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A Study of Learning Assessment of Personal Hygiene Skills of Mentally Retarded Individuals in Drop-In Day Care Services

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Aim: The aim of the study was to assess the success and efficiency of the training practices for acquisition of basic personal hygiene skills and behavior of hand washing and soiling in a relatively heterogeneous group of individuals receiving care from a drop-in day care/special education service. We also analyzed etiologies of the causes of discrepancies in learning behavior implying a need for differentiation of intellectually disabled individuals who are candidates for continuous long-term institutional medical care from those who can be integrated into the community through special education.

Materials and Methods: The study included 30 participants with mental retardation receiving care and special education who were classified within the teachable and trainable limit. A competency-based training was given to the study participants and a checklist based on the learning guide assessing hand washing and soiling skills and behavior acquirement was administered before and after the training.

Results: No significant difference was observed in individuals trained for self-hygiene skills (assessed as hand washing and soiling skills) and behavior when a step-ordered checklist was compared pre- and post-training to some independent variables related to the individual other than educational status of the family member supplying primary care to the retarded individual, receipt of additional institutional or personal support from somewhere other than the observed day care/special education center, and prior receipt of training within the last three months.

Conclusions: To establish a unitary inclusive system of education for social integration of the handicapped, a single law may be adopted obligating school districts to provide an effective education for each and every student - not a 'one-size for all' approach, but a nuanced recognition that students are more alike than different.

Key Words: Learning disabled, basic personal hygiene skills, special education, mental retardation, drop-in day care, learning assessment

Gündüz Bakım Merkezlerinden Hizmet Alan Zihinsel Engelli Bireylerin Kişisel Hijyen Alışkanlıkları Kazanımlarının Değerlendirilmesi Üzerine Bir Çalışma

Amaç: Bu çalışmanın amacı, özel eğitim alan ve/veya günlük bakımevinde kalan heterojen bireylerin oluşturduğu bir çalışma gurubunda, temel kişisel hijyen yeterliliklerinin edinimi amacıyla verilen eğitim faaliyetlerinin başarısını ve etkisini; ve el yıkama ve tuvalet alışkanlıkları davranışlarını öğrenme davranışlarındaki farklılıkların analizi ile beraber değerlendirip, özel eğitimle topluma kazandırılabilen engellilerin sürekli kurumsal bakım alması gereken engellilerden ayrılmasına ihtiyaç duyulduğunu ön plana çıkarmaktır.

Yöntem ve Gereç: Çalışma özel eğitim alan öğretilebilir zihinsel engelli sınıfından 30 bireyi kapsamaktadır. Yeteneğe dayanan bir eğitim önce ve sonrasında, katılımcılara el temizleme becerisi ve tuvalet alışkanlıkları davranışları edinimini ölçen bir test uygulandı.

Bulgular: Engelli bireyin bakımını üstlenen aile bireyinin eğitim durumu, halihazırda gittikleri bakım evi dışında bir başka kurumsal ya da kişisel destek alıp almadıkları ve son üç ay içinde böyle bir destek alıp almadıkları dışında diğer bağımsız değişkenler açısından eğitim öncesi ve sonrasında denekler arasında anlamlı fark bulunmadı.

Sonuç: Özürlü bireylerin topluma entegrasyonuna yönelik birleştirici bir eğitim systemi kurabilmek için 'herkese tek beden' yaklaşımından uzak, her bir öğrencinin birbirinden farklı olmaktan ziyade benzer olduğunu da kabul eden ama öğrenciler arasındaki farklılıkları da gözönünde bulunduran bir eğitim yöntem ve sistemi benimsenmelidir.

Anahtar Sözcükler: Öğrenme güçlüğü, kişisel hijyen, özel eğitim, gündüz bakımı, Öğrenme değerlendirmesi

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Introduction

Need for special education for individuals with learning disabilities has been an issue of worldwide interest since the early developments in the field in the second half of the 20th century. As there is no consensus on a broadly accepted clinical classification of mental handicaps or learning disabilities, approaches to building capacity for independency through health care and educational services also vary widely.

According to the general census held in 2005 in Turkey, 14% of the total population need some type of special education, which totals to approximately 9 million citizens (1). Since 1982, the care and educational rights of persons with learning difficulties was guaranteed by constitutional order in Turkey, and the educational and health care services provided by the Ministry of Education and the Ministry of Health have been included under social coverage.

The American Association for Mental Retardation (AAMR) has described mental retardation as a continuous limitation in one or more of the adaptive behavioral patterns of communication, personal hygiene, domestic life, social skills, self-control, community interaction, health and security, academic function, work-life and spare-time utilization. A complementary sociological opinion by Eripek describes that socially disadvantaged persons (e.g. lower socioeconomic class or ethnic minority members) may be misdiagnosed as mentally retarded or learning disabled; thus, each individual must be considered with respect to one's psychological, cultural, economic and social environment (2).

The special educational needs of learning-disabled persons have been reviewed by many academic authors. In the 1980s, there were few who recognized that adults with disabilities were an important resource in the education of students with disabilities, and that issues of race and culture had consequence for identifying and delivering services to these individuals. In reviewing the work over the past several decades, three major foci were identified: a) access to free appropriate public education, b) achievement of quality academic, behavioral and social outcomes, and c) establishment of a unitary inclusive education system to prepare all students for a full and productive adult life.

The early special education programs of the 70's and early 80's were designed based on the belief that student deficits could be remedied by expending more money in small classes with specially trained teachers. After being "fixed" via the special education programs, the students would then be returned to an unchanged regular educational system.

In the 1980's, as the separate special education system rapidly increased in terms of the number of students served and money expended, the results for a majority of the students involved continued to reflect disturbing outcomes, including failure to master grade-level curriculum, exclusion of special education students from standardized testing, high drop-out rates, low graduation rates, the absence of return to general education, high unemployment rates, and lack of integration into the community. However, expecting a complete solution from educational efforts and integration dynamics is optimistically oversimplifying the bio-medical perspectives for underlying etiologies of a variety of spectra of conditions of mental retardation that result in learning disabilities.

Retarded individuals, or rather, using the medical terminology, individuals with intellectual disabilities, must be bio-medically diagnosed and classified in addition to the challenges they face in their school and social achievements. Persons with intellectual disabilities are likely to have physical disabilities, mental health problems, hearing impairments, visual impairments and communication disorders. Naturally, before expecting educational skills to be followed by societal integration, initially the underlying medical condition needs particular attention to avoid health disparities that will cause social disparities in later adult life (3).

The physical health of mentally retarded people with learning disabilities continues to cause concern, despite numerous initiatives designed to make improvements in community care. The attempts to create solutions to resolve these problems had generally been ignored by healthcare providers that offer access to 'dedicated' health clinics and day care centers. An in-depth understanding of the contemporary context of mental retardation and learning disabilities and not seeing it as a dogma may assist staff training in many services to develop more concerned beliefs and ideologies for complex care skills, for age-appropriate activity and for independency capacity building of severely handicapped care and service receivers in institutional long-term care in addition to the special education institutions.

Improving personal hygiene in severely retarded children and adults and the acquirement of hygiene protection skills and behavior through training in this social group remain a major familial, institutional and community concern of care receivers of drop-in institutional day care services (4).

Fecal-oral contamination is the source of most of the preventable infections, and hand washing and proper soiling behavior is the major component of hygienic living not only in the disabled but in normal individuals as well. Thus, this study was conducted with the aim of assessing the success and efficiency of the training practices for acquiring basic personal hygiene skills and behavior of hand washing and soiling in a relatively heterogeneous group of individuals receiving care from a drop-in day care/special education service. We also analyzed the etiologies of discrepancies in learning behavior implying a need for differentiation of intellectually disabled individuals who are candidates for continuous long-term institutional medical care from those who can be integrated into the community through special education.

Materials and Methods

The study was conducted on 30 participants with mental retardation who were classified within the teachable and trainable limit receiving care and special education at the drop-in day care/special education service OZEV in Kecioren, Ankara, Turkey in 2005.

A competency-based training was given to the study participants and a checklist based on the learning guide assessing hand washing and soiling skills and behavior acquirement, developed by Omercikoglu and his colleagues (5) in 2001, was administered before and after the training. During the competency-based training, no verbal or literary communication was used, but the learning guides were based on pictures and schemas based on the steps of hand washing and soiling skills and behavior. In addition to the personal information sheet addressing the independent variables related to the participants, a checklist designed as a step-wise scale integrating the systematic ordering of the behavior environment was also used. The learning process is expected to take place socio-cognitively based on observation, imitation and reinforcement.

The independent variables of the study such as sociodemographic characteristics, health status, utilization of institutional and out-of-institution care and educational services, and previous receipt of self-hygiene oriented training were compared with respect to the level of skills and behavior of hand washing and soiling. For statistical analyses, Mann–Whitney U test, Kruskal-Wallis analysis and percent variation were used on SPSS v. 11.

Results

The sociodemographic characteristics of the participants are given in Table 1. According to sociodemographic characteristics, 36.7% of the participants were females and 63.3% were males; 70.0% of them were adults and 30.0% were children; and 96.7% received primary care from their mother, 3.3% from others. Among their families, 3.3% were

Table 1. Sociodemographic characteristics of the study population.

Characteristics	n	%
Gender		
Female	11	36.7
Male	19	63.3
Age		
Child	9	30.0
Adult	21	70.0
Primary care provider		
Mother	29	96.7
Other	1	3.3
Educational status of the family		
Illiterate	1	3.3
Literate	3	10.0
Primary school graduate	12	40.0
Secondary school graduate	7	23.3
High school graduate	2	6.7
University graduate	5	16.7
Number of family members		
2	2	6.7
3	7	23.3
4	9	30.0
5+	12	40.0
Level of income of the family		
Low	13	43.3
Moderate	11	36.7
High	6	20.0

illiterate and 10.0% were literate; 40.0% were primary school, 23.3% secondary, 6.7% high school, and 16.7% university graduates. Forty percent of them had more than five and 60.0% had less than five family members; 43.3% of them had a low level of income, 36.7% had moderate, and 20.0% had high level of income.

The etiology of mental retardation is shown in Table 2. In 16.7%, the cause of mental retardation was infectious diseases and intoxication, in 26.7% injuries and physical damage, in 16.7% crude brain injury, in 10.0% unknown prenatal etiology, in 13.3% chromosomal anomalies, and in 3.3% psychological disorders. In 13.3%, the etiology of mental retardation was unknown.

Among the study group, 36.7% were trainable and 63.3% were teachable; 70.0% of them had no other health complaints except their specific situation, and 80.0% had no other family members who were retarded.

This fairly heterogeneous group were cared for and educated in the same institution with different training schedules personalized with respect to their needs. Accordingly, 6.7% of them received training once a week, 30.0% twice a week, 40.0% three times a week, 3.3% four times a week, and 20.0% five times a week. Attendance at the institution was less than 1 year in 36.7%, 1-3 years in 20.0%, 4-6 years in 3.3%, and longer than 7 years in 40.0%.

At the start of the training, 29 (96.7%) of the participants had received no personal hygiene training within the last three months and the same number of families had no hygiene training within the last year. Two of the participants (6.7%) needed assistance for personal hygiene at all times, 2 needed assistance most of the time, 5 needed assistance sometimes, and 21 seldom needed assistance. Statistically, there was no difference in pre- and post-training hand washing skills with respect to sociodemographic characteristics such as gender, age, place of residence, the member of the family in charge of care and her/his educational status, social coverage of medical expenses, number of participants in the family, or average income ($P > 0.05$).

Table 2. The etiology of mental retardation.

Causes	n	%
Infectious diseases and intoxication	5	16.7
Injuries and physical damage	8	26.7
Crude brain damage	5	16.7
Unknown prenatal etiology	3	10.0
Chromosomal anomalies	4	13.3
Psychological disorders	1	3.3
Other	4	13.3

There was no difference in the pre-post training hand washing skills with respect to etiology of mental retardation, IQ value, other health problems, and presence of other retarded participants in the family ($p>0.05$). There was no significant difference in the pre-post training hand washing skills with respect to utilization of in and out-of-institution care/education services, and receipt of personal hygiene-related training by the participant or the family ($P > 0.05$).

Similar results were observed for soiling skills pre- and post-training. All independent variables tested to have impact on variance in soiling skills with respect to training showed no statistical significance for having received personal hygiene training within the last three months, indicating the importance of reinforcement ($P > 0.05$).

Considering behavioral patterns, the behavior of hand washing differed significantly after training in care-receivers with respect to the educational status of the caregiver within the family ($P = 0.047$), and the soiling behavior was mostly altered after training in the participants with prior skills of soiling behavior ($P = 0.067$). Soiling behavior was also somewhat dependent on the duration of utilization of services from the institution ($P = 0.170$) and on receipt of additional support from outside the institution ($P = 0.041$).

Finally, the cross-correlation analysis revealed a considerable correlation between pre- and post skills and behaviors of hand washing and soiling ($0.370<r<0.968$).

Differences in toilet hygiene skills with respect to sociodemographic features before and after training are shown in Table 3. The difference in hand washing skills with respect to health conditions before and after training are shown in Table 4.

Table 3. Difference in toilet hygiene skills with respect to sociodemographic features before and after training.

Sociodemographic Features		n	Toilet Hygiene Skills						
			Before Training (BT)		After Training (AT)		% Difference (BT-AT)		
			X	SD	X	SD	X	SD	P
Main Caregiver	Mother Other	29	3.13	0.95	3.24	0.95	4.02	12.32	0.739
Education Status of the Main Caregiver	Illiterate	1	3	-	3	-	0	0	0.702
	Literate	3	2.66	1.52	3	1.73	11.11	19.24	
	Primary School	12	2.75	0.96	2.91	0.99	6.94	16	
	Secondary School	7	3.42	0.78	3.42	0.78	0	0	
	High School	2	3.5	0.7	3.5	0.7	0	0	
	Junior College	3	4	0	4	0	0	0	
	University	2	3.5	0.7	3.5	0.7	0	0	
Health Insurance	Yes	28	3.1	0.95	3.21	0.95	4.16	12.52	0.837
	No	2	3.5	0.7	3.5	0.7	0	0	

Table 4. Difference in hand washing skills with respect to health conditions before and after training.

Health Condition		n	Hand Washing Skills						
			Before Training (BT)		After Training (AT)		% Difference (BT-AT)		
			X	SD	X	SD	X	SD	P
Etiologies of Mental Disability	Contagious Diseases or Poisoning	5	3.8	0.44	3.8	0.44	0	0	0.508
	Traumas and Physical Causes	8	3	0.92	2.87	0.99	4.16	11.78	
	Major Brain Diseases	5	2.2	1.09	2.4	0.89	20	44.72	
	Unknown Prenatal Etiology	3	3.66	0.57	3.66	0.57	0	0	
	Chromosomal Disorders	4	3.5	0.57	3.75	0.5	8.33	16.66	
	Psychological Disorders	1	4	-	4	-	0	-	
	Unknown	4	3.25	0.95	3.25	0.95	0	0	
Intelligence	Trainable	11	3.36	1.02	3.45	0.82	9.09	30.15	0.703
	Teachable	19	3.1	0.87	3.1	0.93	0	11.11	
Health Problems Other Than Disability	Yes	9	3.44	0.52	3.33	0.7	3.7	11.11	0.422
	No	21	3.09	1.04	3.19	0.98	6.34	22.65	
Disability in Other Family Members	Yes	6	3.66	0.51	3.66	0.51	0	0	0.9
	No	24	3.08	0.97	3.12	0.94	4.16	22.65	

Discussion

Some of the factors influencing the acquirement of self-hygiene skills and behavior in disabled participants may be counted as musculoskeletal insufficiencies, visual impairments, loss of visuomotor integration, and incapacity in manipulative skills. Furthermore, cognitive problems may cause disorders of communicative skills. If the participant is unable to conceptualize verbal explanations in self-hygiene training, reinforcement of single word orders with positive and negative mimics may be an appropriate method. Continuous support and long-term commitment and environmental adjustments are required for success in the acquirement of target skills and behavior.

For the self-hygiene behavior training, the methods of forward chaining, backwards chaining and complete skills training methods are usually preferred choices. Gradual decrease in assistance is also required. A general verbal, cognitive and psychomotor assessment prior to initiation of training in addition to application of checklists and an environmental evaluation will be necessary for proper assessment of the success of the applied training on target development of the disabled participants. Multiple opportunities will also positively impact reinforcement. It is also important to develop an institutional assessment method for special education/day care institutions for the attainment of quality services in the long-term.

In this study, the difference in success of training in individuals receiving additional support from other institutions or persons other than OZEV may indicate either an incapacity in OZEV or a positive reinforcement. In such an institution, the quality assessment program will depend not only on the infrastructure of the institution, but also the capacity of educators, and the satisfaction of expectations of the service receivers also needs to be considered.

Persons with physical and mental disabilities are living longer and integrating into their communities. Primary medical care of persons with mental retardation should involve continuity of care, maintenance of comprehensive treatment documentation, routine periodic health screening, and understanding of the unique medical and behavioral disorders common to this population. Hygiene, feeding and sexual problems are some of the health maintenance concerns for the individual to acquire special skills for life. However, the acquisition of the necessary skills and behavior needs an adequate and persistent communicative environment between the care giver and the care receiver, which is affected by both sociodemographic determinants and the quality of services. The attainment of legal support alone is not sufficient for overall social improvement in the health and life status of the retarded, but continuous support is always to be advised for better capacity building (6,7).

A review of the literature shows that most of the studies concerning hygienic care in mentally retarded individuals and their integration into the communities have focused on the nutrition and sex-education skills (9-12). In most of these examples, the hygiene practices of the handicapped have evolved and improved after receipt of special training for acquiring these skills. On the contrary, our study does not demonstrate major improvement with training facilitation. This may be attributed either to the incapacity of the trainers or the institution or the properties of the study group.

In conclusion, to establish a unitary inclusive system of education for social integration of the handicapped, a single law may be adopted obligating school districts to provide an effective education for each and all students, not a “one-size for all” approach, but a nuanced recognition that students are more alike than different. A unitary system would recognize and value differences among students while honoring the construct of “special education is a service not a place” (8). The central features of a unitary inclusive system include strong leadership, quality teachers, challenging curriculum, differentiated instruction, careful and regular assessments, engagement of parents and community, and a focus on the meeting of standards and the achievement outcomes. For the sake of equity and integration, the isolated status of special education needs to be reconsidered.

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