012) suggests four strategies to overcome the problem of generalization and persistence of new knowledge and skills. Maintaining the use of reinforcement in the natural environment: the most basic point in increasing the generalization and permanence of the skills of the student is to reinforce the student in the natural environment. In order to reinforce the student in the natural environment, every skill he / she performs must be reinforced by the individual in the natural environment during the learning of the functional skills that the student needs. Reinforcers should be produced from the student's natural surroundings to make new skills to be sufficiently permanent and fluid. Instructional objectives should be systematically chosen to be

representative of the stimuli in the natural environment and the needs of the learners and consistent with what the learners have learned at school. In this choice, situations that the child cannot fulfill must be considered as well as situations the child can fulfill (Choosing the skills that can be used in daily life when choosing skills at home and at school reminds us that we need to consider our environment as well). Emphasis should be placed on selecting common stimuli in teaching and generalization environments. Teaching environments should reflect the typical characteristics of generalization environments as much as possible. Stimuli used in teaching environments should be able to be transported to generalization environments (Heward, 2012).

Although studies on the use of reinforcement and skills teaching for children with intellectual disabilities in Turkey have been carried out, the studies on the use of reinforcement use of parents while teaching skills to their children with intellectual disability are very limited. For this reason, there was a need for studies to determine the effect of the reinforcement use of families in teaching daily skills to children with intellectual disability. This study is determining the opinions of parents about the use of reinforcements in the acquisition of daily life skills to children with mild intellectual disability. In this study it has been tried to put forward the types of reinforcements used in daily life skills teaching by families who have children with mild intellectual disability, their level of reinforcement use and their level of knowledge about reinforcement schedules. Besides in terms of variables such as gender, educational status and age of disabled child, opinions of families who have children with mild intellectual disability are tried to be explained. Therefore, this study was designed to figure out the opinions of parents about the use of reinforcements in teaching daily life skills to children with mild intellectual disabilities.

### **3.1. Research Method**

The main purpose of this research is to determine what opinions parents have about the use of reinforcements in teaching everyday life skills for children with mild intellectual difficulties. Qualitative research method was adopted and semi-structured interview method was preferred. Qualitative research methods should be used in special education researches especially in studies evaluating the opinions of individuals (student, teacher, family) about a certain subject (program, method, technique) (Hegarty, 1985). Social scientists, who work on the fields such as psychology, sociology, anthropology, and study human behavior and try to explain the social world and human behavior, often prefer to use qualitative research methods. Qualitative research is used to broaden and / or deepen the understanding of the social world and to interpret the social world understanding. If the research question involves people's experiences or opinions, it is necessary to follow a qualitative method (Maykut and Morehouse, 1994). The semi-structured interview method allows individuals to express their opinions clearly, so it is important that there is mutual trust between the interviewer and the interviewees. This confidence should be conveyed to the participant by the interviewer's style and his or her attitude (Hartas, 2015).

One of the reasons for choosing a semi-structured interview method in this study was the possibility to establish direct verbal relations among the people. Moreover, it is possible to reduce misunderstandings by the flexibility of interview method, since it meets changing conditions, is practical for almost anyone, including illiterates, it allows to obtain detailed

information, and give the opportunity to make observations and to ask participant control questions. Another advantage of this method is that the subjectivity is protected in the answers.

### 3.2. Study Group

The study group of this study in accordance with to the purpose and problem of the research are the families, who have children with mild intellectual disability, in the central districts of Konya. The study group was selected with the help of objective sampling method. Therefore, the basic criterion in determining the study group is to have a child with mild intellectual disability. In accordance with this criterion, interviews were conducted with 48 families. Sample selection in qualitative research can be varied and flexible. The researcher may choose the working group according to the criteria determined due to the subject and the problem statement. In this case, they would prefer the purposive sampling technique (Mertens and McLaughlin, 2004). In many qualitative researches, the study group is determined for the purpose. As Büyüköztürk (2011) suggested, in order getting more in-depth information in this research, study group was selected according to purposive sampling.

**Table 1: Demographics of Participants**

Gender	Relative				Total
	Mother	Father	Sister	Brother	
Female	26	0	5	0	31
Male	0	16	0	1	17
Total	26	16	5	1	48

As shown in Table 4, interviews were conducted with a total of 48 participants, including 26 mothers, 5 sisters, 1 brother and 16 fathers. As seen in the table, 65% of the total participants are women and 35% are men.

**Table 2: Educational Status of Participants**

Relative	Educational status					Total
	primar y	secondar y	high	university	illiterate	
Mother	11	3	9	2	1	26
Father	8	2	3	3	0	16
Sister	0	0	1	4	0	5
Brother	0	0	0	1	0	1
Total	19	5	13	10	1	48

As it is seen in Table 5, 11 elementary school, 3 secondary school, 9 high school, 2 university graduates and one never attended the school of 26 mothers participated in the study, whereas 8 primary school, 2 secondary school, 3 high school and 3 university graduates of 16 fathers



participated in the study. 1 sister participant is a high school graduate and the remaining four 4 are university graduates. One brother participant in the study group is a university graduate. In this case, 19 of the 48 participants elementary school, 5 secondary school, 13 high school, 10 university graduates and 1 did not attend school at all.

### **3.3. Data Collection Instruments**

In this study, a semi-structured interview form developed by the researcher was used to collect data. The researcher is trained to prepare a semi-structured interview form. The questions in the interview form are given in Annex-2. Interviewing is a data collection tool that is carried out by verbal communication and its effectiveness is largely dependent on the interviewers. The interviewer's questions should have the abilities such as clearly directioning the questions, careful listening, effective guiding and making participant to express his feelings freely (Cohen, Manion and Morrison, 2007). Below are the steps for designing a semi-structured interview form.

1. A semi-structured interview form consisting of four questions was prepared to be done with the family,
2. In the frame of the information obtained from the field, some reminders (appreciation, rewarding, and indignation) were developed which reflect the content of each question and its content,
3. The prepared interview form was sent to 2 experts who were experienced in qualitative researches and necessary changes were made,
4. The form used in the research is shaped by the latest recommendations of experts. Interview questions were rewritten in the light of these suggestions,
5. The questions on the interview form have been applied to three families and have been revised for statements that are difficult for families to understand,
6. The interview form has been finalized to be used in actual research.

In the semi-structured interview form prepared for this study; there are open-ended questions about whether families with children mild intellectual disability effectively benefiting from reinforcers in child's skills learning, and the frequency, types and schedules of reinforcement they use in teaching daily life skills. In addition, at the beginning of the interview form, an information form containing information on variables such as parents' gender, educational status and age of disabled children in line with the sub-objectives of the research is included. For the validity of the interview form used in the research, two field experts were asked to evaluate the interview form and pilot interviews were held with three families. Thus, during the pilot interview, the questions in the interview form were checked for meaning and some expressions were corrected.

### **3.4. Data Analysis Process**

The semi-structured interview form designed by the researcher was used as data collection tool during the data collection process. Before the interviews, it was stated that the names of the families who participated in the survey will not be used at all and that their participation in this work was based on volunteerism. In addition, audio recordings were informed and permission was obtained. Interviews were held between February-March 2016.

The interviews took an average of 20 to 30 minutes and were conducted at home and in children's school environment, in line with their families' wishes.

### 3.5. Data Analysis

The Content Analysis Technique is one of the techniques used for the data analysis in qualitative research. the Content Analysis Technique focuses on the contextual features of language features or text as a means of communication. Textual data form, open-ended questionnaires, interviews, focus groups or through oral observations may be in written or electronic form. Qualitative content analysis as a result of intensive language study beyond just the words, is to classify the text through established categories. These categories represent similar meaning. The content analysis technique used to uncover and understand underlying information. Qualitative content analysis defined as the subjective review of a text in fact is a research methodology thematic coding of the data obtained and systematic classification underlies on its basis (Kondracki, Wellman and Amudso, 2002). Therefore, the analysis of data obtained in this study was completed with Content Analysis Technique.

Interviewees taken from the families interviewed coded as P1, P2, P3 as their names were reserved. F letter for women, M letter for men were coded for gender. U for university graduates, H for high school, S for secondary school graduates, P for primary education and İ for illiterates are coded for educational status variable. For the relativeness variable 1 for mother, 2 for father, 3 for sister, 4 for brother are coded.

After completion of the interviews, texts in the form and voice recordings were transcribed. Text files that are created for each family interviewed coded by carefully reading and basic themes were created. Then the data was analyzed using content analysis and subtitles compatible with the main concept was determined. After data were divided into sub-themes considered in this context, it was presented in a systematic and detailed manner in the findings section.

**Table 3: Miles and Huberman (1994) Formula To specify the Reliability of the Research**

Interview Question	Themes	Sub Themes	Consensus	Dissidence
1	2	4	4	-
2	1	5	4	1
3	1	4	4	-
4	1	3	3	-

In order to calculate the reliability of the study, data were analyzed with another researcher. Detailed information of reliability analysis is given in Table 7. As seen in the table, a total of 21 themes and sub-themes were created and 20 formed in the consensus, , there is a dissidence in one of them. To determine the reliability of P (Percentage Reconciliation) =  $\frac{Na \text{ Consensus } 20}{(Na + Nd \text{ Consensus } 20 \text{ Dissidence } 1)} \times 100$  Miles and Huberman formula is used. As a result of these calculations P = 95 percent value was founded. Over 70 percent reliability rate for the reliability of the survey results is available (Kolaç, 2009).

#### 4. FINDINGS

In this section, the research findings are included. The research was covered by a total of four questions posed to the participants and the findings on the data obtained from these questions are provided below for each question. Findings allocated to the themes and sub-themes, which are identified according to examination of the opinions of families, presented in the form of tables and direct quotations are given from the views of the families participating in the study.

##### 4.1. The Use of Reinforcement According to Some Variables

The findings concerning the use of reinforcement was presented under the tables and interpreted. In Tables 4,5, 6 and 7 analysis results are given in the light of question one which is about reinforcement usage and variables such as gender, educational status and child’s age. One-third of respondents (16: 33.3%) stated that they "always" use, one third (16: 33%) stated that they "often" use, while nearly one-third (14: 29.2%) stated that they "occasionally" use reinforcements. Two participants have expressed their opinion that they didn’t use reinforcement. According to these findings, families with children mild intellectual disability participating in the study largely use reinforcements. A total of thirty-two (67%) family stated that they use "always" or "often" reinforcements (for details, see table 4,5,6 and 7 below). Some of the participants' views on the subject are given below.

"I use constantly because I thought it was useful." P10

"Yes, I usually use their skills in order to learn better." P12

"I would if I notice it on your own behavior or his ability to get permanent reinforcement, I use occasionally." P4

"I never used me because after running condition." P19

**Table 4: Analysis Results on Reinforcement Usage**

Reinforcement Usage	Frequency	Percent
Always	16	33,3
Usually	16	33,3
Sometimes	14	29,2
Never	2	4,2
Total	48	100,0

**Table 5: Educational status and Reinforcement Usage**

Reinforcement Usage	Educational status					Total
	primar y	secondar y	high	university	illiterate	
Always	6	2	4	4	0	16
Usually	6	3	4	3	0	16
Sometimes	5	0	5	3	1	14
Never	2	0	0	0	0	2
Total	19	5	13	10	1	48

**Table 6: Gender and Reinforcement Usage**

Reinforcement Usage	Gender		Total
	Female	Male	
Always	13	3	16
Usually	8	8	16
Sometimes	8	6	14
Never	2	0	2
Total	31	17	48

**Table 7: The Child's Age and Reinforcement Usage**

Reinforcement Usage	The Child's Age						Total
	0-3	4-6	7-9	10-12	13-18	over 19	
Always	0	4	4	4	4	0	16
Usually	0	2	3	1	8	2	16
Sometimes	0	2	7	2	2	1	14
Never	1	0	0	0	1	0	2
Total	1	8	14	7	15	3	48

#### 4.2. Reinforcement Types the Families Use

The findings concerning the reinforcement type used are presented through tables are presented and interpreted. In tables 8, 9, 10 and 11 analysis results are given in the light of question two which is about reinforcement type used and variables such as gender, educational status and child's age. For question 2 under the theme of "reinforcement types" "positive reinforcement", "negative reinforcement", "primary reinforcers" and "secondary reinforcement" sub-themes included according to the analysis results. At a rate of about one-third (14: 29%) positive-secondary reinforcers are mostly used. Secondly, a little more than one-fourth positive and primary (13: 27%) reinforcers are used. With a one-fourth rate (12: 25%) positive primary and secondary reinforcers are used in the third place. The majority of the participants prefer to use positive primary and secondary reinforcers. Nine surveyed (18.8%) participants, stated that they use negative reinforcement as well as the positive reinforcement (for details, see tables 8, 9, 10, 11 below).

**Table 8: Analysis Results on Reinforcement Type**

Reinforcement type	Frequency	Percent
positive+primary	12	25,0
positive+secondary	14	29,2
positive+primary+secondary	13	27,1
positive+negative+primary+secondary	8	16,7
positive+negative+primary	1	2,1
Total	48	100,0

**Table 9: Educational status and Reinforcement Type**

Reinforcement type	Educational status					Total
	primary	secondary	high	university	illiterate	
positive+primary	4	2	3	2	1	12
positive+secondary	6	1	4	3	0	14
positive+primary+secondary	8	1	2	2	0	13
positive+negative+primary+secondary	1	1	3	3	0	8
positive+negative+primary	0	0	1	0	0	1
Total	19	5	13	10	1	48

**Table 10: Gender and Reinforcement Type**

Reinforcement type	Gender		Total
	Female	Male	
positive+primary	9	3	12
positive+secondary	10	4	14
positive+primary+secondary	6	7	13
positive+negative+primary+secondary	5	3	8
positive+negative+primary	1	0	1
Total	31	17	48

**Table 11: The Child's Age and Reinforcement Type**

Reinforcement type	The Child's Age						Total
	0-3	4-6	7-9	10-12	13-18	over 19	
positive+primary	0	3	3	2	3	1	12
positive+secondary	1	3	3	2	5	0	14
positive+primary+secondary	0	1	5	2	3	2	13
positive+negative+primary+secondary	0	1	2	1	4	0	8
positive+negative+primary	0	0	1	0	0	0	1
Total	1	8	14	7	15	3	48

#### 4.3. Reinforcement Schedule the Families Use

The findings related to the reinforcement schedule used are presented in tables 12, 13, 14, 15 and 16 in detailed. Table 12 shows analysis results according to the participants' responses about the sub themes such as "continuous reinforcement", "intermittent reinforcement", "fixed-ratio reinforcement", "variable ratio reinforcement," "fixed interval reinforcement" and "variable interval reinforcement" under the "reinforcement schedule," category provided for question 3.

**Table 12: Analysis Results on Reinforcement Schedule**

Reinforcement Schedule	Frequency	Percent
Continuous	20	41,7
Variable ratio	5	10,4
Variable interval	23	47,9
Fixed interval	0	0,0
Fixed ratio	0	0,0
Total	48	100,0

**Table 13: Gender and Reinforcement Schedule**

Reinforcement Schedule	Gender		Total
	Female	Male	
Continuous	14	6	20
Variable ratio	1	4	5
Variable interval	16	7	23
Total	31	17	48

**Table 14: Educational Status and Reinforcement Schedule**

Reinforcement Schedule	Educational status					Total
	primary	Secondary	high	university	illiterate	
Continuous	8	4	4	3	1	20
variable ratio	2	1	1	1	0	5
variable interval	9	0	8	6	0	23
Total	19	5	13	10	1	48

**Table 15: The Child's Age and Reinforcement Schedule**

Reinforcement Schedule	The Child's Age						Total
	0-3	4-6	7-9	10-12	13-18	over 19	
Continuous	1	3	5	4	7	0	20
Variable ratio	0	1	1	1	1	1	5
Variable interval	0	4	8	2	7	2	23
Total	1	8	14	7	15	3	48

**Table 16: Relativeness Reinforcement Schedule**

Reinforcement Schedule	Relativeness				Total
	Mother	Father	Sister	Brother	
Continuous	13	6	1	0	20
Variable ratio	1	4	0	0	5
Variable interval	12	6	4	1	23
Total	26	16	5	1	48

Approximately half of the respondents (23: 48%) uses the variable interval reinforcement. 5 of the participants use the variable ratio reinforcement schedule. Among forty-eight participants, no one is using fixed ratio and fixed interval reinforcement schedule. This result supports the researches state that fixed ratio and fixed interval reinforcement schedule is not so effective for people with intellectual disabilities. We see that continuous reinforcement and variable interval reinforcement are used mostly (for more information Table 12). This result is confirmed by the related researches on the field as well. Using the most effective reinforcement schedules to individuals with intellectual disabilities also supports this notion.

#### 4.4. Effectiveness of Reinforcement Usage

The findings are presented in the tables relating to the use and effectiveness of the reinforcement and are interpreted descriptively. Also quotations from the views of participants on the subject are given. Table 17 shows analysis results according to the participants'

responses about the sub themes such "useful", "useless" and "partly" under the "Reinforcement Use" category provided for question 4.

**Table 17: Analysis Results on Effectiveness of Reinforcement Usage**

Reinforcement effect	Frequency	Percent
Useful	35	72,9
Useless	5	10,4
Partially	8	16,7
Total	48	100,0

Thirty-five of forty-eight participants expressed the opinion that using reinforcement is beneficial in skills teaching. In contrast, five of the participants expressed that they didn't find using reinforcement useful. The eight participants said they found it partially useful. A large part of the participants reported that the use of reinforcement in teaching skills is useful (for more information see table 17, 18, 19, 20, 21). You may see some participants' views on the subject below.

*Of course useful. He also can not do anything if you do not give something. " ( P41)*

*"Yes benefit much. The behavior to select a single outfit was developed for clothing gift (prize).*

*Same for food gifts as well. These are positive benefits. " (P22)*

*"It provides temporary benefits. He then returns to its old. I have to use constantly for to make him learn and to make permanent what he has learnt". (P5)*

**Table 18: Gender and Effectiveness of Reinforcement Usage**

Reinforcement effect	Gender		Total
	Female	Male	
Useful	23	12	35
Useless	3	2	5
Partially	5	3	8
Total	31	17	48

**Table 19: Educational Status and Effectiveness of Reinforcement Usage**

Reinforcement effect	Educational status					Total
	İlkokul	Secondary	High	University	İlliterate	
Useful	14	5	8	7	1	35
Useless	4	0	1	0	0	5
Partially	1	0	4	3	0	8
Total	19	5	13	10	1	48



**Table 20: The Child's Age and Effectiveness of Reinforcement Usage**

Reinforcement effect	The Child's Age						Total
	0-3	4-6	7-9	10-12	13-18	over 19	
Useful	1	5	10	5	11	3	35
Useless	0	1	2	0	2	0	5
Partially	0	2	2	2	2	0	8
Total	1	8	14	7	15	3	48

**Table 21: Relativeness and Effectiveness of Reinforcement Usage**

Reinforcement effect	Relativeness				Total
	Mother	Father	Sister	Brother	
Useful	19	12	4	0	35
Useless	3	2	0	0	5
Partially	4	2	1	1	8
Total	26	16	5	1	48

## 5. DISCUSSION

According to the study results, mothers take more responsibility and play a more active role on their children's education compared to other family members in teaching daily living skills to children with mild intellectual disabilities. Families have important places in changing behavior of children, this study showed us mother's importance, role and responsibilities in changing the behavior of children in teaching skills. According to a study done by Sucuğlu and Kuloğlu (1992), the skills that learned in schools are generalized at the home environment by providing training to mothers. Mothers participated actively in the training and they took the role of an educator in generalizing the skills children gained to home environment. The study stated that children generalized skills learned in school to home environment and it has been observed that mothers achieved to be educators. Vuran (1997) suggested that positive behavior change observed in the desired behaviors on family educational process where giving feedback and awarding were used together. According to this study results fathers use less reinforcement compared to mothers and they are tend to be more inconsistent stance on the use of reinforcement. In other words, it is seen that mothers are more systematic and consistent on the use of reinforcement. In the light of interviews with families, this study also shows that most families consciously or unconsciously use reinforcement in teaching daily life skills to their children with mild intellectual disabilities Reinforcers, which can be named as behavior modification techniques, are often used by families to teach a behavior and to make it permanent. Reinforcers are selected according to the child's age, gender and the needs with trial and error technique as explained in Sari (2015). Numbers of female participants are much

more than male participants. This shows that mothers and sisters take more responsibility in teaching daily life skills to children with intellectual disabilities and play a more active role in their children's education compared to fathers and brothers.

In addition, in this study, it can be seen that families mostly use positive primary and secondary reinforcers. Although some families prefer using negative reinforcement, generally negative reinforcement is not used. Children's favorite foods such as sugar and chocolate are used as the primary reinforcers. Activities such as taking out, drive to the park and going to cinema are also preferred as activity reinforcers. Families stated that social reinforcers cause a quite positive effect on children in teaching daily life skills and so they use frequently and can get effective results. Families, who use negative reinforcers such as yelling, intimidation and even hitting, reported that the reasons to use negative reinforcers are being unable to deal children, to accelerate the realization of the desired behavior by children and burnout. Laird et al (2003) conducted a research and reported that compassion and interest serves as a buffer against the effects of adverse reactions and tougher penalties. More importantly, the relationship between family behavior and children's behavior have been found to be versatile and just like a vicious cycle, inadequate family behavior leads to behavior problems and behavior problems lead to more dysfunctional family behavior.

Families participated in this study select reinforcers in accordance with not only their children enjoy but also allowing them to socialize and make the behavior permanent. Besides, most of the the families use reinforcement actively in all age groups and this indicates that a child, no matter what age group s/ he is, need to be a stimulus to motivate. In this study, families reported that social reinforcers have a quite positive effect on children in teaching daily living skills and so they used them often due to their effective results. The use of reinforcement type according to age groups appeared in approximately equal distribution. Negative reinforcement mostly used with children with mild intellectual disabilities, who are in adolescence period.

Cavkaytar (1998) reports that mothers play an active role in children's with intellectual disabilities learning self-care and domestic skills if they have been trained in accordance with an effective program. Parent-child relationships are highly effective and directly related to child behavior and parenting behaviors. Relationship with parent and child was found to be associated with the parenting behavior and the child's externalizing behavior. External behavior problems of children with mild intellectual disabilities are in connection with parent-child relationships and parenting behavior is fairly important. To create a healthy and effective parental behavior and parent-child relationship, necessary family training programs must be provided (Schuiring et al, 2015). As seen in this study as well, family has a quite high impact in both child's education and psychology. Family's accurate behaviours to the child cause positive results, whereas negative attitudes affect child's learning and ability to make behaviours permanent in a negative way.

In a study evaluating student and teacher responses by teaching students with intellectual disabilities to ask for feedback and / or reinforcement from their teachers, has been observed that if it is provided to request reinforcement in an appropriate manner, students' academic performance is also effected positively. In addition, to give appropriate feedback and reinforcement in a timely manner are of great importance to encourage positive behavior and academic skills and to make them continue (Uysal, 2001). It is an undisputed fact that the

families as well as teachers have an important place in shaping the behaviors of a child, importance of the mothers' place and responsibilities in this behavioral modeling and presence is another result of this study. Ages of the participants' children were categorized by 6 age groups. Most of the participants use reinforcers actively in all age groups. The families stated that they did not only prefer to select the reinforcers that children enjoy, they also select reinforcers that can control their physical energy, make them socialize and ensuring the continuation of the behavior.

In an experimental study conducted in 2013, the effectiveness of using reinforcements was investigated. Sample was determined by random sampling among 6<sup>th</sup> grade students from 5 schools and was divided into two groups including equal number of students as the experimental groups and the control group. Instruction was carried out without reinforcing the control group, while using different reinforcement schedules to the experimental group and giving appropriate reinforcers (praise, medals, pens, mugs, etc.). Weekly tests subjects applied and to determine whether there is a significant difference among the test results, and "t-test" was applied. Although all the same subjects and same activities applied in two groups, and they took the same test, the experimental group, which was the reinforced the group has achieved significantly higher scores in all administered weekly tests. In addition, has it has been concluded that students in the experimental group were more active in the learning process; they kept more information and remember and managed application of this information more than the control group.

Comments, attitude and expression of the students in the reinforcement group showed increased satisfaction and a high level of student participation. In addition, it was observed that the students were more enthusiastic and willing to ask and answer academic questions (Hoque, 2013). In this study, majority of participants stated that they found it useful; the use of reinforcement. Secondary school graduates of all five participants find it helpful to use the reinforcements already, there were no negative comments. Elementary school graduate participants have mostly expressed the opinion the use of reinforcement is helpful. The illiterate participant has expressed that he found it useful as well. Most of the families with children of all ages have an opinion on the benefit of reinforcement usage. The families to inform the opinion that it are not useless to use reinforcement are with children age groups of "10-12" and "19 and older". Families with children "0-3" age and "over 19" stated that reinforcement usage was only useful, they make no negative comments. Mothers, fathers and sisters have overwhelmingly expressed that they found reinforcement useful in their own right.

## **6. Conclusion and Implications for Practice**

### **6.1. Conclusion**

1) According to the results findings of this study, Families use positive primary and secondary reinforcers more. Although it is negative reinforcers are preferred by some participant families, generally they do not prefer to use negative reinforcers.

2) The results showed that the families do not use "fixed ratio" and "fixed interval" reinforcements. According to the research results families mostly use "variable interval" reinforcement schedule and they prefer "continuous reinforcement schedule" secondly. Families prefer to use continuous reinforcement for the behavior as they want to reinforce it more quickly.

3) The least used reinforcement schedule is "variable ratio" reinforcement schedule. This reinforcement schedule was used by only five participants which four of them are male. Since fathers cannot spend time with children as mothers, they often give reinforcers in different numbers and to different behaviors. Another reason for fathers to use variable ratio reinforcement schedule is that fathers are not as systematic and faithful as mothers on reinforcement usage.

4) Looking at the ages of the children of participants are most children between ages 7-9 and 13-18. Participants mostly prefer variable ration reinforcement schedule for their children in this age group. Second row has emerged that the use of continuous reinforcement schedule. Families with children over the age of 19 have not preferred continuous reinforcement schedule. The only participant with a child aged 0-3 has stated that he prefers the continuous reinforcement schedule. Families with children aged 13-18 were the most commonly used variable ratio and continuous reinforcement schedules. Families stated that they get the best results using these schedules that they choose them according to the personal characteristics of these children, who are in adolescence period.

5) Most of the participants reported that they found reinforcement usage beneficial in teaching daily living skills. Vast majority of male and female participants found using reinforcement. Distribution of the participants find particularly useful or useless is almost equal according to their gender.

## **6.2. Implications for Practice**

1) According to the study results, use of reinforcement in teaching daily living skills to the children with mild intellectual is found useful by families. In accordance with these results, family education programs on effective use of reinforcement should be designed for families with children with mild intellectual disabilities.

2) Another result is that families do not have enough information on the use of reinforcement. Special education teachers or RAM personnel may educate and inform families about the use of reinforcement,

3) Another result of this research is that mothers of children with mild intellectual disabilities are more active in teaching daily life skills and they take more responsibility in their childrens' education. Based on this result, mother training programs just for mothers can be prepared to increase both the proficiency of mothers on teaching skills and to make them more efficient in their children's education.

4) National and international literature about the use of reinforcement by families in skills teaching is very limited. Further researches evaluating competency of parents in using reinforcement can be designed with a higher number of children with different types of disabilities to improve the generalization.

## **References**

- Alberto, P. A., & Troutman, A. C. (2016). *Applied Behavior Analysis for Teachers (Interactive 9th Edition)*. New Jersey: Pearson.
- Ashford, J. B., & LeCroy, C. W. (2009). *Human Behavior in the Social Environment: A Multidimensional Perspective 4th Edition*. Belmont CA: Brooks Cole.

- Baker, B. L., & Brightman, A. J. (2004). *Steps to Independence Teaching Everyday Skills to Children with Special Needs, Fourth Edition*. Baltimore: Brookes Publishing.
- Baker, B. L., Blacher, J., Crnic, K. A., & Edelbrock, C. (2002). Behavior Problems and Parenting Stress in Families of Three-Year-Old Children With and Without Developmental Delays. *American Journal on Mental Retardation* , 433-444.
- Browder, D. M. & Spooner, F. (2011). *Teaching Students with Moderate and Severe Disabilities*. New York: Guilford Press.
- Büyüköztürk, Ş. (2011). *Bilimsel Araştırma Yöntemleri*. Ankara: Pegem.
- Carr, J., & Collins, S. (1992). *Working Towards Independence: A Practical Guide to Teaching People with Learning Disabilities*. London: Jessica Kingsley Publishers.
- Cavkaytar, A. (1998). Zihin Engellilere Özbakım ve Ev İçi Becerilerinin Öğretiminde Bir Aile Eğitimi Programının Etkililiği . *Yayınlanmamış Doktora Tezi*. Eskişehir: Anadolu Üniversitesi Sosyal Bilimler Enstitüsü.
- Cavkaytar, A. (1999). Zihin Engellilere Özbakım ve Ev İçi Becerilerinin Öğretiminde Bir Aile Eğitimi Programının Etkililiği. *Özel Eğitim Dergisi*, 2(3), 40-50.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education (6th Edition)*. New York: Routledge.
- Collins, B. C. (2012). *Systematic Instruction for Students with Moderate and Severe Disabilities*. Baltimore: Brookes Publishing.
- Dodge, K. A., & Pettit, G. S. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Developmental Psychology*, vol 39, no 2, 349-371.
- Flora, S. R. (2004). *The Power of Reinforcement*. Albany: State University of New York Press.
- Hegarty, S. (1985). Qualitative Research: Introduction. S. Hegarty, & P. Evans içinde, *Research and Evaluatin Methods in Special Education: Quantitative and Qualitative Techniques in Case Study Work*. Oxford: NFER-NELSON.
- Heward, W. L. (2012). *Exceptional Children: An Introduction to Special Education, 10th Edition*. USA: Pearson.
- Hill, C., & Rose, J. (2009). Parenting stress in mothers of adults with an intellectual disability: parental cognitions in relation to child characteristics and family support. *Journal of Intellectual Disability Research*, vol 53, no 12, 969-980.
- Hoeve, M., Dubas, J. S., Eichelsheim, V. I., Laan, P. H., Smeenk, W., & Gerris, J. R. (2009). The Relationship Between Parenting and Delinquency: A Meta-analysis. *Journal of Abnormal Child Psychology*, vol 37, no 6, 749-775.
- Hoque, R., (2013). Effect of Reinforcement on Teaching – Learning Process. *Journal of Humanities and Social Science (IOSR-JHSS)* vol 7, no 1, 13-16.
- Kolaç, E. (2009). İlköğretim Odaklı Bilimsel Yayınlarda Sözlük Kullanma Durumu. *Türkoloji Çalışmaları* , 743-760.
- Kondracki, N. L., Wellman, N. S., & Amudson, D. R. (2002). Content analysis: Review of methods and their applications in nutrition education. *Journal of Nutrition Education and Behavior*, vol 34, no 4, 224-230.
- Kroth, R. L., & Edge, D. (2007). *Communicating with Parents and Families of Exceptional Children*. Denver: Love Publishing Company.

- Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2003). Parents' Monitoring-Relevant Knowledge and Adolescents' Delinquent Behavior: Evidence of Correlated Developmental Changes and Reciprocal Influences. *Child Development*, (74) 752-768.
- Luckasson, R., Borthwick, S. D., Buntinx, W. H., Coulter, D. L., Craig, E. M., Reeve, A., . . . Tassé, M. J. (2002). *Mental retardation: Definition, classification, and systems of supports (10th ed.)*. Washington: The AAMR AD HOC Committee on Terminology and Classification .
- Maykut, P., & Morehouse, R. (1994). *Beginning Qualitative Research: A Philosophical and Practical Guide (Teachers' Library)*. London: Falmer.
- McCart, M., Priester, P., Davies, W., & Azen, R. (2006). Differential effectiveness of behavioral parent-training and cognitive-behavioral therapy for antisocial youth: A meta-analysis. *Journal of Abnormal Child Psychology*, vol 34, no 4, 527-543.
- Mertens D. M., McLaughlin J. A. (2004). *Research and Evaluation Methods in Special Education*. California: Corwin Press.
- Özyürek, M. (1996). *Sınıfta Davranış Yönetimi-Uygulamalı Davranış Analizi* . Ankara: Karatepe Yayınları.
- Pierangelo, R., & Giuliani, G. A. (2008). *Teaching Students With Learning Disabilities: A Step-by-Step Guide for Educators* . California: Corvin Press.
- Sarı, H. (2002). *Özel Eğitime Muhtaç Öğrencilerin Eğitimleriyle İlgili Öneriler*. Ankara: Pegem A Yayıncılık.
- Sarı, H., & İlik Ş. Ş. (2014). *Bireyselleştirilmiş Eğitim Programı*. Ankara: Eğiten Kitap
- Schalock, R. L., Luckasson, R. A., & Shogren, K. A. (2007). The Renaming of Mental Retardation: Understanding the Change to the Term Intellectual Disability. *Intellectual and Developmental Disabilities*, vol 45, no 2, 116-124.
- Schuringa, H., Nieuwenhuijzen, M. v., Castro, B. O., & Matthys, W. (2015). Parenting and The Parent-Child Relationship in Families of Children with Mild To Borderline Intellectual Disabilities and Externalizing Behavior. *Research in Developmental Disabilities*, (36) 1-12.
- Snell, M. E. (1983). *Systematic Instruction of the Moderately and Severely Handicapped (Second Revised Edition)*. USA: Merrill Publishing Company.
- Sucuğlu, B., & Kuloğlu, N. (1992). Otistik Çocuklara Bağımsız Yaşam Becerilerinin Kazandırılması. *Psikoloji Dergisi*,7(27), 15-26.
- Sutton, R. S., & Barto, A. G. (2012). *Reinforcement Learning: An Introduction*. London: The MIT Press.
- UNICEF. (2012). *Global Evaluation of Life Skills Education Programs*. New York: United Nations Children's Fund.
- Uysal, A., (2001). "Zihin Özürlü Özel Sınıf Öğrencilerine Öğretmenlerinden Dönüt ve/veya Pekiştirme Talep Etmeyi Öğretmenin Etkileri".Yayınlanmamış Doktora Tezi,. Eskişehir: Anadolu Üniversitesi Sosyal Bilimler Enstitüsü.
- Vuran, S. (1997). "Zihin Engelli Çocuk Annelerine Ödüllendirme ve Eleştirmemenin Kazandırılmasında Bilgilendirme Dönüt Verme, Dönüt Verme ve Ödüllendirmenin Etkililiği".Yayınlanmamış Doktora Tezi,. Eskişehir: Anadolu Üniversitesi Sosyal Bilimler Enstitüsü.

### References from the Internet

- Landry, S. H. (2014). The Role of Parents in Early Childhood Learning. *Encyclopedia on Early Childhood Development*. <http://www.child-encyclopedia.com/parenting-skills/according-experts/role-parents-early-childhood-learning> retrieved on May 13<sup>th</sup> 2016.
- MEB. (2012, 10). <http://orgm.meb.gov.tr/>:  
[http://orgm.meb.gov.tr/meb\\_iys\\_dosyalar/2012\\_10/10111226\\_ozel\\_egitim\\_hizmetleri\\_yonetmeligi\\_son.pdf](http://orgm.meb.gov.tr/meb_iys_dosyalar/2012_10/10111226_ozel_egitim_hizmetleri_yonetmeligi_son.pdf) retrieved on May 25<sup>th</sup> 2016.