The main purpose of education provided to children with mental retardation is to make them independent by improving their life functions (AAMR, 2002). Starting from early intervention services, for this purpose, special education services should focus on teaching independent living skills to children with mental retardation. Independent living skills are defined as the specific skills needed for enabling individual leading his/her life without depending on others (Neistadt & Marques, 1984). These skills are generally classified into four skill areas; Basic Development Skills, Foundations of Adjustment, Community Adjustment Skills, and Prevocational and Vocational Skills (Close, Sowers, Halpern, & Bourbeau, 1985; Smith, Patton, & Ittenbach, 1994). Among these, self-care and domestic skills are two important subskills areas of independent living skills (Brolin, 1989; Smith et al., 1994; Snell, 1983).

Behavioral approach and applied behavior analysis have been widely accepted and used on teaching many independent living skills such as self-care and domestic skills to children with mental retardation. Applied behavior analysis can be defined, as systematically arranging environmental events to produce desired learning. Teaching methods derived from applied behavior analysis are used effectively not only with learners who experience mental retardation and other disabilities but also with learners without disabilities in general education. Although literally hundreds of specific teaching strategies are based on behavior analysis (Lovitt, 1995), most hold the following six features in common (Heward, 1996):

1. Precise definition and task analysis of the new skill or behavior to be learned,
2. Direct and frequent measurement of the student’s performance of the skill,
3. Frequent opportunities for active student response during instruction,
4. Immediate and systematic feedback for students’ performance,
5. Procedures for transferring stimulus control of correct student’s responses from instructional cues or prompts to naturally occurring stimuli,
6. Strategies to promote the generalization and maintenance of newly learned skills to different, nontraining situations and environments.

Parallel to these principles, the need of family support and parent involvement to instructional activities at schools is widely accepted. Studies on the active involvement of parents to children’s education indicate that parent involvement has important contributions...
overall to family functioning, to the child, and to the educational process. It was also noted that parents could be helpful in improving children’s many independent living skills such as social skills, self-care skills, domestic skills, and first aid skills (Coleman & Apts, 1991).

By using the applied behavior analysis principles, parent training programs are organized as the process of task analysis, skill teaching and generalization of what was learned (Baker, 1980; Baker & Brightman, 1984; Kroth & Edge, 1997). Research findings in the literature show that parents could be trained as instructors of their children through various methods such as home training, group training, and classroom helping (Schulz, 1987; Turnbull, 1983). Studies also indicate that parents, when trained as instructors, could help their children to gain appropriate behaviors and many independent living skills (Cavkaytar, 1999). Matthews and Hudson (2001) point out “Recent research in the field also has concentrated on the relationship between parent training methods and characteristics of parents and children, demonstrating that training approaches that work for some families do not work for others. Therefore, research reports on comparisons of different methods of parent training can be consulted to assist with the choice of the best methods of training for particular parents and purposes” (p. 77).

In Turkey, there have been several studies conducted regarding teaching directly various skills such as self-care skills and basic concepts to children with mental retardation, and regarding training parents on teaching various skills to children with mental retardation. These studies were specifically about the identification of parents’ needs (Sucuoglu, 1995), and teaching parents to teach their children appropriate behaviors (Vuran, 1997). Among these studies, Cavkaytar (1999) developed and used a parent training program with parents of children with mental retardation on teaching self-care and domestic skills to their children. The study included three mothers who held middle and high school degrees and their children with mild mental retardation, 14-21 years old, who were students of a vocational school designed specifically for children with mental retardation. Results showed that parent training program, skill instruction conducted by the mothers, was effective on teaching self-care and domestic skills to children with mental retardation. He pointed out the need of more studies to see whether this parent training program was also effective with parents holding different educational degrees and with children with moderate mental retardation. Based on this need, this present study was carried out to determine the effectiveness of a parent training program for teaching self-care and domestic skills.

Method

Participants

Participants included three students with mental retardation, their mothers, and their classroom teachers. Students were attending a university research classroom when the study was carried out. The first mother, A. K., was 35 years old with a primary school degree. She was a house wife with two children and her daughter, S. K., was 12 years old had moderate retardation. The second mother, A. Y., was 33 years old with a primary school degree. She was a house wife with two children, and her daughter, N. Y., was 14 years old had moderate retardation. The third mother, E. P., was 27 years old with a primary school degree. She was a house wife with two children, and her son, S. P., was 10 years old, diagnosed as moderate retardation with Down Syndrome.

All students did not know how to read and write. They had been getting training of basic concept skills and life skills at the university research center. Their classroom teachers were special education teachers working with mentally handicapped children for eight years.

Research Design

As one of the methods of single subject designs, multiple probe research design across behaviors was used in order to find out the effects of independent variables on the dependent variable. The independent variables of the study were parent training program, application of the program to mothers and teachers, and instructional activities of the mothers in the program. The dependent variable was performance level of children on
self-care and domestic skills taught by their mothers.

Data Collection

In the study, according to the multiple probe design across behaviors, the children’s baseline phase, training phase, probe phase and follow up phase data concerning performance level of acquisition of children on self-care and domestic skills were gathered.

Baseline data were collected by the researcher using “Data Recording Form for Baseline and Probes” in accordance with research model. The single opportunity method was used in data collection. According to that method, firstly the materials to be used were prepared and the setting was organized. Secondly, the recording procedures were initiated by giving the child discriminative stimuli. The skill steps carried out correctly by the child were marked in the list as (+). When the child had no response within 10s, application was stopped and all skill steps on the list were marked as (-). When the child had a correct response for one of the items, it was marked as (+); and when the child had wrong responses for two consequent items, the application was stopped and the rest of the items in the list were marked as (-). When a child had a correct response for one item and a wrong response for the next item, the correct ones were marked as (+) and the skipped ones were marked as (-).

Training phase data were collected by participant mothers with assistance of classroom teachers using “Data-Recording Form for Training Procedure” (DRFTP) provided by the program.

The Parent Training Program

The purpose of the parent training program developed by Cavkaytar (1999) was to enable parents of children with mental retardation to teach the self-care and domestic skills to their children. Parent training program consisted of the procedures commonly taking place in parent training programs aiming at training the parents as teachers. These procedures include group and individual (one-to-one) teaching activities.

During the application of these procedures, the “Teaching Self-Care and Domestic Skills Manual” (TSCDSM), which was written in accordance with the program objectives, was used. The purpose of the TSCDSM was to make the parents knowledgeable and skillful about the program’s objectives and content. TSCDSM had three parts: introduction, preparing before skill instruction, and skill instruction. An appendices section was also included in the manual. It was comprised of lists and forms for preparing parents before starting skill instruction and skill instruction.

As parent training part of the program, group and individual meetings with parents were planned and conducted. First, as group training part of the program, parent meetings were conducted. The purpose was to give training to parents about the topics in TSCDSM.

Second, as individual (one-to-one) training part of the program, home visits were planned and conducted with parents. The purpose of the home visit, one-to-one teaching aspect of the program, was three-hold; (1) to enable the parents transform the knowledge they gained in parent meetings into practice, (2) to see the parents and the child in a one-to-one practice under the supervision of an expert, (3) to give training to the parent while applying the program with his/her child in their natural settings.

Procedure

Intervention started with the first parent meeting. Three parent meetings, each of which lasted 1.5 hours, and a home visit to the home of each parent lasted 1.5 hours were conducted. Parent meetings were held in a classroom in the school of participant students. Each parent meeting and each home visit lasted until the mothers were competent in terms of the objectives identified.

In the first parent meeting, extensive information was first provided to mothers regarding (a) how the program works, (b) how to use the introduction section of the TSCDSM, and (c) how to identify the child’s performance and the rewards as indicated in the second part of the manual. Second, mothers were asked to identify the skills, which their children were or were not able to perform. They were also asked to put the skills they
identified in order of priority and to identify rewards they would like to use in their home activities.

In the second meeting, following activities took place. First, home activities given to the mother in the first meeting were examined. Second, some explanation was made about planning instructional activities as indicated in the second part of the manual. Finally, the first skill in the list prepared by the parents during home activities was chosen as the sample skill and “Data-Recording Form for Training Procedure” was prepared. All mothers chose cutting nails as the sample skill.

In the third meeting, some explanation was provided about important points that the parents should be careful before starting and during applying the skill training activities as indicated in the third part of the manual and some cues concerning the skill training were provided to parents.

After completing three parent meetings, one visit to each mother’s home was made by the researcher and teachers. During the home visit, the mothers, under the supervision of the researcher, carried out the instructional activity of the sample skill. At the end of the home visit, three independent skills, which each mother would like to work with her own child, were identified together with the mothers. All these steps were carried out by the mothers themselves under the supervision of the researcher and with assistance of the classroom teachers.

Following the home visit, mothers continued instruction of the sample skill they started with the researcher during home visit until there was consistency in the data after three consecutive sessions. At the same time, they prepared DRFTP for each three skills identified.

When there was consistency in the data, mothers called the researcher. The researcher and classroom teachers visited each parent in order to get follow up data of the sample skill and the probe and baseline data of the other skills. In the first part of the visit, the researcher carefully examined the DRFTP prepared by the mothers for three skills. Then, he got the probe data once for these three skills.

In order to provide reliability across observers, classroom teachers of participant students at the university research center were chosen as the independent observers. They were first trained for “recording”. Following this, reliability across observers was determined for each skill using the “agreement/disagreement x 100” formula. Reliability was 100 % for all skills.

After getting reliability across observers, the researcher continued to collect baseline data until getting consistency. As soon as consistency on baseline data was achieved, mothers started teaching the skills and collected data on this phase, and the researcher collected the baseline, probe and follow up data concerning the skills. This continued until each mother completed teaching at least three skills with her child. The experimental procedure, starting with parent meetings and obtaining the follow up data three times for each skill, took approximately five months.

Results

Data obtained from the study were analyzed graphically. Line graphs were used to show children’s skill performances.

Figure 1 illustrates mother A. K.’s training activities about “Running a Washing Machine”, “Running a Vacuum Cleaner”, and “Running a Gas-Cook-Stove”. S. K. was unable to perform any of the skill steps at baseline for the first skill, and was able to perform only a minor part of the skill steps for the second and the third skills. Probe data obtained from the second and the third skills seem to be consistent with the baseline data. A noticeable progress can be seen for each three skills throughout the training process. All skills were performed at the independence level. Moreover, follow up data were consistent with those of the teaching phase. According to these results, parent training provided to mother A. K. can be considered as effective.

Figure 2 illustrates mother A. Y.’s training activities about “Putting on Gloves”, “Running a Gas-Cook-Stove”, and “Tying Shoe-laces”. N. Y. was able to perform only a minor part of the skill steps at baseline for all skills. Probe data obtained from skills seem to be consistent with the baseline data. A noticeable progress can be seen for all three skills throughout the training process. All skills were performed at the independence level. Moreover, follow up data were consistent with
those of teaching phase. According to these results, parent training provided to mother A. Y. can be considered as effective.

Figure 3 illustrates mother E. P.’s training activities about “Putting on Pants”, “Preparing Cool Drink”, and “Tying Shoe-laces”. S. P. was
able to perform only a minor part of the skill steps for all three skills. The probe data obtained seem to be consistent with the baseline data. A noticeable progress can be seen for all three skills throughout the training process. All skills except for “Tying Shoe-laces” were

Figure 2. Students N.Y.’s performance level.
performed at the independence level. “Tying Shoe-laces” was performed at 63 % level. Moreover, follow up data were consistent with those of teaching phase. According to these results, parent training provided to mother E. P. can be considered as effective.

In conclusion, data obtained from the study show that the children were unable to per-

Figure 3. Students S.P.’s performance level.
form the skill steps at the baseline for each skill and the probe data were consistent with baseline data. As soon as the training started, a quick progress for all skills throughout the training process was observed. At the end of the teaching process, all children reached the independence level for all three skills except one of the children could not reach the independence level for tying shoelaces skill. Follow up data were also observed to be consistent with the teaching phase data.

Discussion

Results of the current study indicate that the mothers who completed parent training program comprised of parent meetings, home visits and the TSCDSM were effective on teaching self-care and domestic skills to their children with mental retardation by the training activities provided by the program. Results also revealed that the mothers were able to learn the principles of applied behavior analysis and to apply them in teaching skills to their children with mental retardation.

Results of the current study should be considered with the following limitation. The data on the teaching phase of the study could not be gathered by the researcher or teachers since the skills identified and taught by mothers were required to be taught by mothers in their natural environment and at different times of the day. Teaching some skills were required to be taught when children were needed to perform these skills. Therefore, the data on this phase were collected by mothers not by the researcher or teachers.

There have been other studies, in the literature, regarding parent training programs. These studies have usually been about identifying the children’s educational needs for various behavior and skills, planning parent training programs for teaching various behaviors and skills, and applying and evaluation of these training programs. However, there do not seem to be enough studies related to effectiveness of parent training programs in which mothers get training to teach self-care and domestic skills to their children with mental retardation. Still some studies revealing similar results to the current study exist. For example, at the end of the parent training program applied by Baker and Heifetz (1976), it was observed that children exhibited an improvement in self-care and play skills. Bergan, Neumann, and Karp (1983), applied a parent training program focusing on teaching parents how to use positive reinforcement, instructional cues, modeling and physical prompts in teaching cognitive skills. Results indicated that participant parents could improve their teaching skills and the children were able to exhibit improvements in one of the two skills targeted.

Baker and McCurry (1984) applied a parent training program to a group of mothers. The program consisted of classroom observation, active learning, and video recordings to provide feedback. At the end of the study, the mothers improved their knowledge on behavioral principles and obtained significant gains in teaching these principles. Significant improvements of self-care skills of their children with mental retardation were also observed. Cooper, Wacker, Sasso, Reimers, and Donn (1990) focused on training parents to identify their children’s behaviors, not appropriate for the parents, and teach them how to increase appropriate behaviors of their children. Results revealed significant improvements on appropriate behaviors of children with mental retardation. In another study, Powers, Singer, Stevens, and Sowers (1992), applied a parent training program where mothers were taught behavior management and activity planning techniques. It was observed that the mothers were able to gain and generalize the techniques targeted, and their children exhibited less disturbing behaviors in generalization settings. Vuran (1997) also applied a parent training program in which the mothers rewarded their children’s appropriate behaviors and did not criticize the inappropriate ones. She found out that throughout the mother training process (informing, giving feedback, using feedback, and rewards together) the mothers as well as children showed improvements in the target behaviors identified. Another study on parent training was conducted by Cavkaytar (1999). The purpose of the study was to determine the effectiveness of the parent training program for teaching self-care and domestic skills. The findings indicated that parent training program to teach self-care and domestic skills was effective with mothers of children with mental retardation. In con-
clusion, results of all parent training programs cited above held similar results with those of the current study.

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